

Competition in the Freight Transport Sector – a Channel Perspective



Rikard Engström

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*To Helena,
our wonderful children Albin, Axel, and Moa,
and to my parents.*

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ABSTRACT

This thesis deals with a phenomenon that often is described in a very simple way in literature. In these books, the phenomenon is often described in the following way: “→”. Sometimes several arrows are used and each arrow indicates a separate carrier working in a freight transport channel. Even though this is a short and sometimes powerful way of describing a freight transport movement, I will, in the following, expand on this arrow.

The thesis has a competitive perspective on Swedish freight transport channels. The Swedish market is viewed as movements originating and/or destined from/to Sweden respectively. No restriction is placed on the nationality of the carriers and coordinators involved in the channels. The thesis and its findings rest on three pillars. These are – the theoretical-, the empirical-, and the “the-buzz-of-the-industry” pillar. Even though these pillars have different dimensions, all of them are important in constructing the research.

This thesis gives suggestions regarding how to view competition and how it can be treated in analytical texts. The form of analysis presented does a better job in describing, explaining, and predicting competitive behaviour than the classical perspectives used for analysing competition. The freight transport industry is an industry that in some respects does not work “theoretically correctly” when it comes to competitive matters as will be seen in this thesis.

Some of the contributions of the thesis are (i) the description of obstacles that inertia constitutes to efficient competition, (ii) the description of how competitive phenomena can be analysed in business administration settings using a combination of Resource-Advantage theory and the classical concept of Contestable Markets, (iii) the finding that the shippers (the buyer of the freight transport service), coordinators, and carriers, often perceive competition, and the variables in which the competitive action occurs, asymmetrically, and lastly (iv) the finding that cooperation within channels often are reduced to a minimum level.

Keywords: freight transport, channel, competition, competitive advantage, transportation, shipper, carrier, surface of competition, theory of competition, cooperation, R-A theory, contestable markets.

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Furthermore, many organisations/persons have contributed in one way or the other to making the thesis what it is. I am deeply indebted to them for their comments, trust, patience, and financial support. Therefore, I would like to say **Thanks for your...**

... Financial support

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... Industrial support

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I wish to thank all of my friends and former colleagues at VTI who introduced me to the field of Transportation, especially my previous chief, Head of Research, Jan R. Eriksson, who encouraged me to make my doctoral dream come true.

... Academic support

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- Albin, for his patience when I was working in “my room” and for trying to teach the rest of the family to be patient as well!
- Axel, for reminding me that we always have to ask *why* and *how*!
- Moa, for reminding me that it might pay off to be stubborn!

Again, many thanks to all of you!!!

Kalvsund, October 2004

Rikard Engström

PERSONAL BACKGROUND

My road to obtaining a Ph D exam in the discipline of Business Administration (BA) was not the untraditional one. I began postgraduate studies in Economics in 1995. I took the compulsory courses in Economics. Then, in 1996, I was offered an interesting job at VTI (Swedish National Road and Transport Research Institute) as a researcher. There, I continued my studies on a part-time basis by taking some transport-related courses. At VTI, I entered the interesting field of transportation and I benefited from some experience in the field. Since I got into the field of transport, I could not go on studying with my “old” supervisor, because he was a Professor in Finance. The situation was further complicated by the fact that the department of Economics at the School of Economics and Commercial Law at the University of Gothenburg had, and still has, no Professor focusing on transports. Since I, in my undergraduate studies, had taken courses in BA as well, I could broaden my academic horizon and see that there was a newly established professorship in the field of transport at the department of BA held by Arne Jensen, who offered me a Ph D project. Whether this “change” of academic field has been successful or not is up to the reader to decide.

In Transport Economics, which is a term that I find acceptable as heading for the subject of transports studied by academics taking their starting-point in Economics as well as in BA¹, many things appeal to me². The importance of the transport sector in modern society, freight as well as public transports, is by no means reflected in academic research. Transportation, of freight in particular but of passengers as well, is the artery of every country’s economy. One of the strengths of Transport Economics, as an academic field, is the use of different sciences to “solve” rather concrete problems. Academic fields in which transports are studied/researched in one way or the other are for example BA, economics, environmental economics, ethnography and, natural sciences. The academic field of transport is, in many studies, close to reality. It is, therefore, possible that results in transport economics research will have practical implications. These were important reasons to me when deciding to spend a few years trying to gain increased knowledge in the field.

This thesis contributes to decreasing the gap, which basically is a mental gap, between reality and academia. Furthermore, I hope that it may get some academics to think about the gap between the economic disciplines. My belief is

¹ Traditionally, economists study transport economics, while business administrators study business logistics.

² By a business administration perspective I refer to the management and administration of firms and channels, here typically shippers, coordinators, carriers, and freight transport channels.

that, in many fields, such as the field of Transport Economics, the differences are smaller than one would think when taking courses in the disciplines, even though the examples are even more numerous where the distance is large. I believe that researchers in both fields would benefit extensively from opening their eyes to the other discipline's research methods, for instance.

Regarding the theoretical concept of competition, I view myself as being inside the academic/theoretic world looking out at the "real" world. Regarding the freight transport industry, I am on the outside looking into the empirical world, since my background in the field of transports is theoretical and semi-theoretical.

READING INSTRUCTIONS

Many of you who are holding this thesis in your hands do not intend to read it from cover to cover. This section is written to help the potential reader understand what sections he/she might benefit most from reading. The thesis is written in such a way that it should be possible to read each of the four parts the thesis consists of separately. However, I think that the sum is larger than the individual parts, so you as a reader will benefit from, at least skimming through, the parts that are not of explicit interest to you.

In giving reading instructions, I split the group of potential readers into three categories. These categories are academics (principally working in the field of BA and academics working with transports in other disciplines), politicians and society's decision-makers, and people working in the trade, such as directors, freight/transport/logistics/supply chain managers, and sales executives. Before the reading instructions are discussed, a few words about the structure of the thesis are given below.

The Structure

The thesis is divided into four main parts, which are subdivided into, altogether, nine chapters. Part A, which is called *Introduction & Scientific Conditions*, consists of four chapters. The first chapter discusses the research field of the thesis. The chapter aims at introducing the research field and describe the importance of freight transports. The second chapter is devoted to the theoretical framework, which the thesis is based on. The chapter deals with the different views and concepts of competition, even though cooperation and logistics are also discussed to some extent. In chapter three, the methodological questions are dealt with and this is where the research questions are presented. The fourth, and last, chapter of Part A brings forward and discusses a research model that was developed during the research process. The model is used to analyse the material in Part C. Part B, titled *Mode of Procedure & Contextual Study*, is composed of two chapters. It begins with a description of the methodological line of action as seen from a practical point of view. It elucidates the thoughts underlying the selection of freight transport channels³ studied and analysed in the thesis. The chapter also describes how these channels were investigated. Part B's second chapter highlights the industry's opinion about the topics discussed in the thesis. Two chapters constitute Part C – *Analysis*. These chapters follow the research model developed to analyse the freight transport channels. The first chapter deals with what is referred to as the structural dimensions of competition, while the

³ The freight transport channel is a set of interdependent organisations that are involved in the dynamic process of moving a shipment between origin and destination. The operators in the freight transport channel are the interdependent coordinator and carriers.

second treats the functional dimensions. Lastly, Part D, *Conclusions & Discussion*, consists of one chapter. In that chapter the conclusions are presented, suggestions for further research are given, and the limitations and quality of the thesis are discussed.

Academics

The academics that might be interested in this thesis can be divided into three subcategories. These are (i) BA-academics⁴ with special interest in transports/supply chain management and/or competitive matters, (ii) academics with the same interest as in (i) but belonging to another academic discipline (iii) other BA-academics. The first category could benefit from reading the thesis in full. The second group will probably benefit mostly from skimming through parts of the methodological chapter focusing more on the theoretical survey of theories of competition and the results from the thesis. The third group could benefit from the methodological section and the research design, but they are likely to have less interest in the description and the results from the sector studied and the description of the theories of competition.

Politicians and Decision-Makers

The second category, politicians and decision-makers, needs an as good and correct appreciation as possible about the sector in order to make the right decisions seen from their intentions⁵. If the background facts and their understanding of the market are insufficient, there are risks of effects by decisions made that are not the ones wished for. This group will, given that they already know the market, perhaps benefit mostly from the analysis and conclusions part of this thesis. These chapters might help them understand how the trade can be, and how it cannot be governed to benefit the manufacturing industry, the interest of the people in the street, and to help out in reaching the transport policy objectives set up by politicians.

The Trade

Last, but not least, people working in the trade will benefit mostly from getting increased knowledge of how competition works, and how it does not work, in the trade they are working in. Hopefully they will also be able to make use of the more theoretical line of thought as to how a competitive advantage can be reached and how they will be able to compete in a successful way.

⁴ In this sense, BA might be rather broadly defined to include economists focusing on the micro-economics and industrial organisation.

⁵ For instance, a deregulation process might end up in a market that needs some re-regulation to fulfil the politicians' objectives.

I believe that many people in the trade underestimate the value of academic knowledge. An increased interchange of knowledge between academia and the trade would benefit both disciplines. This view is supported by the Swedish Road Haulage Association⁶ as can be understood from the leader by managing director Jan Sandberg in Sandberg (2003).

⁶ In Swedish Svenska Åkeriförbundet.

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PART A

INTRODUCTION & SCIENTIFIC CONDITIONS

Swedes are thought to cooperate, not compete
M. E. Porter (The Competitive Advantage of Nations)

The first part of this thesis, Introduction & Scientific Conditions, consists of four chapters in which the background of the research area and the research topic and the purpose and limitations of the thesis are discussed. Chapter 1 is an introductory chapter, giving the background of the topic providing the purpose of the thesis. In chapter 2 the Frame of References is described. It provides a theoretical extensive literature exposition regarding the concept of competition. Chapter 3 deals with the important research questions and the methodological issues. The research design is also developed and described in chapter 3. Thereafter, chapter 4 deals with the research model.

1. INTRODUCTION

This introductory chapter is divided into seven sections. The chapter aims at providing some basic knowledge to the reader about the importance of the sector studied clarifying what I have chosen to study and why. The chapter will position the research theoretically and empirically by making it clear what the thesis is about and why this has been the focus of my research project.

1.1. *Background*

This thesis deals with two fields. The first is freight transport and the second is competition. Freight transports are described in sections 1.2 and 1.3 and competition in section 1.4. The topic of this thesis is of great importance to practitioners, politicians and academics to understand how one of modern society's mainstays work. This mainstay is freight transports. In this thesis, the study object is limited to the important freight transport channels, the shippers buying those channels, and the carriers and coordinators that are the building blocks in these constellations. Coordinator refers to the firm coordinating the service in the freight transport channel. Such a firm can be called transport broker, third party logistics, forwarding agent, freight forwarder, etc. The coordinator might be a shipper, a carrier, or a third party. The study subject is the competitive situation within and among these freight transport channels and their participants.

The thesis is motivated by the non-existence of realistic theories for explaining and predicting competitive behaviour in freight transport markets. Many theories on competitive behaviour are derived from "neoclassical" competition theory. Therefore, their premises stem from the concept of perfect competition. The assumptions, on which neo-classical theory is based, are very distant from the present empirical facts of freight transport markets.

The focus in this thesis is to describe how competition works and how the shippers, i.e. they buyers' of the freight transport services, and the channel participants, i.e. coordinators, and carriers, think, in terms of competitive instruments, when trying to gain competitive advantages. Furthermore, the thesis

aims at describing the competitive surfaces⁷ in freight transport from a business research point of view. The thesis is partly theoretical but aims at being of practical relevance. It narrows the gap between theory and practice in the field of freight transport.

Since the beginning of modern economics, literature concerning the determination of living standards has been interested in trade. Smith (*The Wealth of Nations*, 1776), in his discussion of specialization and the extent of the market, stresses the relationship between wealth and trade between nations. Since transportation is a necessary mainstay for trade, an efficient transport industry will promote trade between businesses, regions, and countries and thereby economic wealth. This thesis increases the knowledge of the industry by analysing eleven freight transport channels. In-depth interviews have been performed with almost 40 shippers, coordinators, and carriers in their roles as managers or their counterparts in shippers, coordinators, warehouses, and carriers.

1.1.1. The Importance of an Efficient Transport Industry

Producing companies all depend on the freight transport system and its effectiveness to be able to do business. Most companies depend on the transport sector for inbound as well as outbound movements. If the transports can be made more efficient, this will promote not only the industries but also the utility of the end customers. This assumes that the competitive forces within the industries work well so that the wealth is distributed not only from the transport industry to another industry of the market, but also to the end customer.

Having an efficient freight transport sector is of great importance not only to a country or a region, but also to manufacturers and consumers (see, for instance, Engström & Wikberg, 1991). An efficient freight movement system supports shippers in several ways. First of all, they depend on having a reliable system in order to be able to optimise their stocks and manufacturing activities. Secondly, they and their customers depend on having an efficient and reliable transport system for their finished products. Thirdly, shippers might use the freight transport system to gain a competitive advantage over competitors in the market place. There is, however, many other interested parties in the freight transport systems that might not have a strict economical interest in the process. The main reason for their interest may, for instance, be the external effects. Figure 1 below describe how consumers, and thereby society as a whole, benefits from a more efficient freight transport system.

⁷ Those alternatives that constitute a solution to a shipper's/coordinator's need, belong to the same surface of competition.

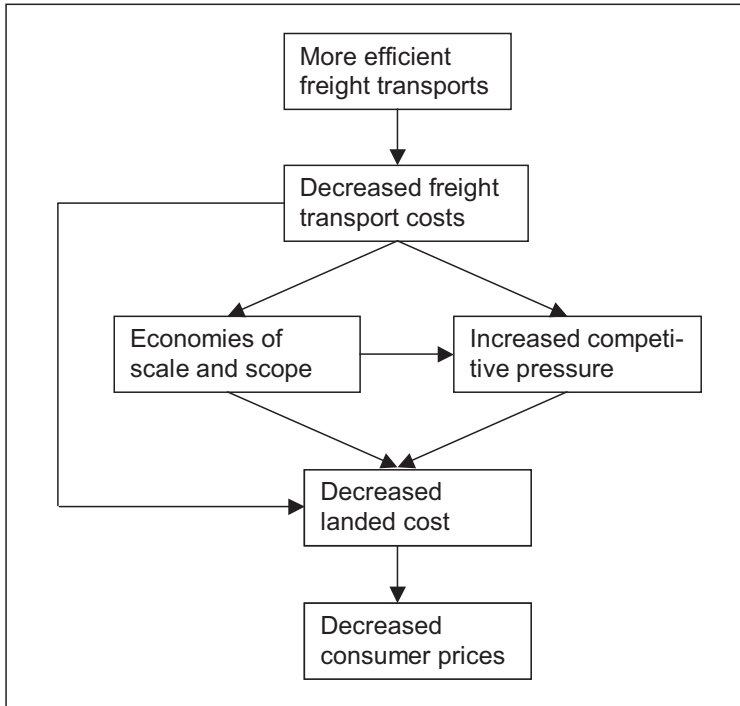


Figure 1. The value of a more efficient freight transport system (Source: A Jensen, Lectures in Transport Economics)

The model should be interpreted as follows: Start out with a given freight transport system and assume that it is rendered more efficient for some reason. This improvement will then make it cheaper, or more efficient, to move goods. The decreased freight transport costs will then have three effects. First of all, and as a direct effect, the landed cost will decrease. Secondly, it will improve the possibilities for the manufacturing industries to benefit from increased economies of scale and scope. This will then indirectly lower the landed cost more. Thirdly, the decreased freight transport cost will, together with the increased economies of scale and scope, increase the competitive pressure on the manufacturers to improve their offerings. The reason for this is that their competitors, who also face lower transport costs, will be able to compete on the same geographical market. This increased competitive pressure will decrease landed cost even more. All of this will directly bear effect on the prices and offerings that the customers face. Studying how competition works may help to put focus on an important phenomenon in freight transports whereby the competitive pressure can be made more efficient resulting in a more efficient transport industry to the advantage of several parties.

The field of freight transports is very important and challenging to explore and analyse for several reasons. Freight transports are highly significant for each

nation's, region's, and firm's competitiveness. For Sweden, positioned on the outskirts of Europe, and far from several important supply and demand markets, the industries are highly dependent on reliable and efficient transports to be competitive on the international markets. In order to have an efficient transport industry and for the shippers, and politicians, to be able to use it efficiently, the knowledge of the sector has to be continuously improved. This thesis contributes to the actors' knowledge in this respect. According to my understanding, the total amounts of research on freight transports performed do, by no means, reflect the importance of the field in the Swedish economy.

1.1.2. Benefits from Increased Knowledge of Competition

Better knowledge of how competition works in the freight transport sector benefits most shippers and many coordinators and carriers in the long run. One common thought is that more competition is better than less competition. But is this necessarily true? I argue that it is not. A monopoly that acts as if it were exposed to competition⁸ will theoretically be more efficient in offering the market supply than any other combination of suppliers. The reason is that a large supplier can use economies of scale and scope that cannot be used otherwise. In real life, it is not possible to say whether the monopoly is more efficient than any other hypothetical market structure would be. If more competition was always preferred to less, we would end up in a situation where authorities should govern the market toward "perfect" competition. In the ideal state then no company would differ from any other in any relevant aspects and, therefore, no company would have the financial strength to make any investments to become more efficient. This indicates that "perfect" competition not is "perfect" at all. Rather, "perfect competition" is one of the less competitive market structures, since it does not give the companies any freedom to compete in a constructive way.

Many parties involved directly or indirectly in a freight transport movement can be assumed to benefit from a more correct understanding of competition and competitive behaviour. Society, as a whole, could benefit from having certain freight transports areas exposed to more, or less, intense competitive pressure. To reach such goals it might be necessary that actions are taken to govern the areas in the best possible direction. When the economies of scale are large, the optimal industrial organisation will tend to fewer and larger companies. In the extreme case, this will result in a monopoly. Policy makers might have an important role to play to stop the large suppliers, independently of the basis of their largeness, from dominating the market. For such governing to be efficient, it is important to correctly understand how competition in the sector works.

⁸ That is when they take measures that promote efficiency, develop their service, and do not try to gain monopoly rents.

1.1.3. Interested Parties of the Thesis

As discussed above, the field of freight transports is interesting to several parties directly or indirectly, since the shape of the sector and its efficiency affects most individuals in one way or another. The parties and their interest are, in brief:

- **Practitioners⁹ working in the freight transport industry** – since they make their living in the trade they will typically be better off with more and better information about how the market works. This thesis adds to the general knowledge of decision-makers, practitioners might also be affected indirectly by decisions aiming at altering the market in some way.
- **Manufacturing industry** – shippers having access to more efficient freight transport solutions will get a competitive advantage as compared to their competitors. The manufacturing industry has moved in the direction towards a greater interest in freight transports, logistics, and what today often is brought into the wider concept of supply chain management. To make use of the transport services efficiently is often decisive for company survival in the market.
- **Consumers** – as was seen in Figure 1 above a well-developed and well-functioning freight transport market may lower the prices that the customers pay for the products and increase the competition among manufacturers.
- **Politicians and decision-makers** – a well-developed and well-functioning freight transport market increases the country's prosperity and finances due to the increased competitiveness of the manufacturing industry. The freight transport industry is an important basis for tax revenue.
- **Researchers (and consultants)** – academics are interested in the field of freight transports for many reasons and from several angles.

1.2. Freight Transports

Viewed in historical, economic, environmental, social, and political terms, it [i.e. the transportation system] is unquestionably the most important industry in the world.

Coyle, Bardi & Novack (2000)

This section describes the freight transport sector. The figures deal, if not otherwise stated, with the Swedish domestic freight transports. Transportation is a very special industry, from a scientific as well as from a practical point of view. From a scientific point of view, the importance of having successful companies, regions, and countries in combination with the complexity of the freight transport service makes it special and interesting. From a practical point of view, the

⁹ This group includes carriers and coordinators, but also the trading industries' interest groups such as wholesalers and retailers.

industry studied is special in many ways. It is an adaptable industry working under special conditions, and many parts of it is characterised by low margins.

Every industry and every end-consumer is affected by the efficiency of the freight transport industry. The industry's importance has increased during the last decade. This is easy to understand when looking at the manufacturing industries' specialisation, where they produce longer series in order to take advantage of the economies of scale and then letting the goods be shipped to the demand markets. From an international perspective, the infrastructure in Sweden is known to be of high quality. Foreign companies that consider establishing a business in Sweden appreciate, among other things, the quality of the infrastructure (SOU, 1997).

The conditions for performing transports in Sweden are somewhat different from those in most European countries. Sweden is a large country, about 450 000 square kilometres, but small in terms of number of inhabitants (nine million). This results in a density of population close to 20 persons per square kilometre. This figure could be compared with the figures of some other European countries in Table 1 below. Even though these figures must be interpreted with care, it is easy to understand that this implies somewhat different conditions for the freight transport system and its actors. These conditions affect how carriers and coordinators, and to some extent shippers compete and cooperate.

Country	Population density inhabitants/km ²	Country	Population density inhabitants/km ²
Belgium	333,2	The Netherlands	419,2
Denmark	123,1	Norway	13,6
Finland	15,2	Great Britain	235,2
France	107,1	Germany	224,3

Table 1. Density of population in some European countries (Data: <http://www.odci.gov>¹⁰)

These geographical/population density conditions result in many long transports, often having a low degree of utilisation. What is called a short freight transport in Sweden is often called a long freight transport in many other countries. However, it should be pointed out that it is the relevant market, which might be independent of national borders, that is of interest. National borders within the EU are often more of a mental character than a practical obstacle today.

Porter (1990) describes the Swedish situation: *“The long distances between resources and cities, as well as the distance of Sweden from many markets, have lead to a great sophistication in logistics as well as Swedish presence in a*

¹⁰ Full address of the web page: <http://www.odci.gov/cia/publications/factbook/country-frame.html>.

number of transportation and logistics-related industries". Porter continues: "...Swedish firms gained advantages from superior logistics".

1.2.1. Characteristics of the Freight Transport Market

Transportation is typically seen as *the creation of time and place utility*¹¹ (see, for instance, Coyle, Bardi, & Novack, 2000). Freight transportation has some characteristics making it somewhat different from "normal" goods or services. Firstly, the demand for freight transportation is a derived demand, a phenomenon discussed by many authors, see, for instance Friedlaender & Spady (1980), Button (1982), Begg, Fischer, & Dornbusch (1994), Coyle, Bardi, & Novack (2000), or Hensher & Brewer (2001). Transportation is, thus, to a large extent something that is a "necessary evil". Transport increases the utility and value of the goods by making it available to customers. Secondly, transports make it possible for companies to use geographical opportunities that are a condition for the specialisation in the economy improving the Pareto efficiency¹². Thirdly, the demand for transports fluctuates greatly over time. This is extraordinary, since these variations occur over the day, week, month, year, and business cycle. This means that parts of the industry, from time to time, has an excess capacity and, from time to time, the opposite occurs. The dynamics in the demand for freight transports manifests itself in time, space, and type of goods. Furthermore, the industry produces a service that, as all services, is characterised by the fact that it is: (i) consumed at the same time as it is produced, (ii) not transferable and, (iii) not storable¹³. The need for the service can be affected using warehouses, etc.

As stated as the first characteristic above, demand for freight transportation is a derived demand. Derived demand, in this case, means that one does not demand the transport in itself but the result of the transport. Producers of some goods have a demand for the products to become available to customers. In order to meet this demand, the goods must be transported to the customers. There is, thus, a derived demand for the freight transport. Transportation increases the utility, and thereby the value, of the goods in making it available to customers. The users

¹¹ To put it simply, place utility means that the goods have a value at the market where they are demanded (there is no demand for raincoats in the desert) and time utility means that the product should be offered to the market at the time when it is demanded (there is a demand for today's newspaper in the market but not for an old paper).

¹² Pareto efficiency (or allocative efficiency), occurs when resources are allocated in such a way that it is impossible to make anyone better off without someone else becoming worse off. In the literature, Pareto optimality is sometimes used synonymously with Pareto efficiency (see, e.g. Khemani & Shapiro, 2003). Sometimes Pareto optimality is reserved for cases when both production and allocative efficiency are obtained. For more information about Pareto optimality, see for instance Bohm (1996).

¹³ At least not in the traditional way. There is, of course, nothing to prevent the transport services from being bought and sold transaction wise for forward delivery. Such an arrangement could, in a way, be compared to a stock-in-trade.

of the service will, therefore, have an objective to minimise the costs (broadly defined to not only include monetary costs) of the transport.

Demand for freight transport services is often heterogeneous and dynamic. The heterogeneity regards, for instance, time aspects, geographical aspects, volume aspects, and the services that are required when buying the service. Supply has to be very adaptable in order to meet the shifting demand. Supply, therefore, has to be heterogeneous to meet demand but it is also heterogeneous for “internal” reasons that follow from ordinary rent-seeking behaviour.

The freight transport market on average is characterised by low profitability. There are many sources that give evidence of this, see, for instance, Silander (2003). Some carriers are rather profitable and a large number of less successful carriers can, therefore, be assumed to run their business with an extremely low mark up or even at a loss. The reason for this phenomenon is most likely the traditions in the industry, and especially then for the small, often family owned, businesses there is a feeling of not having any realistic alternatives. Several articles in industrial papers reveal that firms in the road freight industry often are family businesses. When parts of the road freight and the coasting-trade industries have gone from a structure of many small family-owned companies through mergers and acquisitions towards a more concentrated industry structure, the traditions and particularities have been more limited but not fully erased.

1.2.2. Freight Transports - Then and Now

There are a number of reasons for the rapid increase of the domestic freight movements in the 20th century (see, for instance, Tarkowski, Ireståhl et al. 1995). Increased competition in the manufacturing industries has resulted in increased utilisation of economies of scale and scope and greater demands on freight transports. The larger volumes, but also the increased distances, result in more tonne-kilometres performed. The increase in tonne-kilometres performed also results from: the increased national and international trade; the continual improvements of the modes and the equipment used; the relatively cheaper and cheaper and more and more efficient and reliable transports; and the development of the infrastructure. Today the turn over of the transport sector accounts for about 5% of the Swedish GDP, see, for instance, ÖCB (2001) or Svenska Åkeriförbundet (1998). The investments in the sector account for about 7% of the total investments (Svenska Åkeriförbundet, 1998).

The freight transport industry is very important for the companies' and the nation's economical prosperity. From the 1950s to the 1970s, the growth rate in the freight transport sector was approximately the same as the growth in the GDP. During this period, there was a structural transformation of the industry. The mode gaining most, in terms of market shares, from this transformation was

the lorry. Data from SIKa show that the growth rate of the domestic freight transports still correlates well with the GDP, see SIKa (2004). This relationship is, however, not undisputed, since it depends on how one chooses to measure the activities¹⁴.

Over the years, the modes and their market shares have changed considerably as can be seen from Figure 2 below. The figure provides a comprehensive view of the modes' relative importance for moving goods domestically. The negligible air transports, when seen from the volume perspective, are omitted in the figure. All modes have had their ups and downs but it seems as if most of the loss in market shares of the domestic shipping has further promoted the road sector. This should, of course, be taken with caution – it is possible that the losses in domestic shipping have promoted the rail sector, while the rail sector has lost other volumes to the road sector. However, the road sector seems to be the “winner” when analysing from this market share perspective. The shares are also affected by such things as changes in total weight of vehicles; changes in taxes, etc. Noteworthy is the dramatic increase in the transports performed by road freight but it is also interesting to see that the railway has increased the transport performance, but the market share has declined since the total transports have increased significantly. The fact that the railway is still rather “strong” is unique for Sweden s compared to the other EU15 member states.

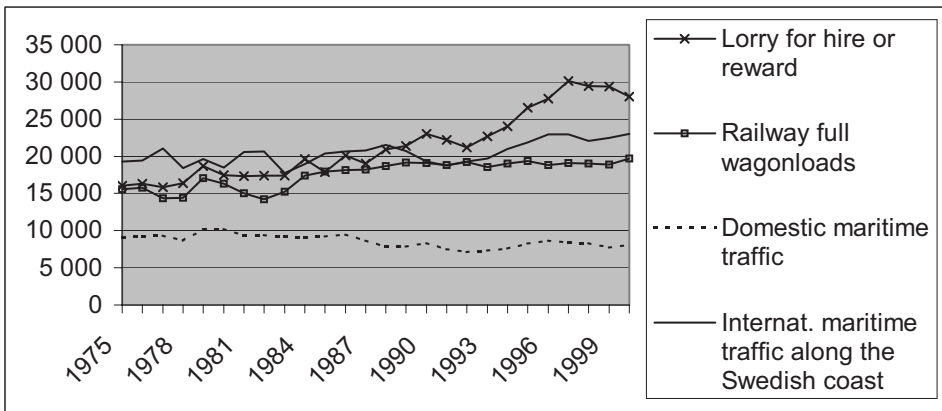


Figure 2. Domestic goods transport performance by mode of transport 1975-2000, million tonne-km (Source: SIKa¹⁵)

Railway

The long distance freight market, on the main railroads, was opened for competition in July 1996. Many researchers and experts agree that the Swedish

¹⁴ This and other myths or facts of transport growth are questioned in Koppen (1995).

¹⁵ Source: www.sika-institute.se (Accessed 2002-11-15).

State Railways (SJ) increased their efficiency substantially after the reorganisation even without competition (Berglund, Edwards, Engström, & Jansson, 1996).

The rail sector will have to give discounts to large shipment sizes to be able to compete with the maritime sector. The rail sector is exposed to competition for small shipment sizes from trucks and, on large sizes, from the shipping sector. There is, thus, a “leakage” at both ends (Skarstad, 1996). According to Ehrling and Johansson (2000), competition in the rail freight market can be characterised as competition on the tracks. Other researchers are of the opposite opinion. However, Ehrling and Johansson (2000) verify that there are extensive obstacles to establishing freight transport lines even if the market formally is open for competition.

Maritime Transports

The tendency, as revealed by the figure above, is that the domestic shipping’s market share has declined during the period, but caution has always to be used when analysing such graphs and figures.

There are no significant formal barriers¹⁶ to the domestic coastal shipping, and the sector works satisfactorily. Companies in the domestic market are not subsidised (SOU 1995:112). According to Berglund, Edwards, Engström et al (1996), the land transports are favoured by the freight transport subsidy system. Further, they hold that, with a neutral transport subsidy system, or without any subsidies at all, sea transports would be competitive. It is characteristic of the maritime market that liner-shipping companies for decades have been cooperating worldwide in consortiums and other cooperating organisations.

Road Transports

Truck is the dominating mode for performing freight transports over “short” distances. When it comes to long distances, the situation is somewhat different. This is due to the fact that the other modes need longer movements to outweigh their drawbacks in forms of less extensive infrastructure, a more problematic loading, reloading, and unloading processes. In the freight transport channels, different modes are often involved. Truck may, then, perform two short movements at the endpoints to and from the mode performing the long-distance movement – such a mode of procedure helps explaining the dominance of the truck on short distances.

The road freight transport may be split up into local and long-distance traffic. The long-distance traffic in turn can be divided into two parts; the first of these is

¹⁶ Barriers constitute restrictions to enter a market, such restrictions might, for instance, be financial, physical, legal, or social/mental requirements on the firms to enter a market.

long-distance line-based transports. The second part is typically referred to as irregular long-distance road transports. Local freight transports are to a large extent, performed by road carrier cooperatives and individual road carriers. Individual road carriers mainly perform the domestic long-distance traffic on a commission basis for the transport intermediary companies (Statens Pris- och Konkurrensverk, 1989).

There are no large formal barriers to enter the road freight operator market. The initial costs may, however, be too high for an independent operator. Many operators are tied to a forwarding agency. This tends to decrease actual competition in the market. The market is often duopolistic, since the forwarding agencies and the operators are working in niches (Berglund, Edwards, Engström et al., 1996). In the late 1980s, competition on the road freight market was not functioning well. Possible reasons were that large discounts were given, there were few suppliers, firms used similar methods for price calculation, they made similar changes at the same points in time, and buyers had asymmetric information¹⁷ (Berglund, Edwards, Engström et al., 1996).

In Statskontoret (1996), it is established that the profitability and the solidity in the road carriers industry is so high that the industry will continue to be a strong competitor to the Swedish Railway's freight movement business. Now we can, with a few years to look back on after Statskontoret's prophecy, say that they were perfectly right in that uncontroversial prediction. Statskontoret further notes that the strong business cycle sensitivity of the shipping industry in the early 1990s resulted in very low profits in the industry. The high solidity, which they say is very common in the industry, is necessary for the firms to be able to cope with the recessions.

TFK (2000) say that the main competitor for intermodal transports, i.e. movements performed by a sequence of carriers of different modes, are that those movements are performed solely by road freight carriers.

An EU Perspective

When comparing the Swedish freight transports with those of the other countries within the EU, some special characteristics are noteworthy. First of all, the majority of the countries in the EU depend to a larger degree than Sweden on the pipeline and the inland waterways as EU defines these¹⁸. In Sweden, the movements performed by these modes are very limited. In Figure 3 below, one

¹⁷ This might, however, be a result of a well functioning competitive market!

¹⁸ Navigable canals, rivers, and lakes regularly used for transport. For Sweden, the data relate to the Göta canal system. (Source: European Commission Directorate-General for Energy and Transport in cooperation with Eurostat: European Union Energy & Transport in Figures 2002 downloaded from http://europa.eu.int/comm/energy_transport/etif/index.html 2003-04-01).

can see that Sweden and Austria by far have the largest proportion of movements performed by rail.

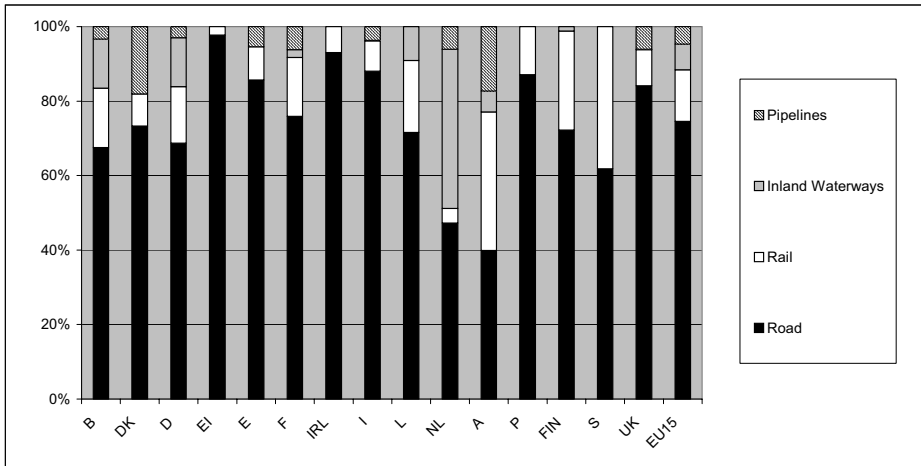


Figure 3. Modal split by country in the EU¹⁹ in 2001. Base: tonne-km. (Source: http://europa.eu.int/comm/energy_transport; 2003-04-01)

The development of the Swedish freight transport market has not been dramatically different from the development of the freight transport markets in the rest of the western European countries and other large trading partners in the last decades. The railway sector has typically had some problems in keeping the market shares in the expanding market²⁰, whereas the road carriers have been more successful. The Swedish market, however, stands out from the EU average market by the fact that the volumes moved by the railway have not declined over time (see also Godstransportdelegationen, 2004).

1.2.3. Transport Policy

National as well as international transport policies directly and indirectly affect carriers and, at least indirectly, coordinators and shippers. The carriers can be affected directly when changes in the transport policy regard, for instance, the mode they represent, but also indirectly, since other rules for another mode indirectly affect the focal mode. Therefore, most transport policy issues have an effect on competition in the freight transport industry.

¹⁹ EU15 is not calculated as the average of the individual countries modal splits but based on the total performance of each mode in the countries taken together. Short sea shipping is not included.

²⁰ Expanding refers to the total amount of goods moved but it is true if it is interpreted in terms of geographical market as well.

The sector of freight transports is often the subject of different types of measures, for instance, political measures that directly or indirectly affect the industry. These measures might have different objectives. Some are imposed for safety reasons, some are imposed for fiscal reasons, and still others are imposed for “the health” of the industry (see, for instance, Godstransportdelegationen, 2000; Hesselborn, 1999; Kommunikationskommittén, 1997; The Commission of the European Communities, 2001).

The European Union’s transport policy has been developed from the European Coal and Steel Community (Meade, Liesner, & Wells, 1962), and more recently it has been influenced by the creation of the Single European Market in 1992 (Button, 2000). Over the years, when the EU has become more of a political union than it used to be, the integrating role of transport has become more important. The removal of barriers in combination with the political integration has led to a developed transport policy in the union, according to Button (2000). The transport policy on a regional, national and an EU-level provide the framework that the industry has to conform to. The overall Swedish national transport policy objective is to safeguard economically efficient and sustainable transport provision for both individuals and the business sector in all parts of the country. The objective can be broken down into six long-term components: An accessible transport system, high-quality transport, safe traffic, a good environment, positive regional development (Kommunikationskommittén, 1997), and a transport system for gender equality (Näringsdepartementet, 2001).

In 1997, the European Commission published a green book about intermodality within the EU (The Commission of the European Communities, 1997). The book deals with the increased cooperation between, and within, the modes taking part in the freight transport system. The commission found a great need for increased cooperation and also great possibilities for increased cooperation. They are of the opinion that these matters have to be solved in order to reach the aim of sustainable freight transport solutions in the future.

In the EU white book called “European Transport Policy for 2010: Time to Decide” (The Commission of the European Communities, 2001), a large variety of transport related aspects are treated²¹. The book brings forward some of the most important and acute problems in the freight transport sector nowadays. Focus is on the increasing problems of congestion and transport growth in the central European countries. These problems directly or indirectly affect the Swedish industry as well regarding the enhancement of competitive strength of the shipping and railway sectors. Politicians should, according to the white book, work to regulate competition to favour the modes that are a better long-term

²¹ The white book has been subject to heavy criticism, see, for instance Svensk Logistik (2002), or Sandahl (2002).

solution for society and to develop the modes coordinated to improve intermodal freight transport solutions. The white book does not propose any bills, but some problems and proposed ideas to help to solve these problems are dealt with. In the road sector, the white book mainly discusses rules and regulations. There is a lack of respect for the rules and they need to be harmonised. The railway sector is treated in detail as regards the gradual deregulation, the open markets, and the problems with international freight movements on the railway, the responsibility, and a common European authority for safety issues. For the aviation sectors, congestion is the main problem and the proposed solution is the so-called single sky. The shipping and inland waterway market is wished-for to interconnect with the railway to a greater extent than today and to develop the rules for the sector (The Commission of the European Communities, 2001).

If companies work together, in channels or in some other kinds of cooperating groups, they are typically able to offer a more attractive package of services to the customers. Negotiations and competition can, then, be performed on a group-level. This can be time- as well as resource-efficient as compared to each company in a channel offering/negotiating with the customers independently. A large portion of the freight movements is, therefore, performed as a part in a series of movements taking the goods from the origin to the destination. The transports, then, take place in what could be called a freight transport channel. The importance of these channels can be highlighted by a quotation (freely translated²²) from the Swedish Freight Transport Delegation²³: *“A transport is commonly a combined system of different modes, load carriers, and other activities, the needs of the industry do often create multi-modal systems”* (Godstransportdelegationen, 2000).

In order to minimize the problem of congestion, the Council of the European Union decided, in the end of 2002, to impose Marco Polo, which is a system of subsidies aiming at a switch-over to less environmentally harmful transports (Regeringskansliet, 2003). Furthermore, the commission has worked out several proposals dealing with possible ways for the railway sector could become more efficient. Thereby the railway could take over parts of the goods that otherwise would have been shipped by truck. These proposals aim at removing technical, administrative, and safety obstacles to an efficient national and international railway sector (The Commission of the European Communities, 2001).

²² Originally stated as: *“En transport [är] ofta ett sammansatt system av olika transportmedel, lastbärare och andra aktiviteter, industrins behov skapar ofta multimodala system”*.

²³ In 1998, the Swedish Government set up a special Freight Transport Delegation (GTD) in order to increase the coordinators' and carriers' collaboration in the freight transport sector. They were also supposed to describe the Government's role in the system.

1.3. Freight Transport Channels

This thesis treats bundles of services often produced by different coordinators and carriers, a thing that makes the situation very special. This section deals with a central concept in this thesis– the concept of freight transport channels. The concept is further explained, and elaborated, in Appendix I. A freight transport channel is typically used for carrying goods between the points in the origin/destination-relation (OD-relation) independently of whether the transportation is domestic or international. Freight transport channels, moving goods from “door to door”²⁴, is a very important and interesting part of the freight transport industry from an empirical as well as a theoretical point of view.

The freight transport channel is a set of interdependent organisations that are involved in the dynamic process of moving a shipment between origin and destination. The operators in the freight transport channel are the interdependent coordinator and carriers. Several modes and/or companies are often taking part in the freight transport channels. A freight transport channel can be part of a more extensive freight transport system, but it can also be an independent channel. Both variants are common. Freight transport systems often consist of several carriers working together to offer the customers solutions over many OD-relations. The freight transport channel service may be carried out by constellations differing extensively in several aspects, such as number of participants, whether there is a coordinator or not, the ownership relations among the shippers and the service suppliers (i.e. the coordinators and carriers), the modal choice (the channels might be multimodal but they do not have to be), and the possible use of warehouses, responsibility, and objectives. The shippers, i.e. the buyers of the freight transport channels’ services, may even perform the full transport on their own or they can contract one or several external parties for this service. The freight transport channel can be positioned among the other channel-concepts on a level close to the fundamental mission of freight transport. The logistics channel is a wider concept than the freight transport channel. It should be regarded as a set of interdependent organisations involved in the process of creating time- and place utility by making a product available for use or consumption through storage, handling, transfer, transportation, and communication functions. Physical distribution deals with moving, storing, and processing the output of firms. The companies that perform the services making the movement possible (loading/unloading services or stocktaking) are not explicitly dealt with in the freight transport channel.

²⁴ “Door to door” should be interpreted broadly – it might for instance concern a freight transport channel working from a manufacturer to a warehouse or the other way around. A door-to-door transport can include different coordinators, carriers, and modes of transport. It is not necessary that the same load carrier is used throughout the movement.

Freight transport channels, where firms work together in cooperations, are growing in importance, as stated by the Swedish Freight Transport Delegation in the quotation in section 1.2.3 above. The characteristics of the service that the freight transport channel provides depend on internal factors as well as on other companies involved in the supply chain (see, for instance, Paulsson, Nilsson et al. 2000). The market for a transport channel may be an entire OD-matrix in a macro-oriented representation of demand or a single OD-relation in a more micro-oriented case.

The term “actors” is throughout this thesis used as a synonym for shippers, coordinators, and carriers. The term cannot involve only a subset of these types but it does not necessarily refer to every shipper, coordinator, and carrier. The freight transport channel participants (i.e. the service suppliers) take on different roles. Figure 4 below describes a freight transport channel performing a movement of the goods from X to Y involving three carriers and coordinated/supervised by the coordinator (the eye in the figure). The service that the shipper is interested in is performed by the freight transport channel, which thus consists of several parts. The parts building the channel may be organised by a coordinator even though such a coordinator not necessarily has to be involved in the channel. The coordinator’s role is further discussed below.

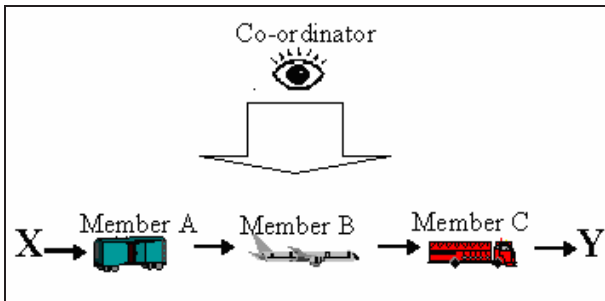


Figure 4. *The freight transport channel.*

There is a lack of empirical evidences helping out to understand how, and if, competition occurs within and among freight transport channels. To bring forward such knowledge is one important task in this thesis. The service suppliers (i.e. the carriers and coordinators) cooperating within a channel compete individually and/or collectively with other channels and their participants. The channel participants also compete within the channel, striving to optimise their own company’s position. The channels compete with each other in attracting the best members. Service suppliers may, on the other hand, compete with each other hoping to be chosen to work in a certain channel. Furthermore, each individual carrier in the channel may compete with external companies about the positions in the channel. The latter form of competition will in this thesis be referred to as

external competition. External competition may also occur when channels and channel participants compete with alternative solutions such as a movement of the shipper's business, or the shipper starting to use a warehouse. Competition may, thus, occur as intra-channel competition (i.e. competition within the channel), inter-channel competition (i.e. competition between channels), and external competition. Even though it is not within the scope of this thesis to discuss it can be understood that service suppliers also may compete about resources in trying to attract the best staff, equipment, etc.

The Role of the Coordinators

The coordinators' role varies considerably. Some coordinators are responsible for selecting the carriers that should be used in the channel, while others "only" administrate and make the channel with the selected carriers work as smoothly as possible. Not every freight transport channel has a specific coordinator. The shippers may have contracted the carriers so that they know when to pick up and deliver the load and at what origin and destination this should be done. The carrier might, then, tell the next member in the channel that this has been done so that they know when they can take over the movement process. If a coordinator is not used, the shipper or one of the carriers can assume his role. The channel service might be created as a package of separate services offered to the shipper as a full freight transport channel solution or as individual parts performing their service on a link in the route. The leadership and the integration vary from very weak in the case of almost market-based channels, where the participants work independently from the other performing their part of the freight transport channel service, to very strong in the case of vertically integrated channels. In-between these extremes, all different forms of partnerships can be found. Various kinds of partnership occupy a position somewhere in between these two extremes. The coordinating mechanism may be based on power, commitment, and trust or a combination of them see, e.g. Kanter (1994), Bowersox and Closs (1996), Donaldson (1996), or Stern, El-Ansary et al. (1996).

The need for a coordinator in the channels depends on many factors like the regularity, the characteristics of the pick-up and delivery points, the time philosophy (just-in-time increases the use of a coordinator), and the formal and informal communication among the actors. For instance, when one carrier picks up the shipment at the factory and delivers it to a warehouse or a split-up-point where another carrier takes over the responsibility of the movement, the idea of having a coordinator is limited. Since the role of the coordinator is special, it is sometimes difficult to determine what actor(s), if any, takes on the coordinator's role.

1.4. Competition

This section deals with another central concept in this thesis – the concept of competition. The thesis discusses how competition is understood, used, and how it can be split up and analysed with focus on the freight transport sector. One of the theoretical contributions of this thesis is the discussion about competition as a concept. Competition in freight transport is somewhat special, since it is controlled and restrained by public policy. Foreign carriers may, for instance, not operate as they please in Sweden and there are strict regulations and laws that each carrier and coordinator, domestic as well as international, must convey to in order to be able to begin to operate on the market.

Competition might be thought of as a contest between parties in the best case and, in the worst case, a destructive war between parties²⁵. If we view competition in this broad sense, competition is everywhere.

1.4.1. The Importance of Competition

Competition is one of those words that most consumers as well as many producers perceive as positive (Konkurrensverket, 2002). Most Swedish consumers as well have a positive feeling for the word competition²⁶. Competition in the business sector is synonymous with higher quality and/or lower price to the customer. Most people believe that they intuitively know what competition is. However, when asked more directly, they seldom give a theoretically “correct” definition. There are several plausible explanations for this. First of all, one simple reason is that they do not care. People, in general, are highly affected by competition, in good as well as bad ways. They care about the effects of competition and how these might be amplified or moderated but the definition is of little interest. A second reason is that it is difficult to grasp the different dimensions of competition. Competition defined from different points of view will typically be very different, since the dimensions, the building blocks of competition, are perceived differently.

The value of competition in freight transport can be expressed by the very simple observation that, if shippers can choose between carriers, the carriers try to adapt their offers in order to increase customer value by improving efficiency, effectiveness, and innovation in order to survive. Understanding the process in which this improvement takes place, firms’ competitive behaviour is of considerable interest to the business firms themselves as well as to the Government. Decision-makers in governments and private enterprises have little guidance from theories focusing on competition from a firm perspective, and, therefore, they might have to rely on incomplete or misleading theories. This

²⁵ One example of destructive competition in the sector of transport is, according to a discussion with Donald Wood, the U.S. motor-carriers before 1935.

²⁶ Konkurrensverket (2002) referring to Sifo Research & Consulting (2002).

might, from time to time, lead to decisions where the result counteracts the intention. There are numerous examples of effects of this kind that would not have occurred with a better understanding of the competitive situation. In order to stimulate the use of trains for transports, governments might increase road traffic costs. However, the effect might be increasing use of airfreight instead. Another example is the introduction of rail freight subsidies in order to reduce road transports, which resulted in a decrease of sea transports. With better knowledge of who competes with whom and how this competition is working in freight transports, such surprises might be avoided.

Competition is often said to be a driving force for improved efficiency. This is undoubtedly true, but it is important to point out that competition is not necessarily beneficial to society as a whole. Some actors may benefit from an increased competitive situation, while others lose from it. If the economies of scale are large enough, we may have a natural monopoly²⁷. If this were the case, the business would have the best possibilities to serve society if it is managed as a state owned or regulated monopoly (as discussed in section 1.1.2). If the economies of scale are not of this magnitude, competition, especially intramodal²⁸ competition, may benefit the customers resulting in cheaper services and/or a larger variety in the price/quality combinations offered. Further, improved efficiency does not necessarily imply lower prices or better services for the transport buyers. The efficiency improvement might as well only benefit the seller by higher profits. In “the long run”, however, when the sellers’ competitors have reached at least the same efficiency through using the same or a better technology or whatever the competitive advantage came from, the customer will benefit from the increased efficiency, since the firm cannot use its monopoly power anymore. Competition can benefit producers through larger market shares and higher profits, and customers through new/improved services or lower prices as a result from innovations.

Competition among freight transport channels might be present continuously or at specific periods in time leaving the carrier with some monopoly power in the meantime. Normally, this monopoly power is, however, limited if the shippers have (and if they are conscious about this) alternatives for the chosen channel.

²⁷ A natural monopoly (see, basic textbooks in Economics such as Begg, Fischer, & Dornbusch (1994), Parkin (1990), or Wonnacott & Wonnacott (1986)) exists when one single firm can serve a market at lower cost than any combination of two or more firms. Natural monopoly does not arise from the activities of Governments or rivals, as might be the case in traditional monopolies. Natural monopolies exist because of economies of scale and scope, which are significant relative to market demand.

²⁸ Intramodal competition refers to competition among carriers representing the same mode.

1.4.2. What is Competition?

The following section will discuss what competition is and what effects well functioning competition has on the market outcome.

A Concept with Many Meanings

Answering the question above can hardly be done in a way that makes sense to each and everyone, since the term competition is highly depending on the observer's frame of reference, see, for instance, Konkurrensverket (2002). Some customers regard competition as something that gives customers greater choices and others as something that increases or decreases the price-quality ratio, while still others focus on the conditions for competition in thinking about the term. If the term is perceived from the sellers' point of view, competition can be regarded in a less positive way. They might find it threatening to their position or even existence, but they might also, in a positive way, find it inspiring and as a driving force for the development of their products or services. Lastly, looking at competition from a regulator's or an authority of competition's perspective, competition provides advantages as well as drawbacks. In freight transport this regards intramodal as well as intermodal competition and national as well as international competition.

Competition, which is often seen as being synonymous with the concept of rivalry, is described in Khemani & Shapiro (2003) as "*A situation in a market in which firms or sellers independently strive for the patronage of buyers in order to achieve a particular business objective, e.g., profits, sales and/or market share*". This definition has one weakness in stating independence as a condition²⁹. Competitive rivalry between firms can occur when there are at least two firms. Rivalry may take place in terms of price, quality, service, or combinations of these and other factors that customers may value. Competition is viewed as an important process by which firms are forced to become efficient and to offer better choice of products and services at lower prices. It gives rise to increased consumer welfare and allocated efficiency. According to (Lövström, 2002-02-20), the Swedish Competition Authority interprets competition in the following way (freely translated): "*Well functioning competition concerns a situation where the quantity produced is the one at which the difference between the market price and the marginal cost is as small as possible*"³⁰.

²⁹ In the freight transport market, as in many other markets and industries, is it common to see companies cooperating to some extent when it is convenient. These companies might, therefore, compete to some extent and cooperate to some extent.

³⁰ The Swedish original: "*Med en väl fungerande konkurrens menas att utfallet på marknaden är sådant att den kvantitet produceras vid vilken avvikelsen mellan marknadspris och marginalkostnad är så liten som möjligt.*"

The concept of competition has not had a thorough exposition in literature focusing on freight transports. Competition is traditionally defined as a contest for command over scarce resources. Broadly speaking, competition can be viewed from two perspectives. Either it is understood as competition among sellers in order to sell products to the customer(s) or as a phenomenon occurring among buyers that want to buy the service. Focus here is on the first type of competition. If the process of competition is successful for an actor, he will gain market power in his product area. Based on my experience from the freight transport sector and my studies, I preliminarily refer to competition as *the dynamic process through which sellers strive to win the buyers' commission, confidence, and loyalty*. The customers' commission, confidence, and loyalty can be won through one's product/service being superior supplier in some way or the other to the alternatives available to the customers.

Competition can be said to exist when the buyer's (shipper's) choice set regarding the freight transport alternatives consists of more than one possible solution. The buyers, and only the buyers themselves, can decide what solutions can be regarded as competitors. The channels, or other solutions to the shippers' freight movement problem, that the actor perceives as potential solutions to the problem compete more or less actively. Several issues dealing with such competitive situations can be analysed from the shippers', the coordinators', the carriers', and society's point of view. Is there competition in a market if the actors are not aware of the competitors' existence? If a supplier thinks that he is the only provider of a service he will, if he is a profit maximising company, set a high price. If competition is present and the firm has not understood that it is, this will probably lead to a loss of market shares. This paragraph is expanded in section 4.2 and in Appendix II.

For the service suppliers to experience a real competitive pressure, the shippers and coordinators must make active choices. They have to make the carriers believe that they are serious in their threats to use one of the competing solutions. If the shippers and coordinators use the competition in an efficient way, they will, theoretically, benefit from this. However, in real life, this is not necessarily the case. This is one of the shortcomings of the traditional theories of competition. It might be more rational for the shippers and coordinators not to make use of the threats to choose the carrier with the best offering. There might be many reasons for not choosing the best price-quality combination. For instance, it might, in the long run, be strategically safer and/or more profitable due to e.g. switching costs, to stay loyal to one carrier than switching for the optimal solution in the short run. Among the shortcomings of the traditional theories of competition one can mention that they do not explicitly deal with soft variables, such as history, traditions, personal relations, and other forms of transaction costs.

Why is it important to know that different buyers view competition differently? Well, the carrier can, if he understands the shippers' view of the competitive surfaces, compete more efficiently focusing on bringing forward his competitive advantages and comparing them to the other solutions in the shippers' choice set. If a carrier has a wrong idea about the shippers' view on competition, the carrier risks to focus on "wrong" dimensions of their service. For instance, the carrier may stress the high reliability of their service while the shipper's almost only is interested in the price.

When asking shipper-, coordinator-, or carrier representatives the question "*which are your competitors?*" they typically mention some companies. This way of answering the question bears witness of a not too well developed understanding of the concept of competition. Most respondents ought to start their answering by stating: *Well, it depends...* The reason is that the answer depends on different things. First of all, and maybe most importantly, the answer depends on the perspective chosen. The carrier will have to look at the issue from the customers' point of view, since this is where the competitive surfaces are decided. So, if the carrier views the competitive situation as it is realized by shipper A, the answer might be different than if the carrier views the competitive situation from shipper B's perspective.

If there are ten carriers in the market³¹, one shipper demanding a simple service might find that all ten of them as competitors, since they all can offer a price/quality-combination that satisfies the shipper's needs. Another shipper might have more complex requirements on his freight transports that only one of the carriers can satisfy. This leaves that carrier with a monopoly *regarding that very shipper*. There might, of course, be reasons why the carrier still cannot earn the monopoly's rent more than for a short period. The pressure from potential competitors might stop the carrier from earning monopoly rent (see, for instance, Baumol, 1982). Carriers might, thus, compete in some respects, while they might not in others.

Relevant Market – The Foundation for Discussing Competition

One of the most fundamental aspects in analysing competition is how the relevant market is described and defined. When the transport buyers try to benefit from the competitive situation in the freight transport markets, they need to define the relevant market. It is vital that the definition is as correct as possible, since this

³¹ Now and then there is a discussion of the multifaceted market concept. The concept can describe the physical place where food and commodities typically are sold, it can describe the marketplace where goods and services are traded, or it can describe the interface between supply and demand for goods or a service, where price, quantity and other characteristics can be determined following the tradition of Walras (1874) in Polak & Heertje (2000) Chapter 5 *Imperfect competition in transport markets* by Emile Quinet.

will decide how the competitive situation is treated and used. To define the relevant market is, however, not easily done and it will always be easy to object to the definition³².

The relevant market deals with two aspects. These are the service market, or the product market, and the geographic market. Among others, Goetz (2002) notes that the relevant geographic market “*can be defined in different ways, depending on the industry, products, and geographic areas involved*”. In dealing with these aspects of the relevant market, the demand- as well as the supply-side has to be considered. Looking at the market from the demander’s, and the buyer’s³³ point of view, the services have to be regarded as substitutes if they should be in the same service market³⁴. From the supply side, one should look at the actual as well as the potential service suppliers that are perceived as substitutes from the buyer’s perspective. From the geographical perspective, the market can be more or less extended.

The domain of competition of a service depends on the customers’ choice, demographical, and geographical factors. In deciding the relevant product market, the alternatives and demands of the customers must be identified. How the boundaries are set for the relevant market differs from person to person and from case to case. Therefore, a seller of a service may think that he is in a special market, while the buyer is of a different opinion. It is quite possible that different individuals within a firm have different opinions about the relevant market.

It is not good to define the market too narrowly, as pointed out in Tirole (1988). In a very narrow definition, each and every company would possess monopoly power. On the other hand, the definition should not be too broad either, since many products are substitutes to some extent. If the relevant market is misunderstood, the consequences can be dramatic (as in the examples discussed in section 1.4.1.).

³² This might be exemplified in the following way. Assume a transport from A to B, a distance of 250 km, which today is performed by train at a certain time of the day. What is the relevant market, from the transport buyer’s perspective, then? At least the following, non exclusive, alternatives are possible:

- Every possible (regarding size, etc.) transport between A and B.
- Only “green” transports between A and B.
- Only transports with the pick-up time (or delivery time) as specified in the example.
- Transports with a certain maximum price (or a certain level on another characteristic variable for the transport or a certain mode of transport).

³³ In this case the shippers (and, to some extent, the receivers).

³⁴ Which could be exemplified in the following way: A shipper needs a long-distance transport but his company markets itself as an environmental friendly company. Therefore, the company will only use a transport channel in which the larger part of the movement is conducted by rail. This would drastically limit the relevant market.

1.4.3. Competition Policy

The view on competition brought up by the European Parliament is explained in the following quotations: “*Competition in the marketplace is a simple and efficient means of guaranteeing consumers products and services of excellent quality at competitive prices*”³⁵. Further: “*Competition policy aims to ensure wider consumer choice, technological innovation and effective price competition, thus contributing to both consumer welfare and to the competitiveness of European industry. This is achieved by ensuring that companies compete rather than collude, that dominant companies do not abuse their market power and that efficiencies are passed on to final consumers.*”³⁶.

Two things should be noted in the first quotation: first of all, the Parliament says that competition guarantees high quality and low prices. From a theoretical point of view, this is often³⁷ correct but it cannot always be observed in practice. Secondly, it might be rather easy to give the right presumptions for competition in the marketplace but this must not necessarily result in actual competition. If the threat of competition is so strong that the incumbent firm understands that if it does not behave competitively. This will tempt the outsiders to step into the market. This results in the market outcome showing competitive characteristics. In the second quotation, it is made clear that the European Commission is afraid of the effects on the market from close cooperations between companies. They do not mention the positive effects that might result from cooperations. It is important to understand that these are not necessarily all together bad. Cooperations *might* leave all parties better off even though it is important to follow closely cooperating companies to make sure they do not take advantage of the situation at the customers’ expense.

The Concept of Competition in Transport Policy

There are reasons and motives why the national and supranational competition policies regarding the transport sector diverge somewhat. Often, however, the fulfilment of the national transport policy objectives believed to improve cooperation between the modes and carriers, which, in combination with an effective competition between providers and solutions will lead to increased efficiency in the transport system.

“*Transport is crucial for our economic competitiveness and commercial, economic and cultural exchanges*”. These words by Loyola de Palacio open the EU White Book *European transport policy for 2010: time to decide* (The Commission of the European Communities, 2001). Competitiveness can be

³⁵ Source: http://europa.eu.int/comm/competition/citizen/index_en.html Accessed 2003-04-02.

³⁶ Source: *ibid.*

³⁷ It may not be the case under certain circumstances like when there are extensive economies of scale (and/or scope).

regarded as one of the key words in the White book. Competition is discussed from several angles but it is most intensively discussed in terms of intermodal competition. The main objective for the need to alter the intermodal competitive situation is the increasing external effects resulting from the road transport sector³⁸, which otherwise threatens the economical competitiveness of the member states. Intramodal competition is treated far less extensively.

From an EU perspective, the white book makes clear that EU aims to make the railway and the shipping sector, relatively speaking, more competitive so that goods can be transferred from the highly congested road sector and the air sector to these sectors. Competition is defined, in EU's general competition policy, as *“A situation in a market in which sellers of a product or service independently strive for the patronage of buyers in order to achieve a particular business objective, e.g., profits, sales and/or market share. Competitive rivalry between firms may take place in terms of price, quality, service, or combinations of these and other factors, which customers may value. Fair and undistorted competition is a cornerstone of a market economy and the European Commission has been vested with the powers necessary to oversee and enforce EU competition law to ensure effective competition in the internal market.”*³⁹ Competition in the marketplace is a simple and efficient means of guaranteeing consumers products and services of excellent quality at competitive prices. Suppliers offer goods or services in the market to meet their customers' demands. Customers seek the best deal available in terms of quality and price for the products they require. The best deal for customers emerges as a result of a contest between suppliers.

Many national as well as international mergers and acquisitions have taken place in the freight transport industry in the last decade. Neither the Swedish nor the EU competition policies prevent all forms of collusions, a thing that most likely benefits the majority of the manufacturing industry and the customers.

Competition, as treated in the Swedish policy documents regarding the freight transport sector does typically, as in the European Parliament's documents, focus on intermodal competition. These policy documents are in accordance, in all essentials, with their counterparts on EU-level. These papers are written from somewhat different perspectives, since the modal split in Sweden differs from the modal split of the central European countries.

1.4.4. Competition in the Freight Transport Sector

Unfortunately it is not as simple as stating that more, or less, competition in the freight transport sector is beneficial (see, for instance, Hensher & Brewer, 2001).

³⁸ This regards all types of users of the roads.

³⁹ Source: http://europa.eu.int/comm/competition/general_info/c_en.html#t30 Accessed 2003-04-02.

One has to consider several factors in order to be able to tell whether another degree of competition would be good or bad. It depends on what party's perspective one takes in looking at the competitive situation. It might be the society-, the region-, the industry-, the shipper-, the carrier-, or the customer perspective. What is beneficial seen from one perspective can be detrimental seen from another perspective.

The most important perspective in this thesis is that of the shipper's. The reason for focusing on shippers is that "*what is good for the shippers is good for the country*" – even if this might be a qualified lie, there is a good deal of truth in that phrase⁴⁰. However, the shippers' perspective is not the only perspective treated. The carriers' and the coordinators' perspectives are also subject to analysis.

Increased competition will typically be beneficial to the customers. Increased competition on one route or in one segment typically decreases competition on another route or in another segment and this is why negative consequences may arise in another part of the freight transport system. Generally speaking, increased competition, *ceteris paribus*⁴¹, typically implies:

- A pressure on rates and prices offered
- Higher quality of the services
- More/better value-added services

A decreased competitive pressure can have the reverse effect. One can expect the rigidities to be extensive for a carrier/coordinator to carry through changes to the customers' disadvantage when they are exposed to a lower competitive pressure than before.

Since the transport sector accounts for such a large part of the GDP, it is of importance to understand how competition works within the industry. With fewer national regulations affecting the carriers the competitive pressure stemming from international competitors could be intensified. If the rules are harmonised within EU so that competition occurs on equal terms, the freight transport sector can gain in efficiency. Today the competitive situation, among service suppliers from different EU member states and others, is affected by national rules for the nations' carriers, which restraints international competition in the transport industry.

Competition and cooperation are not necessarily incompatible. It is not unlikely that carriers compete in some respects and cooperate in others. They might

⁴⁰ Since this study has a business administration perspective, society's and the region's perspective will not be treated explicitly. However, some minor comments regarding these perspectives are made.

⁴¹ *Ceteris paribus* means other things being equal, or other things remaining constant.

compete to gain a larger share in the channel, but to stay competitive they might have to cooperate.

1.4.5. Why Study Competition?

There are several reasons why it is important to study competition in general as well as in specific areas⁴². Some of the most important reasons for studying competition in the area of freight transports are to:

- See if, and how, price, quantity, and quality are affected by the strength of competition.
- Inform decision-makers about the way competition works in reality.
- Examine how the advantages from an intensified competitive situation can be weighted against its drawbacks.
- Understand how markets work, and where public policy can have an impact.

As stated in section 1.1.1, it is of great importance to understand competition “correctly” from several perspectives. Politicians, managers of different kinds of companies, as well as individual shippers, coordinators, and carriers will benefit from having a good knowledge of what competition really is and what persons, firms, and conglomerates are competing with each other.

From a business point of view, it is important to have good knowledge of freight transports and the competitive situation since these affect industry location. For a manufacturing business to be competitive in the market, it is necessary to have a good transport solution. If the transportation is slow, expensive, unreliable, or otherwise of low quality, this affects the manufacturing industry’s competitiveness. From the point of view of the society, the interest might have origins in e.g. environmental care, industry location, taxes, or competitive power of industries/firms as compared to foreign equivalents. For the end customer, a well-functioning freight transport system implies an increased supply and/or lower prices.

1.4.6. Understanding and Studying Competition

Competition affects every person and every company in modern society. There is naturally a difference in the magnitude of the influence depending on a large number of variables.

It might be difficult to determine whether two companies are competitors or not. This depends on many things but maybe principally on the subjective part in drawing the limits for what and when companies are competitors. Many factors complicate the definition of what actors/solutions are for them to be regarded as

⁴² Some general reasons, which are similar to the reasons mentioned here, are brought up by Bernstein & Gauthier (1998).

competitors. Three such complicating factors are identified by Bernstein and Gauthier (1998):

- Perceived versus “real” competitors.
- Active versus potential competitors (some competitors may be satisfied with their current market share).
- Imperfect consumer knowledge.

To study competition as it occurs in channel settings add complications as compared to analysing competition between individual firms. The channel participants have some motives to cooperate intensively, and other motives not to cooperate. Such motives are based on the fact that the channel participants might be competitors in other settings. Channels, and their members, can, thus, compete with other channels to some extent, but the channel participants might also compete within the channel and with actors’ external to the channel. For this dual motive to cooperate/compete, it is more complicated to analyse competition in channel settings than between firms working individually. Therefore, the channel participants must balance how close cooperation should be.

For the channel to be able to compete efficiently the participants benefit from cooperating. However, reasons can be found why such cooperation is limited, since the channel participants might be cooperators in certain settings but competitors in others.

Another thing that complicates the situation is the dynamic perspective. Firms that are competing at one point in time do not have to be competitors at another point in time. The market for freight transport services is changing constantly. It is dynamic for several reasons. Firms entering the market affect the traditional logistics providers. They are also affected by changes in their environment, such as deregulation⁴³, the globalisation of the transport service markets, and increasing demands from customers⁴⁴.

1.5. Purpose

Given the background described in this chapter, this thesis discusses competition within and among freight transport channels. The purpose of the thesis is:

To explore, describe, and develop the view on competition and competitive forces in the complex setting of freight transport channels.

⁴³ What is meant by deregulation differs somewhat from one country to another. In Sweden, deregulation is synonymous with increased competitive pressure on a public monopoly. In Great Britain, on the other hand, deregulation is closely associated with privatisation, according to Ehrling & Johansson (2000).

⁴⁴ These forces affecting the logistics providers were mentioned by Peter Wagner (CEO Danzas) at the Logistics and Transport Fair in Gothenburg on 23 May 2000.

To fulfil the purpose, competition is discussed from a firm as well as a channel perspective in an attempt to interpret and, if necessary, modify concepts and theories of competition related to freight transport.

1.6. Delimitations and Limitations

Research on the phenomenon of competition often takes on an economic perspective, since economists have developed the prevailing theories of competition. This study highlights, analyses, and interprets competition as it occurs within and among freight transport channels from a company- and a channel perspective. This is done to get a satisfactory picture of as it is viewed, and dealt with from a company behaviour point of view.

This section discusses some delimitations and limitations of the study. According to Creswell (1994), the delimitations address “*how the study will be narrowed in scope*” and the limitations discuss the study’s potential weaknesses.

1.6.1. Delimitations

The delimitations are discussed in terms of the freight transport perspective used, the case studies selected, what market have been investigated, the perspective used in the research process, and some service-specific characteristics. These delimitations will limit the broad purpose presented above.

The Cases

This thesis is based on case studies consisting of shippers and adherent freight transport channels (for details, see chapter 5). The case studies consist of eleven full cases and two partially investigated cases, were selected according to certain criteria. These channels delimit the study. The actual number of channels investigated was given by the saturation in the material. Since this was a deliberate strategy from the beginning, to let the channels studied give the delimitation, no detailed delimitations will be presented. However, there were naturally some other, clearly outspoken or not, delimitations in the project. These may be helpful to the reader to understand what has been studied and what freight transports generalizations might apply to.

Freight Transport Channel

This study deals with freight transport channels and not systems/networks. Such channels can, however, be part of systems/networks. Thus, the channel might be synonymous with a system but it is not necessarily the same as a system.

The Market

This thesis focuses on the Swedish freight transport market, which means that the origin and/or destination of the transport will have to be on Swedish soil. This does not imply that the service suppliers have to be Swedish. In large and much,

the freight transport market is an international market, and, therefore, it is not fruitful, in this study, to focus only on Swedish service suppliers.

Perspective

I do not deliberately take the shippers' perspective, on the freight transport channels but the research is naturally strongly affected by the shippers' perspective, since many decisions already have been made about their freight transport system, what preferences they have regarding the system and their choices. The freight transport channels to be investigated were selected in consultation with the shippers. It should be kept in mind that there is a risk that the channels studied are "success stories" even though they have been selected based on how interesting they seemed to be from the perspective of this thesis. Hypothetically, the shippers might have chosen not to inform me about freight transport channels if they, for some reasons, did not want me to know about them.⁴⁵ Sometimes, the freight transport channel studied was a channel that the shipper was more proud over than others. Throughout the interviews, I have worked with the channel perspective, focusing on issues that regard the channel in general and the selected channels in particular.

Characteristics of the Service

The type of relations treated in this thesis is "non-isolated" cases. This means that the shipments are not of one-off type. Several reasons motivate this delimitation. Most important is, however, that not contracted haulers (often one-man haulers) frequently perform the one-off shipments. Since they are not contracted, the situation is rather elusive and the rationality in the choice process for these transports might be questioned.

The word goods refer to physical products that have to be physically moved from shipper to recipient by air, water, road, and/or rail. This may have consequences for some special products⁴⁶ but on the whole this is negligible.

One, less concrete, delimitation has been made regarding the size of the shippers. The shippers must be of such a size that they are likely to have several different types of regular freight transport movements. Furthermore, I have only selected rather "well-known" companies in this study.

This thesis deals with transports performed professionally. The reasons for not including other transports are (i) their regularity and their use of the manufacturing industry is limited even though their total activity is substantial (ii)

⁴⁵The shippers have been very generous in showing and describing their activities and how they work and think in terms of freight transports. I very seldom had the feeling that there was something that they tried to hide from me.

⁴⁶ For instance, products that could be digitalized and electronically transmitted.

it is very hard to get hold of non-professional transports and how these compete with professionally performed transports.⁴⁷ In this delimitation, another is included deliberately or not. Transports, where the carrier who performs the main part of the transport uses a vehicle with a total weight less than 3,5 tonnes⁴⁸, have not been studied as a consequence of the delimitation presented in the preceding paragraph. This delimitation has not affected the choice of relations studied. It is possible though that these types of vehicles are used at the ends of the movement.

Aviation will not explicitly⁴⁹ be treated in this study because of the fact that the market for freight transportation by air is rather special in the sense that it is far more expensive than the other modes of transport. The aviation mode will thus be rather limited in the type of goods it carries. For movements with special demands regarding time, the aviation segment may be the emergency solution. Even though these emergency cases are interesting and they are closely correlated to the normal cases and the margins, such movements are beyond the scope of this thesis.

1.6.2. Limitations

The limitations have to do with the study's potential weaknesses. Given the purpose of this thesis and the phenomena investigated, some limitations can be identified. Among the potential weaknesses of this study one finds, as one typically does in qualitative studies, that the findings can have been biased, since they are based on the researcher's subjective treatment and interpretation of the empirical material. Furthermore, this study deals only with a small sample of the population of freight transport channels and the actors taking part in such settings, which, of course, makes the generalizations somewhat uncertain. However, if no generalizations are made, nothing will ever be said regarding the freight transport markets since they are so extensive in scope. Of course, due to the qualitative nature of this thesis, the findings could be subject to alternative interpretations.

To a large extent this thesis, and its findings, are based on in-depth interviews. This is both a strong and a weak method for collecting information. Its weakness is that there is neither any guarantee that the respondents answer honestly nor are there any guarantees that they understand the questions and the settings correctly

⁴⁷ The competition between these types of transports is, however, for some markets not to be neglected. Take for instance removal of furniture. Such removals are often performed privately and not registered anywhere – they do, however, compete heavily with the removal firms.

⁴⁸ The reason for this delimitation is to avoid transports performed by bike messengers, and very small messengers operating with a car/van that is classified as a “B-group vehicle” i.e. a vehicle that one is allowed to drive without a specific truck-driver's licence.

⁴⁹ Implicitly, aviation is included to some extent, though. One freight transport channel involves a long distance aviation link. That case study was selected due to the interesting steps prior to the air link.

and in similar ways. These weaknesses are, however, compensated for to some extent by asking the respondents check questions throughout the interview.

In this thesis several choices have been made regarding the research's focus, study objects, methodological design, questions asked, etc. Choices imply limitations, as well as strengths, to the thesis. Also the researcher's background implies limitations and strengths. Some persons might view a subject, such as competition, as more important than other persons do, depending on the subject's and the person's influences and surroundings. Therefore, when comparing and contrasting the respondent's views on competition, some aspects might be given an un-proportional space in relation to how important of the phenomenon would stand out if every channel participant's understanding of the phenomenon were investigated.

1.7. Terminology, Definitions, and Abbreviations

In this section, some basic terminology is explained that will be used in discussing freight transport channels. The terms explained below are central to this thesis and are used according to this definition throughout this thesis if not otherwise stated. Terms and definitions of concepts used less frequently are presented when needed.

Actor	The term actor(s) is used as a synonym for “shipper(s), coordinator(s), and carrier(s)” ⁵⁰ .
Barrier	Entry/exit barriers constitute restrictions to firms' possibilities to enter/exit a market. Such restrictions might, for instance, be of financial, physical, legal, or social/mental nature.
Carrier	The carrier is the party that performs the actual freight transport movement. The carrier often offers some additional services as well.
Chain	A sequence of movements of shipments between an origin and a destination, where the goods are transferred between vehicles/vessels between movements. The transport chain focuses on the traffic.
Channel	See freight transport channel.
Channel participant	A term referring to the carrier and/or coordinator constituting the channel.
Company group	The term company group, or simply group, refers to a group of companies, or a concern. According to the BBC English Dictionary “ <i>a group is also a number of separate firms that all have the same owner</i> ”.

⁵⁰ The term actors cannot involve only a subset of these types but it does not necessarily refer to all shippers, coordinators, and carriers.

Competition	I define the concept of competition in the transport sector as: Competition is the dynamic process through which an actor strives to win the customers' trust by being superior to his competitors in some way or other.
Coordinator	The firm that coordinates the freight transport channel (the coordinator might also serve as a carrier) is a coordinator. What here is referred to as a coordinator, is a firm that can also be called transport broker, forwarding agent, freight forwarder, etc. However, a shipper or carrier involved in a channel might also perform the role of the coordinator.
Freight transport channel	A set of interdependent freight transport service suppliers (carriers and/or coordinators) involved in the dynamic process of moving a shipment between origin and destination.
Intermodal	Intermodal transports are movements that involve more than one mode of transport ⁵¹ .
Intramodal	Intramodal transports are movements that only involve carriers using the same mode.
Level of aggregation	The economic aggregation level at which an issue is analysed. There are macro-, meso-, and micro-levels.
MA	MA is an abbreviation of Merger and Acquisition. In this thesis mergers are not separated from acquisition if not, if not clearly stated. The term is, therefore, to be regarded as a synonymous to fusions between firms.
OD	OD is an abbreviation of Origin/Destination. The origin is the point at which the transport route begins and the destination is where it ends.
Product	Product is used as a synonym for service.
Quality	The quality of a freight transport service refers to the intrinsic properties ⁵² of the service. Some of these variables are measurable while others are not.

⁵¹ Many other definitions of intermodality deal with containerization, see Jones, Cassady, & Bowden (1999). Intermodality, as it is used in this thesis, does not have anything to do with the load carriers. It rather follows Merriam-Webster's definition (<http://www.m-w.com/cgi-bin/dictionary>, accessed 2004-04-07) stating that "...being or involving transportation by more than one form of carrier during a single journey". The concept of intermodal transports is sometimes said to be transports where unbroken single loads are used in chains and different modes cooperate. This use of the concept of intermodal transports seems to be dominating in the USA, according to Swahn (1997).

⁵² These properties deal with the dimensions of quality as described in Jensen (1990) The dimensions Jensen describes are frequency; transport time; regularity; goods comfort; transport security; controllability; flexibility; detachability; and expansibility.

P/Q-ratio	P/Q is used as an abbreviation for Price/Quality and the higher the ratio the less attractive the offering for the customers.
Service	The term service in freight transports refers to those characteristics that have personal communication as the main contact surface. The term “service” is viewed as a subset of the broad quality-term. Since it is such an important subset, it is sometimes necessary to be able to separate it from the core quality concept.
Service suppliers	Service suppliers, as a term, is used as a synonym to carriers and coordinators.
Shipper	The shipper is the firm that orders the freight movement – here used as a generic term for the companies I have contacted regarding their transports. The shipper is the buyer, but not necessarily the payer, of the freight transport service.
Surface of competition	Those alternatives that constitute a solution to a shipper’s/coordinator’s need, belong to the same surface of competition.
Traffic	Traffic is synonymous with vehicle movements. Traffic performance is typically measured in vehicle kilometres ⁵³ .
Transport (freight)	The process of moving goods from an origin to a destination. The process creates time and place utility. Transport performance is measured in tonne kilometres ⁵⁴ .

A few other things that the reader might find useful to know are:

The terms forwarding agent, representatives, and third party logistics providers are not separated. Instead, these coordinators and carriers are classified as either “coordinators” or “carriers”. Typically, when these firms are selected in the case studies, they are treated as coordinators. Some respondents have been regarded as both coordinators and carriers in the analysis of the material due to the character of the service provided by them.

⁵³ Source: SIK A (2003).

⁵⁴ Source: *ibid.*

2. THEORETICAL FRAME OF REFERENCE

This chapter is based on theoretical textbooks, articles in scientific journals, conference papers, opinions stated by theorists in less well-reputed sources⁵⁵, and theoretical/academic “public property”. The sources discussed in this section, mainly of a theoretic nature, to a large extent refer to the fundamental aspects of the problem, such as theoretical aspects on competition, collaboration, and logistics/transport economics.

This chapter covers three broad fields. These fields will together constitute the theoretical foundation that this thesis rests on. The first field is “Competition” and it deals almost exclusively with different concepts of competition. The section provides an extensive description of the different theories and concepts of competition that have been found and considered in this thesis. The purpose of the section is to focus on theories that can be supposed to be the most significant ones for this thesis, given the context it is written in. The section also covers concepts that are not relevant for the thesis. These concepts are described, in disparaging terms, for the section to be more complete. The second field is “Cooperation” and it takes on a rather broad view on cooperative issues that are relevant when dealing with freight transport channels. This section does not aim to cover most theories on the subject, as the section on competition did. Rather, the fields discussed are brought up since they are important, given the purpose of this thesis and the setting it is conducted in, throughout the research process. The third field is “Channels and Logistics” and is different from the others in some respects. First of all, the first fields are naturally delimited in their scope. Secondly, they are “standing alone” in so far as they can contribute to an improved understanding in several fields. The third field depends on the other two fields in treating the organization and management of freight transport channels. This field depends on the context in which it is studied and to a higher degree than the former subjects, i.e. competition and collaboration. For this reason, the section starts out by describing logistics, transport economics, and channels of distribution. This section is, therefore, somewhat broader than the

⁵⁵ These findings might stem from the Internet or personal communication for instance.

title might indicate. It brings forward concepts and theories in the following fields:

- Chain and channel concepts
- Transport Economics/Business Logistics

Some of the theories and concepts dealt with in this section are large and well-known lines of thought that have had, and still have, important consequences for practitioners as well as theorists, while other theories are “smaller” or theoretical modifications of existing theories. Some are rather old-fashioned but still interesting while others are very important and deserve more attention. Some theories have been and will probably also in the future be of very limited practical as well as theoretical use. The section aims to provide a description of all the existing theories that I have been looking deeply into. Therefore, this section is rather broad in range. The reason for incorporating all these theories and aspects in the thesis is to give the reader a broad background to improve the understanding of the problems one comes across when investigating the freight transport channel market from a theoretic perspective. Furthermore, this section contributes by gathering the major theories and aspects on competition in a more concentrated form than ever before. Most of the theories and views on competition as described in this section draw on microeconomic theory.

In research, theories can be used differently. Theories can be viewed as being the true story but they can also be used as ideas about how reality works and to generate hypotheses. In this thesis the theories are used instrumentally rather than to, by themselves, generate hypotheses. By this I mean that the theories are used as an instrument helpful in (i) formulating an interview guide, (ii) being part in knowing what to look for in the empirical material, (iii) analysing the material, and iv) drawing conclusions. In stating that the theories are used instrumentally, I stress that they are used as instruments, as means helpful in understanding and conducting the research project.

2.1. Competition

Competition is described by Parkin (1990) as “*A contest for command over scarce resources.*” The scarce resource for the freight forwarders is principally the customers’ demand for the transport. Competing channels try to get the job to perform the transport(s) ordered by the shipper. There are many definitions of the term competition, but Parkin’s is one of the more traditional definitions. On the other hand, Hunt (1999), describes competition as “*the disequilibrating process that consists of the constant struggle among firms for a comparative advantage in resources that will yield marketplace positions of competitive advantage for some market segment(s) and, thereby, superior financial performance.*”

Stigler has defined competition as “...a rivalry between individuals (or groups or nations), and it arises whenever two or more parties strive for something that all cannot obtain” (Stigler, 1987, in The New Palgrave, according to Vickers, 1995).

There is, however, competition over many levels in the freight transport markets as described in section 4.3.6. The channels (coordinators) compete against each other in attracting the best members (coordinators and carriers). These members, on the other hand, compete with each other to be selected to work in the channel. Furthermore, the actors compete in attracting the best staff, equipment, and other resources needed. There are, of course, different rules that the competitors must comply with. These rules are legal ones (national as well as international laws of competition) but there are also moral restrictions on their actions.

Competition puts pressure on the firms/channels to increase their efficiency – giving the consumer a better service or a lower price. The channel that is producing a superior product than its competitors will be the winner in an economical sense, given certain assumptions. Competition might be good for the coordinators and carriers, since it can help them to find ways to improve their business, which they would not have done otherwise. These improvements may benefit the customer, from lowered prices, as well as the firm, from lower costs that are not fully passed on to the customers.

Much could be said about competition regarding such aspects as how it works, and how it should work. But what it all comes down to in the end is that the actors’ perception of the competitive situation in the market is one of the most important aspects. The actors do not have perfect information in reality. Therefore, actual and perceived competition differs, which imply difficulties in making decisions. These thoughts are developed in Appendix II.

Why is the competitive situation of importance then? Well, there are many reasons. The transport channel participants may set their prices differently in different competitive situations. If competition is intense, it may be necessary for the channel (parts of or the whole channel) to set the price close to the marginal cost of the service. On the other hand, if competition is weak, it may be possible to set prices in the same way as a profit-maximising monopoly would have done.

I have been looking at several different theories⁵⁶ of competition⁵⁷. Most of them are to some extent influenced by the (neo-) classical market structures and its

⁵⁶ Well, to be honest I do not think all of them are to be considered as theories in its true meaning – many of them are rather views or concepts on competition – but I will refer to them as theories.

view on competition. Some of the theories are to be considered as being modifications of each other rather than new concepts. All theories focus on “simple” products – neither services nor channels. Most of them are however likely to be usable directly or with a slight modification for services as well. More serious is that most of the existing theories⁵⁸ do not deal with channels, which is a key concept in this thesis. Competition may, of course, occur in different forms. Two common forms are price competition and quality competition. The quality service competition takes the form of different suppliers’ offering different qualities in their services. In freight transport channels, many forms and relevant aspects of competition co-exist since the service sold may be rather complicated. The difference in analysing different forms of competition is large; the forms of competition have, therefore, not been separated.

When comparing competing theories of competition, it is impossible to single out and compare every variable. Therefore, Ochoa & Glick (1992) suggest that “the hard core”⁵⁹ of the theories should be compared. This is what the following review of many theories of competition aims at. The theories having the most suitable hard core have, therefore, been given most space in the following exposition. This does not imply that other theories are unusable. They may be used to complement “the hard core”.

The reason for including this section, dealing with the theories, is that it provides an overview of most existing views on competition. Of course, it is not supposed to be a description of every existing view of competition. The descriptions are included here to give the reader a deeper understanding of the common grounds many theories have. Naturally, as indicated above, the theories that are most likely to be usable in this research project will be given most space in this description. Among the theories and concepts described in the following sections it is possible to find those sharing some or many ideas, others that have been influenced by several other theories, and those that are more distinguishing understanding competition in a more unusual way.

Competitive advantages might arise in a wide variety of forms. Porter (1980) describe the advantages to be described as either advantages from lower costs or from differentiation. The concept of competitive advantage is sometimes described as being the link between strategy and competition, see, for instance, Porter (1985; 1990) or Porter and Kramer (2002). Possible strategies to reach

⁵⁷ The theories deal with subjects like trying to understand how a specific competitive situation arises, how the competition in a market evolves, how a company can affect its competitive environment, etc.

⁵⁸ Maybe with exception from relationship marketing and the new concept of competition.

⁵⁹ This is what is most representative for each theory.

competitive advantages are through being the cost leader, by differentiation, or by using focusing as a strategy (see, for instance, Andersson, 1999; Enarsson, 2001; Porter, 1985; Porter, 1991; Rask, Igekint, Karlsson, Lindberg, & Ödlund, 1999).

2.1.1. Theory of the Core

The core of the market Telser (1988) consists of all possible competitive equilibriums that can arise in the market where sellers and buyers meet. The competitive process does not always result in a classical equilibrium. This theory imposes fewer restrictions and relaxes the assumptions of the classical analysis of competitive equilibrium. The theory is not relevant here, since it is about the aggregates in the market.

2.1.2. Keynesian and Post-Keynesian Competition

Characteristic for Keynesians is that they accept state regulations for the public good. These regulations may take many forms; for example there can be interventions in form of fiscal policies and/or through subventions. Non-market solutions and imperfect competition are key concepts in this view of competition. The theory is, thus, not founded on the superiority of the perfect competition. The relevance for me is quite low, since it discusses competition from a society point of view. It might be useful to explain different kinds of state subventions⁶⁰.

The post-Keynesian economists are far from being a homogenous group. In line with this, there is no generally accepted post-Keynesian theory of competition. The advocates of the post-Keynesian view of competition have an important thing in common – they all focus on the variables capturing demand conditions. The group argues that prices are determined by costs and not by demand. Furthermore, the group gives one important explanation for prices being higher than costs in the long run (neo-classical economists hold that there should not be any mark-up in the long run). Their focus is on mega-corporations. These large companies are not, as assumed by neo-classical economics, passive agents of market forces Tsaliki and Tsoulfidis (1998).

2.1.3. Marxist Competition

There are three major differences between the Marxist⁶¹ and the neo-classical views. These are (i) the relation between individual capitals; (ii) Marxists look at

⁶⁰ This theory would have been more interesting if I was to view the sector from an economics point of view.

⁶¹ For texts on the Marxist view on competition, see for instance: Marx, K. *Capital*, Vol III, Chs XVIII and L (Illusions created by Competition); Chs LI and XLVIII-XLIX (Production Relations and Distribution Relations). Marx, K. *Poverty of Philosophy*, Ch. II, Sec. 3, International Publishers, 1971; Marx, K. *Wage, Labor and Capital* (written in 1847, the section on competition is of particular interest); Rosdolsky, R. *The Making of Marx's Capital*, Ch. IV, Sec. B.2, Pluto Press, 1977; Shaikh, Anwar. 1980. *Notes on the Marxian Notion of Competition*, New School for Social Research.; Semmler, Willi. 1984. *Competition, Monopoly*,

the market as a whole and not as specific market segments; (iii) competition is viewed as the process by which individual capital cohere in the formation of total capital. The concept is not relevant for me for basically two reasons. First, it deals with the aggregates in the markets; second, it is based on a totally different economic and political environment than the Swedish.

2.1.4. Neo-Classical Competition

The Neo-Classical view on competition is based on the market structure variables. Especially the concept of perfect competition⁶² is a cornerstone of the theory. The entering and leaving of firms is the most important factor in eliminating profits above “normal”. The intensity of competition in the market is due to the number of firms active on the demand-side and the supply side. The overall view perspective is that the world is led to the best solution in the long run. The assumptions may be unrealistic but the theory may still be useful as a benchmark. The theory seems to be to unrealistic when not dealing with aggregates and it is, therefore, of rather limited interest to me.

In perfect competition there is really no dynamic competition at all, since firms and products are equal in every important aspect. That is, the intense competition occurs prior to the “state” perfect competition. In this time, the companies, and their products become more and more similar regarding all dimensions (such as technical aspects, costs, price) and since no barriers to enter⁶³ the market exist, other firms will enter the market as long as there is an above normal profit to make. After a while, we enter the state of perfect competition – this is the state when every firm and its products are uniform in every relevant aspect. Firms do not make any above normal profit and they do, so to speak, not dynamically compete any more. When at least one assumption made in the theory of perfect competition is altered, the market is imperfectly competitive. Since there are so many ways in which the assumptions could be relaxed, there is not one theory about this kind of market structure that could be regarded as *the theory of imperfect competition*. Imperfect competition ranges from monopoly via duopoly,

and Differential Profit Rates, Columbia University Press, New York: chs 1-2 (theories of competition).

⁶² For a market to be perfectly competitive there should be:

- Many firms selling identical products
- Many buyers
- No barriers to entering the market
- No advantage for incumbents over potential entrants
- Perfect information

⁶³ There are mainly two types of barriers. These are the structural (economic) and the strategic (behavioural) barriers. The former arise from industry characteristics such as technology, costs and demand, while the latter arise from the behaviour of incumbents, according to Khemani & Shapiro (2003).

oligopoly, and monopolistic competition⁶⁴ to the cases where competition is almost perfect.

One interesting market structure when analysing the freight transport market is monopolistic competition, where products offered for sale by firms differ, i.e. the products are close but not perfect substitutes. Chamberlin (1933) introduced the term monopolistic competition. The characteristics are that every firm faces a downward-sloping demand curve, firms do not make any above-normal profits, and price changes by a firm will only have moderate effects on other firms in the industry.

Walrasian (competitive) market equilibrium is a variant of the neoclassical view appropriate for analysing commodity markets characterised by adaptable prices and many traders. The paradigm is based on the assumption of a competitive environment. The firms in the market are price-takers i.e. they cannot influence prices. The Walrasian equilibrium consists of a vector of prices and an allocation so that, given the prices, each trader by maximizing his utility given his presumptions, offer and demand products and services, whereby the market is cleared. Walrasian markets minimize the informational requirements to complete a transaction. The traders must only know the products' characteristics including the price, and their utility function. Full information on the characteristic is necessary in order to retain the efficiency features of free price formation in competitive markets. When the traders have some market power, the competitive paradigm does not longer apply fully. Prices can then be explained as auctions. When there are many buyers, results from the auctions tend to approach the competitive price.

2.1.5. The Classical Theory of Competition

This view bases the analysis on the conditions for production. Free mobility of capital and labour is a cornerstone. Firms do not make profits above "normal". Competition is an inter-temporal process. Exchange only rarely takes place at a general equilibrium. The classical concept is far broader than the neo-classical, since the former is not limited to changes in price and quantity. The theory stresses that the process of competition is more important than the final situation in terms of number of participants and their relative largeness (Tsaliki & Tsoulfidis, 1998).

⁶⁴ These oligopolistic market structures differ from the other structures because: "*Oligopoly is distinguished from perfect competition because each firm in an oligopoly has to take into account their interdependence; from monopolistic competition because firms have some control over price; and from monopoly because a monopolist has no rivals.*" (Khemani & Shapiro, 2003)

I find this theory to be a more realistic view on competition than the neo-classical model. The theory could be useful for benchmarking purposes but it is of limited use for analysing the freight transport market from a company/channel-perspective, since it relies on conditions that are not fulfilled in reality. The view takes on a too broad economics perspective to be really interesting in analysing segments of an industry.

2.1.6. Workable Competition

Workable competition is a concept that was brought up by Clark (1940) since perfect competition did not exist in reality⁶⁵. Clark held that theories based on perfect competition were not reliable guides for competition policy. He further said that the objective for the policy makers should be to make competition “workable”, not perfect. One of the problems is to decide the criteria to be fulfilled for a competitive situation to be “workable”. The criteria typically deal with many different things such as the number of firms in the market and the promotional expenses. According to Khemani and Shapiro (2003) many bodies administering competition policy use some version of workable competition as a guideline.

The concept recognises that individual firms may influence market prices and market condition, since firms rarely have complete knowledge. Economists refer to one of two things by workable competition: “*either the market outcome reasonably approximates the results that would flow from a competitive market or competitive forces are strong enough that any additional exercise of market power would not be possible*” (Hederman, 1989). If a firm possesses market power, the market is not workable competitive. This theory has some interesting points; many are, however, treated in other, on the whole more interesting, theories as well. It might influence my work but it will not be of any interest.⁶⁶

2.1.7. The Social Structure of Competition

The social structure of competition points out that the social structure of the firm and its members is important in competition among firms. The entrepreneurial opportunities that certain firms and/or people got from having the right social competence disturb the theoretical situation of competition. Each firm brings three kinds of capital to the competitive arena. These forms of capital are financial capital, human capital, and social capital. The social capital of individuals adds to the social capital of the organisation (Burt, 1992).

⁶⁵ Later on, Clark abandoned the term “workable” and replaced it with “effective” (Clark, 1961), “workable” is, however, still today, the term most commonly used when referring to the concept.

⁶⁶ For a deeper treatment of the concept see for instance: G. Reid, *Theories of Industrial Organization*, Blackwell, Oxford, 1987, Ch. 7 or F.M. Scherer and D. Ross, *Industrial Market Structure and Economic Performance*, Houghton Mifflin, Boston, 1990.

2.1.8. Structure-Conduct-Performance

This is a view on competition normally taken by industrial organisation (IO)-representatives. By the structure, including factors such as market concentration, product differentiation, technological aspects, and size of entry barriers, the properties of the industry are regarded. By conduct, the firms' individual decisions, regarding pricing and advertising, for instance, are considered. Lastly, by performance, regarding aspects as market power, consumer surplus, profits, productivity, and efficiency, the social welfare is considered⁶⁷. The structure determines whether the competition among firms is strong or weak. Less competition prevents the performance. Industrial organisation economists try to understand the nature of the competitive behaviour when the ideal conditions of homogeneity are not valid. They recognise that firms and customers are not homogenous groups (Sudharshan, 1995).

The Chicago School approach, see e.g. Friedman (1953) or Reder (1982) goes the other way around. The advocates of this approach argue that larger firms and increasing concentration ratios on the market are the result of firms behaving efficiently and not a result of any anti-competitive behaviour. The approach's advocates say that a growing firm size and increasing market concentration might be the result of the firms and the market working efficiently and anti-competitively (Laaser, Sichelschmidt, & Soltwedel, 2000). According to Banister and Berechman (1993) the school's advocates say that predation by "incumbents" is irrational and it will only benefit the customers.

Laaser, Sichelschmidt, and Soltwedel (2000) hold that "*...the traditional schools of competition and antitrust — the classical Harvard School structure-conduct-performance approach (SCP) and the more recent Chicago School of antitrust approach — have their deficiencies when being applied to the complex contractual vertical and horizontal arrangements within a network industry.*"

The discussion on heterogeneity assumptions, or rather the non-homogeneity assumptions, in the SCP-paradigm are interesting since such aspects seldom are being discussed in such a detail in other concepts of competition. Morgan and Hunt develop these thoughts in the Resource-Advantage theory see section 2.1.11. The concept of market power, as described in the IO-literature is of importance when discussing interrelations as is done in freight transport channels. IO representatives are, however, not the only discussants of the concept. The SCP-paradigm is of importance for the conditions of competition and the influence of the external environment on competition.

⁶⁷ Sudharshan (1995) wrote "*the IO paradigm identifies a set of industry conditions (or context) which ultimately affects the competitive behaviour and performance of firms.*"

2.1.9. Theory of Contestable Markets

One important line of thought originating in the IO-paradigm is the theory of contestable markets. In the theory of industrial organization, some business investment strategies are discussed. Firms can use these strategies⁶⁸ in order to deter other firms from entering the market. The idea behind deterring other firms from entering the market is that the incumbent firm should act so that the new firms' makes no profits. In the theory of contestable markets, the number of firms in a market is of minor interest in determining the competitive situation. This is not the case in the traditional theories, where the number of firms and their sizes is very important. The incumbent firm should invest, broadly defined, to make sure that the entry of other firms is made unprofitable⁶⁹. If the objective for the incumbent firm is to deter from entering, the firm should invest heavily if it is tough and very little if it is soft. If the incumbent firm for some reason does not want to deter other firms from entering the market, it may use another strategy, namely to accommodate entry.

The theory of contestable markets is supposed to be a generalization of the concept of perfect competition. Thus, perfect contestability is not supposed to describe reality. It is supposed to be a benchmark for desirable industrial organisation (Baumol, 1982).

In a contestable market, the threat of competition ensures efficiency in the market – a market in which no monopoly power is (ab-)used. These conditions require that an entrant should have the opportunity to undercut the incumbent for a period of time. If the profits made during this time exceed any sunk costs, the market is contestable. The incumbent will set prices in such a way that undercutting is not possible to keep the potential competitors out of the market. At these prices, the incumbent(s) will make “normal” profits.

There are four important assumptions underlying the theory of contestable markets (Dixit, 1982). These are (i) all producers have access to the same technology, (ii) this technology may have scale economics but not sunk costs, (iii) incumbent firms cannot change their price immediately, and (iv) consumers respond at once to price differences. If these assumptions (which are stated

⁶⁸ The strategies are described by Tirole (1988) in the following way:

- Top dog – be big or strong to look tough or aggressive
- Puppy dog – be small or weak to look soft or inoffensive
- Lean and hungry look – be small or weak to look tough or aggressive
- Fat cat – be big or strong to look soft or inoffensive

⁶⁹ If the profit of the (potential) entrant is called Π and the investment of the incumbent is called K_1 it can be said that: If the derivative $d\Pi/dK_1 < 0$, the firm is tough and if $d\Pi/dK_1 > 0$ the firm is soft. As can be seen from the derivative, an investment of the incumbent if he/she is tough will decrease the (potential) profit of the (potential) entrant.

somewhat differently by, for instance, Bailey and Friedlaender (1982), Baumol (1984), and Levine (1987)) of the incumbent firms' price rigidity and the time it takes to get established on the market are not valid for the sector of transport, the threat from potential firms will be without any effect (Berglund, 1998a). In the theory of contestability, the number of firms in a market is of minor interest in determining the competitive situation. This is not the case in the traditional theories. A contestable market may thus have any number of firms⁷⁰ and it is not required that they are price-takers. The contestable market theory is developed for cases where scale economies lead to a market situation in which the number of competitors is not "many".

Several empirical tests of the contestability theory have been carried out regarding the airline industry⁷¹. In one of them, Morrison and Winston (1987) conclude that the industry is not to be regarded as a perfect contestable market, since there are sunk costs and it takes time before an entrant can start as an operator. Morrison and Winston (1987) hold that the market may, however, be treated as an imperfectly contestable market. They state "*contestability is not an all-or-nothing proposition*". In the imperfectly contestable market, potential competition influences the pricing in the industry but it does not automatically lead to the existence of non-zero economic profits. Goetz (2002) says that "*Contestability theory has been shown to be totally inapplicable to the airline industry*".

To summarize, an "imperfectly contestable market theory" might be of importance for understanding competition in the freight transport market, since it highlights the importance of potential competition for the market structure.

2.1.10. New Concept of Competition

Many theories of competition are based on a view that competition occurs between simple products. Competition at present, however, occurs on a higher level. Moore (1996) points out that competition has moved on to a system level. He says that competition today is more intense than ever before but it has moved from competition at a product level to a system level. It is the total system leadership that matters and not the leadership for one product or service. In what Moore (1996) calls the business ecosystem, four stages can be distinguished, viz. the pioneering, expansion, authority, and the renewal stages. Moore summarises

⁷⁰ Even a market characterised by one actor that has a natural monopoly may be a contestable market if there are no significant sunk costs. Such a monopoly does therefore, not have to be regulated or subject to competition policies.

⁷¹ Goetz (2002) describe the (US) airline industry from a contestability theory perspective. In the study it is stated that each of the assumptions are now known not to be fulfilled in the airline industry.

“the challenges of leadership, cooperation, and competition across the stages of ecosystem development” in a table reproduced below (Table 2).

Stage of development of the business ecosystem	Overall leadership challenges	Cooperative challenges	Competitive challenges
Pioneering	Value	Work with customers and suppliers to define the new value proposition and a paradigm for providing it that is dramatically more effective than what is available	Protect your ideas from others that might be working toward defining similar offers
Expansion	Critical mass	Bring the new offer to a large market by working with suppliers and partners to increase supply, and to achieve maximum market coverage and critical mass	Defeat alternative implementations of similar ideas; ensure that your approach is the market standard in its class through dominating key market segments; tie up critical lead customers, key suppliers, and important channels
Authority	Lead coevolution	Provide a compelling vision for the future that encourages suppliers and customers to work together to continue to improve the ecosystem	Maintain strong bargaining power in relation to other players in the ecosystem — including key customers and valued suppliers
Renewal	Continuous performance improvement	Work with innovators to bring new ideas to the existing ecosystem	Maintain high barriers to entry to prevent innovators from building alternative ecosystems. Maintain high customer switching costs in order to buy time to incorporate new ideas in your own products and services

Table 2. *The business ecosystem*

I find the thought of competition to be analysed on a system level interesting, since this is done in this thesis. In the market of freight transports, competition exists within as well as between different systems. The view that firms compete in some aspects and cooperate in others appeals to me. The a priori feeling is that such forms of competition/cooperation are likely to be found in the freight transport markets.

2.1.11. Resource-Advantage Theory

The Resource-Advantage theory (R-A theory)⁷², Hunt and Morgan (1995) does a better job in explaining market phenomena than the neo-classical perfect competition theory does. A theory of competition should be able to explain the micro phenomenon of firm diversity. On the macro side of the economy, the theory should be able to explain why command economies are inferior to economies based on competition. The neo-classical theory can, according to Hunt and Morgan, explain the macroeconomic phenomenon in a satisfying way but it cannot give any adequate explanation to the microeconomic problems. This is where the R-A theory of competition differs. These types of theories are compared in Table 3 below. Comparative Advantage theory is to be seen as a synonym to R-A theory, according to Hunt (1999a; 1999b).

	Neo-classical Theory	Comparative Advantage Theory (R-A theory)
1. Demand	Homogenous within industries	Heterogeneous within industries
2. Consumer information	Perfect and costless	Imperfect and costly
3. Human motivation	Self-interest maximization	Constrained self-interest
4. The firm's objective	Profit maximization	Superior financial performance
5. The firm's information	Perfect and costless	Imperfect and costly
6. Resources	Capital, labor, and land	Financial, physical, legal, human, organizational, informational, and relational
7. Resource characteristics	Homogenous, perfectly mobile	Heterogeneous, imperfectly mobile
8. Role of management	Determine quantity and implement production function	Recognize, understand, create, select, implement, and modify strategies
9. Role of environment	Totally determines conduct and performance	Influences conduct and performance
10 Competition	Quantity adjustment	Comparative advantage

Table 3. *Neo-classical theory vs. RA-theory*

Resource-advantage theory is a rather new theory for dealing with process theory of competitive firm behaviour⁷³. It stresses the importance of market segments

⁷² From the beginning, this theory was named Comparative Advantage theory by the originators Morgan and Hunt. In this section, I use the preferred name Resource-Advantage (R-A) theory even in the cases where the originators in their papers used the term Comparative Advantage theory.

⁷³ Presented by Hunt and Morgan in an article in Journal of Marketing 1995 (Hunt & Morgan, 1995).

and resources. The groups within the segments are not homogenous. Schematically, the theory is described in Figure 5 below, see, for instance, Hunt and Morgan (1997a), Hunt (1999), or Hunt (2000b).

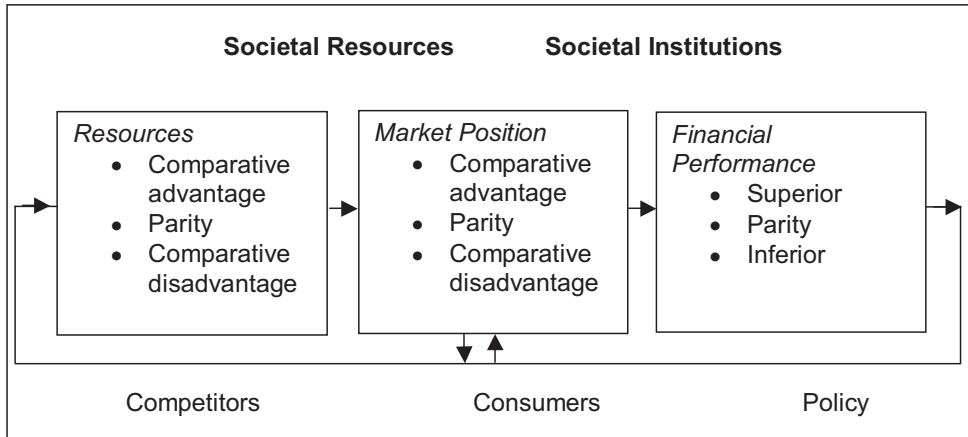


Figure 5. The R-A theory

According to Hunt, the figure should be interpreted in the following way: Competition is the dis-equilibrating, ongoing process that consists of the constant struggle among firms for a comparative advantage in resources that will yield a marketplace position of competitive advantage and, thereby, superior financial performance. Firms learn through competition as a result of feedback from relative financial performance “signalling” relative market position, which in turn signals relative resources (Hunt, 1997c, 1999).

The theory accepts that resources of firms in an industry may be heterogeneous and immobile (Hunt, 1999). As a consequence of this, firms may possess a competitive (dis-)advantage. How a firm can have a competitive (dis-)advantage is explained in the Competitive Position Matrix reproduced in Table 4 below. For interpretation, see the text below.

		Relative Resource-Produced Value		
		Lower	Parity	Superior
Relative Resource Cost	Lower	1 Indeterminate Position	2 Competitive Advantage	3 Competitive Advantage
	Parity	4 Competitive Disadvantage	5 Competitive Disadvantage	6 Competitive Advantage
	Higher	7 Competitive Disadvantage	8 Competitive Disadvantage	9 Indeterminate Position

Table 4. The competitive position matrix

“The marketplace position of competitive advantage identified as Cell 3 results from the firm, relative to its competitors, having a resource assortment that enables it to produce an offering for some market segment(s) that (a) is perceived to be of superior value and (b) is produced at lower cost.”(Hunt & Morgan, 1995; Hunt, 1999)

The R-A theory combines the demand theory in marketing, where demand is assumed to be heterogeneous, with the management view of resource-based firm theory (Hunt, 1997d).

The R-A theory will prove to be very helpful in understanding how competition works in the freight transport markets. The R-A theory may be fruitful in viewing competition within and among channels. I am appealed by the fact that demand is considered to be heterogeneous within industries – the demands on a transport differ from one shipper to another regarding e.g. price, time, quality, and additional services. As most new or revised theories, this theory of competition has been subject for criticism. In Hunt (2000a), the originator of the theory responds to three critical articles, which all are published in the same issue of the Journal of Macromarketing. The criticism refers to whether the comparative advantage theory is too eclectic, too neoclassic, respectively too incremental.

2.1.12. Hypercompetition and Relationship Marketing

Hypercompetition is an intense form of competition. The term was introduced in D'Aveni and Gunther (1994), see also D'Aveni (1995). The major difference between hypercompetition and relationship marketing (RM) is that the latter is built on lasting relationships, while the former is characterised by short relations – this makes hypercompetition the opposite of RM but at the same time this is the reason for treating them under the same heading. Both concepts deal with the relation between companies and persons. To a large degree, RM strives to create a competitive advantage for the companies through the rigidities that the relations create, while hypercompetition strives to create a competitive advantage for the companies through breaking these relations down. Firms should, according to the concept of hypercompetition, try to eliminate advantages of competition. This concerns their advantages as well as others' advantages. Advantages are rapidly created and eliminated. Hypercompetition is constantly out of equilibrium, since it is moving so fast⁷⁴.

In hypercompetition, which D'Aveni views as a market structure in-between oligopolistic competition and perfect competition, the firms aggressively seek their positions by attempting to put opponents at a disadvantage. The firms should develop their own competitive advantages thus making the opponents' competitive advantages irrelevant. This is done through one or several of the

⁷⁴ Source: <http://www.atargo.se/sidor/kun/guests/evert1.html>

areas (i) cost/quality, (ii) timing/know-how, (iii) stronghold creation/invasion⁷⁵, and, (iv) deep pockets⁷⁶. The competitive advantages found are always temporary, since opponents, as well as the focal firm, try to develop better services.

According to Hunt and Morgan (1994a), the term relationship marketing “*refers to all marketing activities directed at establishing, developing, and maintaining successful relational exchanges in the supplier, lateral, buyer, and internal partnerships*”. In relationship marketing, there is a paradox. To be an effective competitor in the era of network competition⁷⁷, the firm also will have to be an effective cooperator. Hunt and Morgan stress that, for an alliance to be successful, commitment and trust are very important. Trust is the most important word in a relationship, since problems may be solved more easily if the partners trust each other. Shared values between firms indicate trustworthy partners (Hunt & Morgan, 1994a).

I view hypercompetition as a market structure rather close to perfect competition. The concept of hypercompetition is rather unrealistic, since firms seldom try to eliminate their own advantages of competition, but rather to develop them further. Relationship marketing is a concept closer to my view of reality. There are close points of similarities between the Relationship marketing and the R-A theory.

2.1.13. Resource-Based View of the Firm

The resource-based view of the firm (RBV) draws on economics and to some extent it can be compared to the R-A theory in focusing to a large extent on the resources and their importance for the firm active in a competitive environment. The firms’ strive to achieve sustained above normal returns through the use of their resources is the basic thought of the concept. The heterogeneity and the strategic factor markets help the firm to reach this objective.

The RBV was in much and large developed from the IO-perspective in the late 1980s and the 1990s even though it is possible to find the thoughts and ideas of the RBV as early as 1959 in Penrose’s work (Penrose, 1959), where it is stressed that a firm is a collection of productive resources⁷⁸. Among the more modern advocates of the RBV, one finds Wernerfelt (1984; 1995), who often is claimed

⁷⁵ In Swedish: Affärsrevir

⁷⁶ In Swedish: Kapitalstyrka

⁷⁷ That competition to a large extent, is between networks is also supported by Lambert, Cooper, and Pagh (1998) who say “*Business management has entered the era of inter-network competition*”.

⁷⁸ Penrose draw on Chamberlin (1933) and Robinson (1933) in highlighting that the firm’s specific resources are of importance for understanding and describing its behaviour.

to be the originator of RBV since he coined the term, and Barney (1986a; 1986b; 1991).

Since the R-A theory to the greatest extent covers the same phenomena as the RBV, and more, the RBV will not be given too much room in this description.

2.1.14. Other Concepts

There are, of course, other concepts of competition not covered in this review. Many such concepts are, to a large extent, slightly different versions of the ones presented (it might, of course, also so that the concepts presented above are a different version of a not presented concept⁷⁹).

Spatial Competition

In a model of spatial competition the geographical dispersion is helpful in explaining the outcomes of competition. “*The theory underlying this approach goes back to the early work of Kaldor (1935), who recognised that firms within a market compete not only with each other, but also, to a lesser extent, with firms in other nearby markets*” (Asplund & Sandin, 1999). Asplund and Sandin refer to this as “*overlapping oligopolies*”.

Yardstick Competition

Yardstick competition⁸⁰ is, according to Bouf et al. (2000)⁸¹, a “virtual” form of competition between comparable companies. In order to be able to talk about this type of competition, it is thus necessary to have several comparable companies. One compares the companies and from this comparison one decides what the best price could be. This price is then to be set by the companies by involvement of a regulator. This concept might be useful when, for example, discussing regulation of country’s railway sector. The rail company should then be compared to rail companies in other countries (Bouf, Peguy, Crozet, & Guihery, 2000).

Demsetz Competition

Another concept is that of Demsetz competition. This is competition for the market (see, for instance Hensher & Brewer, 2001) by recurrent tenders and thereby no competition within the market. The shippers use Demsetz competition, deliberately or not, when trying to contract the best carrier for their

⁷⁹ One example is *The Theory of Competition for Differential Advantage* as presented by Clark (1954). This theory points out the fact that firms are unique in some aspect to their customers. The uniqueness might stem from the location, the products, and/or the methods. Companies will try to gain a competitive advantage from these sources. Absolute advantage is not enough in the competition for customers but differential advantage is also needed, according to Hunt (1991).

⁸⁰ The theory of yardstick-competition was developed by, among others, Baiman and Demski (1980), and Holmström (1982).

⁸¹ The authors refer to Shleifer (1985).

needs. Yardstick competition, on the other hand, is of more use for the authorities in trying to make a former regulated market work efficiently.

Austrian Economics

Austrian economists, such as Hayek, say that there is no competition in the neoclassical theory of perfect competition. Instead, competition, as held by the advocates of Austrian school of thought, is defined simply as rivalry behaviour. Competition occurs when a firm distinguishes the services that it sells from other firms' offerings. The authors stress that the firms do not have perfect knowledge. Hayek stresses that competition is a "discovery procedure" where trial and error are obvious features. The Austrian School of Economics is to a large degree preoccupied with methodological questions.

Dickson (1992) argues, in a semi-Austrian way, that competition *results from* an initial supply-demand disequilibrium. The traditional proposition is that competition *results in* such a state. The concept finds encouragement of self-improvement important and the author say that competitiveness and self-improvement drive go hand in hand. The importance of individual as well as collective rewards for improvements is emphasized. The ability to react quickly is important for a firm when it cannot predict competitor and buyer behaviour. Quick, but not impulsive, response can compensate for imperfect knowledge. The ideal combination is "wait and see" learning combined with quick reaction to what is learnt. Planning and decision-making routines are important for a firm to become competitive. The concept says firms seeking higher profit through tax loopholes, using asymmetrical information in financial markets, etc. results in, less agile, alert, and competitive companies in their markets. The concept "*applies competitive rationality to all firms rather than focusing predominantly on the behaviour of the entrepreneur*" (Dickson, 1992). The theory identifies some important psychological aspects that are not addressed by the Austrian theory⁸². These are alertness, market learning, and imitation (Dickson, 1992).

Cut-Throat Competition

Cut-Throat Competition is also known as destructive or ruinous competition. It refers to situations when competition results in prices that do not always cover the fixed costs of production. This may arise in declining or "sick" industries with high levels of excess capacity or where frequent cyclical or random demand downturns are experienced (Khemani & Shapiro, 2003).

2.1.15. Summary and Concluding Comment

The existing main views on competition do not explicitly deal with complicated products or services but rather with more simple products where, substitutes and

⁸² For more Austrian Economics literature, see for instance: Dolan (1976), or the web-page <http://www.austrianschoolofeconomics.com/> (accessed 2002-08-16).

markets are easily defined. Neither do the views deal with the complication when several products or services are sold in a packet or a channel⁸³. Another drawback of the traditional views on competition is that they do not explain the issues of competition from the BA point of view, where homogenous assumptions about resources and markets are not assumed to be valid. In this section, some important conclusions regarding the different theories of competition and how important I believe they are when investigating competition in a setting as the one used in this thesis are discussed. In this thesis, the “best parts” of several theories of competition are used to explain the findings.

The Importance of the Theoretical Concepts

Table 5 below very roughly describes which theories I find to be useful and which theories I think have the best possibilities of fitting an empirical material collected in a study like this one focusing on the company/channel-perspective.

View on Competition	The view's importance for this thesis			
	High	Medium – High	Medium – Low	Low
Theory of the Core				×
Keynesian Competition				×
Marxist Competition				×
The Classical Theory of Competition			×	
Neo-Classical Competition		×		
Hypercompetition				×
RBV			×	
Relationship Marketing		×		
Workable Competition				×
Structure-Conduct-Performance		×		
The Social Structure of Competition		×		
The New Concept of Competition		×		
R-A Theory	×			
Theory of (imperfectly) Contestable Markets		×		

Table 5. Views' importance summarised

⁸³ I think that channels of services should be treated somewhat differently than a single service from a competition point of view. The reason for this is that there are several levels at which competition might take place simultaneously (see section 4.3.6). The service (performed by a channel) might from the buyer's perspective be thought of as one service if it is bought from a transport channel coordinator or a channel leader. The buyer of the service will then perceive the competition among the alternatives on a “high” level, where only full solutions from starting point to end point are considered. There may thus be competition going on in the channel without the buyer's knowledge.

There are no clear boundaries between the different views on competition presented in this thesis, but, of course, some of them are further away from each other than others. As can be viewed from Table 5, I regard the R-A theory as the most applicable and useful theory. However, I do not believe that this is the only theory or view on competition of interest in my project. The market structures, as understood from a classical economics point of view, are important as well. It is also important to use concepts such as contestability, relationship marketing, and hypercompetition. I further consider “New Concept of Competition” to be important when doing research on the topic of competition. The major contribution of this concept is to move the analysis of competition from a low to a high system level. This is rather natural for me in my project, since it discusses system solutions in freight transport. The IO perspective is also influencing this research.

Many theories have features in common, while others are more “unique”. The contestable market theory has points in common with the SCP-concept, e.g. both are IO-theories. The SCP-concept has points in common with the neoclassical theory of competition, a theory that most other theories refer to in one way or another. Points of similarity can be found between the IO-views and the RM-perspective. The RM-perspective in turn has points in common with the RBV-concept. The R-A theory is similar to many other concepts such as the RBV-, the RM-, the IO-, the Social-, and the New Concept of Competition, and even though the dissimilarities with the neoclassical theory are many some important similarities and fundamental ideas are close to each other as far as I can understand.

The neoclassical theory assumes firms’ objective to be profit maximisation and the role of management to determine output quantity by manipulating capital, labour, and land as the only resources given the demand and the firms’ competitors. I assume that the long-run objective of the firm is to accomplish an acceptable balance between financial performance and strategic uncertainty. The role of management is, in the spirit of Resource-Advantage theory, to give the firm a competitive advantage by developing, selecting, implementing, and modifying business strategies. Competitive behaviour is the actions taken in the dynamic process⁸⁴, where firms strive to fulfil their objectives by optimising the balance between their financial, physical, legal, human, organisational, informational, and relational resources on one hand, and a set of market segments on the other. In this process, resources as well as markets are open for choice within more or less narrow limits for individual firms. I regard resources as

⁸⁴ The dynamic process of competition deals with how the market outcome is developed. This is almost ignored by the theories of competition treated in this thesis with one exception – the R-A Theory.

heterogeneous and imperfectly mobile, relevant information as costly and difficult to acquire.

To summarize my perception of the theories, I conclude that there are some problems most of them share. Most theories, or concepts, if this less ambiguous term is preferred, make rather extensive assumptions regarding aggregation of individuals/companies and small homogenous groups into very large groups, which are assumed to be homogenous in many important aspects. The extensive assumptions regarding homogeneity are the major problem with the existing theories for me, since these assumptions are not realistic to make in analysing competition within and among freight transport channels. I believe that R-A theory differs since it does not exclude heterogeneous and dynamic resources in looking at competition from a theoretical point of view. Another problem is that most theories do not explain competition on a business level but rather on an industry level. This refers to predictions as well as explanations. I believe R-A theory differs, in this aspect as well. These problems make the traditional theories of competition less usable in investigating the freight transport market as it is done here.

Normative and Descriptive Focus

In Table 6 below, I have described in which economic field I think the different theories are useful and whether I perceive the theory to be more usable in normative or descriptive⁸⁵ research. Earlier it was common among researchers to make a sharp distinction between what was descriptive and what was normative research. The descriptive research was seen as being objective and universally true. The normative research, on the other hand, was seen as subjective and influenced by the researcher's values. Further, I have positioned my own research at the bottom of the table. Some comments follow after the table.

⁸⁵ Normative research here is research aimed at trying, theoretically, to explain competition. A normative purpose in research is when the study aims at estimation. Descriptive research, on the other hand, has got the description of reality as one of its main interests – the theoretical objectives are subordinated the role to inform about and describe reality. A study using case studies as a method is generally a descriptive study.

Objective	Normative		Descriptive	
	<i>Business Adm.</i>	<i>Economics</i>	<i>Business Adm.</i>	<i>Economics</i>
<i>Economic Discipline</i>				
Theory of the Core		×		
Keynesian Competition		×		
Marxist Competition				×
The Classical Theory of Competition		×		
Neo-Classical Competition		×		
Hypercompetition				×
RBV			×	×
Relationship Marketing	×			
Workable Competition				×
Structure-Conduct-Performance		×		
The Social Structure of Competition			×	
The New Concept of Competition	×			
R-A Theory			×	
Theory of (imperfectly) Contestable Markets		×		
Position of my research			×	

Table 6. Views of competition positioned according to objective and economic discipline

There are some things to be stressed regarding this subjective table, which is motivated by the discussion of the concepts above. These are:

- There is really no sharp boundary line between the normative and descriptive matters, which one might suspect when looking at this table.
- Most of the theories would actually fit into several of the fields. I have, however, placed the cross in the field where I believe that the theory is most likely to be positioned if used to analyse the freight transport market.

My research is descriptive and it belongs to the field of BA. This thesis is an example of applied research. One objective in this thesis is to describe freight transport channels and its' parts focusing on issues of competition. Most theories of competition deal with the subject from an economics point of view. The conceptual development in this thesis has its theoretical origin in business administration and industrial organisation. The research is influenced by Alderson (1957; 1965), especially by his theories of differential advantage and market matching; Porter (1980); Dickson (1992); Jensen (1997); and by Hunt and Morgan (Hunt and Morgan, 1995; Hunt, 2000) and their "Resource-Advantage" theory. This theoretical base is superior to the traditional ones, when looking at competition from a BA point of view. The different theories are not at all of equal importance for the development of this thesis. They differ in importance, among other things, since they differ in their adaptability, in their importance in

analysing a modern economy with special reference to the freight transport industry, and their paradigmatic view on society.

The theories discussed above view competition from different angles and perspectives. However, I still regard the preliminary definition of competition, as described in section 1.4.2 above, to remain valid when studying freight transports from the perspective used here.

2.1.16. A Critical View of the Theories of Competition

The theories of competition rely, as most theories, on some fundamental generalizations. The theories cannot, and are not aimed at being able to, describe every phenomenon occurring in real life. The theories should describe, in general terms, the findings one can make when observing reality. However, the question is whether the theories of competition are too far from reality when one is analysing the freight transport market. How useful is the competitive paradigm, as discussed by the neoclassical advocates, when analysing freight transport services from a BA point of view? I stress that the competitive paradigm is not very useful at all for this purpose. The main reasons are, in my view, that the market is not homogenous enough. One cannot ignore the fact that different markets, conditions, and participants taken together constitute different market segments. In reality, there are differences, inertias, and heterogeneities in many key factors that the competitive paradigm does not deal with or simply assumes away. This concerns resources, informational, as well as demand and supply questions.⁸⁶

The competitive paradigm is described in several textbooks. The critical view I present in this section is based on one of the best descriptions I have found regarding the competitive paradigm, since it is concise and easily explained (Tirole, 1988). A more extensive description can be found in, for example, Varian (1992). Tirole (1988) describes the paradigm as “*the best developed and most aesthetically pleasing model in the field of economics*”. The paradigm is based on the following assumptions. Consumers are perfectly informed and they cannot alter the price of the goods. Firms (producers) are price-takers, i.e. the goods are sold at marginal cost, on the market(s) maximising profits by choosing which quantity to produce. Between economic agents, there are no externalities

⁸⁶ Further, one has to keep countries' different legislation of the branch in mind. With the increasing legal cabotage within the European Union, this is becoming more and more important. The possibilities of cabotage is not the only reason for taking different presumptions for different conditions to base the competitive force depending on mode and the country where the carriers are registered into account. Since the market for transports between countries is highly international, shippers can choose among countries' shippers to perform the service.

(other agents are not affected)⁸⁷. Further, the nature of the goods is private – that is, several consumers cannot consume it simultaneously⁸⁸. Tirole (1988) considers the most conspicuous of the conditions in the theory to be that firms are assumed to be price-takers. I agree to this point of view, since most firms in real life have some degree of market power⁸⁹. Further, in real life, another reason exists that contradicts this price-taker assumption. The products and services sold are seldom homogenous, which means that customers have some preferences regarding what product and supplier to choose. If the companies understand this they also understand that some degree of uniqueness in their product and/or brand name gives them a competitive advantage – that is they are not price-takers, or to use the microeconomic words, they are not competitive firms.

The fact that the competitive paradigm is based on a *perfect* competition is of course strongly questionable. *Perfect* - implies, as pointed out by among others Hunt (2000), that no “disturbances” are allowed. The idea of perfect information falls short on the term *perfect* – for something to be perfect no information is to be missed. This is almost never possible. It is likely that shippers receive different qualitative information due to their size, how important they find these matters, how they filter the information, etc. Since information is not perfect, nor equal, different decisions will be made as to what strategy they choose to achieve a competitive advantage. Even though R-A theory is superior to the other concepts of competition in explaining the competitive behaviour and the outcome from competition, it has some drawbacks as well. This thesis has focused on the freight transport channel market, while the R-A theory has a far broader field of application and the drawbacks I point out in this section will be valid first of all for this limited field of application even though I am convinced that these drawbacks are important in a broader sense.

To be able to make the optimal choice, the shipper needs full information about the alternatives. The carriers need perfect information about the shippers, the competitors, and possible partners in order to make an optimal choice. One of the assumptions underlying the theory of perfect competition is that the participants in the market possess this information. According to my findings, this is an unrealistic assumption when it comes to the freight transport channels. Among

⁸⁷ There are positive network externalities when a service is of larger value to the users if there are many users (but not too many) of the service (or a compatible service). For example, the more users there are of a road the higher the quality of the road and thereby larger utility for the user.

⁸⁸ The classical example of a public good is national defence – you and I can “consume” it simultaneously.

⁸⁹ The market power might be substantial for some carriers in the freight transport market in some market segments or on some links, while on other relations the market power is very weak. The competitive equilibrium(s) is present where prices are such that they, given the demand and supply, clear the markets.

the most important factors for the shippers' (and the coordinators') choice of (coordinator and) carrier to perform a service, and thus one of the most important variables in explaining the phenomenon of competition and the carriers' competitive advantages are the traditions, the history, the personal relations, and the shippers' experiences. These variables are jointly referred to as "inertia". These soft factors are found to be among the absolutely most important aspects when a freight transport channel buyer is to invite companies to a tendering process, when he is to select a winner from the process, and if he is to invite tenders at all. All of these aspects deal in one way or another with inertia. It can be argued that these aspects can be included in other aspects/headings dealt with by the R-A theory. However, I argue that inertia is such an important characteristic in most buying procedures that the R-A theory would benefit from treating it as a separate variable. Inertia is a multifaceted variable that often limits competition⁹⁰ providing an actor with a competitive advantage.

2.2. Cooperation

Traditionally, marketing theory as well as basic economics has viewed competition as the most important driving force of a market economy. Cooperation, or collaboration, has been treated less carefully and as a less important as driving force of a market economy.

Why should firms cooperate? Well, first of all they cooperate to be able to earn a larger profit than they would be able to do if they were not cooperating. Cooperation can be a result of scarce resources and in cooperation, all parties can specialise in doing what they do best. Firms should cooperate, since a finished product does a better job of satisfying customer needs than a bag of components (Sudharshan, 1995). Another reason for cooperation might be that customers wish to work with only a few suppliers. In the freight transport industry, cooperation among coordinators and carriers manifest itself in what is described as freight transport channels. The importance to cooperate in a sufficient but not exaggerated extent can be described by quoting Gummesson (1997a), who say "*too much competition can keep managers awake nights, whereas too much collaboration might make them sleep well – even during the day*".

Bowersox (1992) outlines five factors that he sees as critical to a successful logistics partnership. These are selective matching, information sharing, role specification, ground rules, and exit provisions, in which a method for ending the partnership is defined. Tate (1996) highlights that "*compatibility, a deep understanding of a partner's business needs, open communications, commitment, flexibility and trust*" are important for a successful partnership. Mentzer et al.

⁹⁰ It is also possible that it intensifies the competitive situation even though this is likely to be far less common.

(2000)⁹¹ performed interviews with 20 supply chain executives to determine the enablers, impediments, and benefits from collaborative relationships. The difference between cooperation and collaboration is, according to one of the interviewed, like the difference between dating and marriage. Collaboration is very deep and intense. The authors write that *“The study found that certain enablers must be in place for a company to achieve supply chain collaboration. These enablers can help the organization overcome the impediments that inevitably surround an initiative like collaboration. If the enablers are in place and impediments are removed, supply chain members can realize some powerful competitive benefits.”* Among the enablers, the authors were surprised to find that so many were related to people and personal interaction. The enablers they found were: common interest, openness, recognizing who is important and what is important, mutual help, clear expectations, leadership, working together, and adjusting to one another, cooperation – not punishment, trust, benefit sharing, and technology. The most important obstacles to collaboration are: doing things the old way, conventional accounting practices, tax laws, limited view of the supply chain, annual negotiation processes, time investment, inadequate communication, inconsistency, and betrayal. If the implementation of a collaborative relationship between companies working together is successful, the main expected benefits are financial⁹² (Mentzer et al., 2000).

A tendency in the freight transport market, in the last decades, has been the increasing number of mergers, on a national as well as an international level. The merging process decreases the number of companies in the market. How the actual competitive situation is affected is, however, difficult to say. There are reasons for claiming that this would have a negative effect on competition but there are also reasons for arguing the opposite. The actual situation varies from case to case.

2.2.1. Trust and Commitment

Among the most important variables in any kind of positive relationship are trust and commitment. Being an effective competitor in network competition also means being an effective cooperator. Investments of time, money, staff, and equipment in a relation signal commitment.

It is important to distinguish between relationship commitment and task commitment (Hunt & Morgan, 1994b). Chenet (1997) defines internal

⁹¹ The article was presented at the CLM-conference in New Orleans, 2000.

⁹² The benefits found were: Reduced inventory, improved customer service, more efficient use of human resources, better delivery through reduced cycle times, higher speed to market for new products, focus on core competences, enhanced public image, greater trust and interdependence, increasing share of ideas and technology, stronger emphasis on supply chain, improved shareholder value, and gaining a competitive advantage over other supply chains.

relationship quality as “*the way (good or bad) in which an organisation's management and employees manage their relationship*”. I hold that this idea is useful when studying freight transport channels as well. The concept's name could then be called intra-channel relationship quality. The concept involves benefits as well as costs for both parties. For the channel to be successful, the relationship should be based on fairness and equity. Chenet says that “*the fairer and the more equitable the organisational exchanges are, the stronger and better the relationship becomes*”.

There are three things behind a strong relationship and thereby a high intra-channel relationship quality (Chenet talks about internal relationship quality). The first is that the partners in the relationship should trust others enough to let them decide about e.g. some of the resources. The second is commitment, which Chenet sees as an outcome of trust. Commitment involves the participants identifying themselves with the channel, being highly involved in the channel effectiveness, and being loyal to the channel. Professor Donald F. Wood holds⁹³ that there are also financial commitments to each other. Thirdly, Chenet mentions cooperation when the channel works as a team and not only as parts in a system.

Fukuyama (1995) holds that trust is what drives businesses and relations forward. Trust is thereby a necessity for a superior economic situation on a firm level as well as on a channel level. Therefore, the trust and commitment among channel participants can be strengthened by making sure that the communication among them works well.

Sooner or later, every cooperative venture will have a conflict. It is, therefore, natural to mention some relevant facts about conflicts. Conflicts are “*a process of two broad classes of changes: (1) is a change that precipitates the conflict relationship and (2) a change in response to conflict which either leads to resolution or to system disintegration*” (Gorman & Stern, 1969). There are basically two different alternatives following a conflict. The first is that power is exercised and the second is (intra)organisational change (Gorman & Stern, 1969). The exercise of power can, thus, be a reason for the emergence of a conflict as well as a result from a conflict. The reasons for an emerging conflict are many. Among these are objective, decision, and communication conflicts⁹⁴. It is important to note that conflicts are not altogether bad things. A conflict may, if the cooperation survives, lead to an improved cooperation in terms of efficiency, profitability, and /or competitive strength. The conflicts must be solved for cooperation to continue. Solving a conflict often involves some kind of power, which will be treated below.

⁹³ A comment made by Professor Donald F. Wood after reading an early version of this thesis.

⁹⁴ For more fields of conflicts, see for instance Carlsson and Kusoffsky (1969).

2.2.2. Networks

In the following section, a short description of the concept network theory is presented⁹⁵.

A network exists when at least two organisations are involved in a relationship. Positioning the firm in the network might be as important as positioning its products or services in the marketplace. The position is due to the firm's domain, position in other networks, and power. The network paradigm stresses that the quality of the position might be as important as its quantitative aspects (Thorelli, 1986). Gulati (1998) looks at strategic alliances and networks. Gulati defines strategic alliances as “*voluntary arrangements between firms involving exchange, sharing, or co-development of products, technologies, or services*”. Gulati introduces social networks in the study of strategic alliances. These are argued to be able to give important contributions in understanding strategic alliance structures.

Schjaer-Jacobsen (1992)⁹⁶ argues that “*Network theory is not one single theory but rather consists of various contributions*”. Schjaer-Jacobsen identifies three factors in describing the external network, viz. the actors involved in the network, the activities that they perform, and the resources that the actors control and use to perform the activities. The resources' value is determined by the activities in which they are used. Networks typically develop over time, since the investments in relations deepening the knowledge of the actors taking part in the network (Skjoett-Larsen, 2000). The relationship between the parties in the network deepens and develops through two processes according to Johansson and Mattsson (1986). The first process, called the exchange process, refers to the “softer” variables that can be mutually used in a beneficial way by the network. This refers to information and social processes, for instance. In the second process, the adaptation process, the services/products, the administrative systems and so on are adapted to fit each other for increased efficiency of the network. This description of network theory is well in line with my way of looking at the sector of freight transport channels.

Over the last 20 years, the question “with whom and how do firms compete?” has occupied researchers and practitioners in the field of strategic management. How research in strategic management has tried to answer this question is the topic of an article written by Thomas and Pollock (1999). To answer the question, “who competes with whom”, requires some kind of aggregation of the industry. The industry-level base for grouping used in the SCP-paradigm is too broad. But still,

⁹⁵ Regarding the concept of networks there is an excellent web-resource by Professor Nicholas Economides. The web-page's address is <http://www.stern.nyu.edu/networks/site.html> (accessed 2002-06-08).

⁹⁶ The quotation is taken from Möller (1995).

the level must be larger than the firm level. Hotelling (1929) was the pioneer in examining the question. His reasoning was, however, quite abstract, according to Thomas and Pollock (1999). Hotelling argued that firms should be clustered within a product space. This early theory has been challenged by Economides (1986). He argues that the results do not hold when variations are entered in e.g. the number of firms or the utility functions. This theory of spatial competition provides a “*theoretical basis for the expectation that groups within an industry exist*”. The theory tries to explain why firms competing in a market may use different strategies.

Another way to cluster companies is to use strategic groups. The advocates of this view argue that firms with uniform asset configurations will pursue similar competitive strategies and, therefore, they may be treated as a group. In SCP, the industries’ structure influences the strategic behaviour of the firms, which in turn influences the performance. Behaviour of firms is a black box. The strategic group perspective turns this upside down. The advocates argue that the firms’ strategic behaviour influences the structure of the industry as well as the performance of the industry. Firms within a strategic group are expected to pursue the same competitive strategy. How groups of firms came to share the same resources and asset configurations is not considered. Cognitive communities use a psychological approach to the exploration of collectives of firms within an industry. The sharing of the same beliefs among a group of managers results in a “cognitive community”. These beliefs result in recipes for doing business and how to compete within the industry. Firms may form strategic networks with competitors, suppliers, and customers. They may share knowledge and resources in some arenas but not in others. Network structures offer benefits but certainly limitations as well. Among these, one notes restrictions in how fast the firm can adapt to a changing environment.

Networks and Competition

The classical analysis of competition, à la Porter, suffers from the fact that temporary advantages of competition are not dealt with. The models constructed in the 1980s and 1990s will, therefore, need to be complemented according to Paulsson, Nilsson et al. (2000). If only one part of the channel is analysed, there is a risk of sub optimising the channel as a whole. Therefore, the analysis of the individual company will have to be complemented by an analysis of the full channel (Paulsson, Nilsson, & Tryggestad, 2000).

Services that are dependent upon another service, or product, in order to satisfy customer demands are of limited utility if separated. This is one reason for links, which are dependent on each other, in a chain to form an integrated network. It is, for example, of limited use to run a non-matched freight transport channel resulting in extensive waiting times. These services are complementary and they

can with advantage be integrated or coordinated. This is one of the most common reasons for performing vertical and/or horizontal integration. The distribution network is often built up of services that compete and/or complement each other to some extent.

2.2.3. Power

Since this thesis discusses channels, in which firms depend upon each other, it is important to discuss power relationships. The concept of power is important not only between, and among, actual freight transport channel participants and the shippers but also in relations between, for example, shippers and potential channel participants. Power normally has a counteracting effect on the market solution as compared to competition. Competition will normally result in services having higher quality and/or in prices being lower. The effect of power, on the other hand, is the opposite. Market power can result in prices charged/services offered at a, for the customer, less beneficial level than they would have been in the absence of the market power.

Normally, the viewpoint for studying the concept of power in distribution channels has been that of economists. This has implied that the focus has been on the outcomes of power. Behaviour scientists, on the other, hand are normally more interested in the question of why a given power situation has occurred. Beier and Stern (1969) look for sources of power that are useful for channel members. There is a close relation between what is meant to be market power and market share (Dempsey, 2001). On a general basis, one, then, could state that when there are mergers and acquisitions in the market, *ceteris paribus*, the market share of the resulting company will increase and, hence, the market power would be larger for this company. This is, however, not necessarily true.

Bases of Power

There are five different bases of power identified by French and Raven (1959), according to Kotler (1991):

- Coercive power – based on threats to withdraw resources or to terminate the relationship. This might be effective in the short run but not in the long run
- Reward power – can be useful and produce better results than the coercive power but it might be problematic if the reward is common and expected
- Legitimate power – works as long as the powered part views the powering part as the legitimate leader
- Expert power – can be used if the powering part has special knowledge
- Referent power – when the powering party has such a good reputation that the powered part is proud to be identified with that firm

In Thorelli (1986), five sources of power, which differ somewhat from the bases mentioned above, are described, viz. power using a financial base, technology base, expertise base, legal base, or trust-based power. The last two bases differ somewhat from the ones French and Raven discussed. The first of these might to some extent overlap the legitimate power but not totally. The legal base for power might come out of ownerships, patents, and/or contracts. The last base, the trust base for power, covers partially several of French and Raven's bases. It might, however, be important to view it as a separate base. It might occur through inter-personal relations or strategic alliances, for example.

According to Porter (1980), there are five driving forces on the market determining the competitive pressure, two of these deal with power, viz. are bargaining power of buyers and sellers. The others do not deal with power, but with competition (established and potential) and the pressure from substitutes. There are two additional relevant forces for transportation firms discussed in Jensen (1998) (i) changing demand and (ii) political pressure. In Jensen (1991), the forces of bargaining power are extended. Jensen points out the importance of the possibility to segment the buyer circumstances. The importance of this possibility is also supported by theory of international marketing, see, for instance, Bonoma and Shapiro (1983)⁹⁷.

It is important to keep in mind that Porter's five-force model was developed to analyse industries – not companies in the industries. Studies have shown that industry stands for 8-10% of firm profitability, while the firm effect is about five times as large - 45-55%. In R-A theory, managers must focus on transforming basic resources into core competences giving the company a superior competitive advantage in a market (Mavondo, O'Keefe, & Schroder, 1998). Generally, it is not possible to separate these forces from each other in practice. It will, for example, be difficult to separate the bargaining power of buyers from the pressure from substitutes. If there are no substitutes, the power of the buyers will, at least in the short run, be very limited. In the long run, it is always possible to activate more "dramatic" substitutes, such as moving or closing down the business. However, it may not be of any importance to separate the forces totally.

Power in Channels⁹⁸

The nominal market power determinants for channel members (not the (potential) leader) are: (i) the members' real competition, (ii) the members' potential competition, (iii) entry and exit barriers protecting the members, and (iv) involvement protecting the members.

⁹⁷ Bowersox and Closs (1996).

⁹⁸ This section is based on Jensen (1993). Jensen explains how potential channel leaders may increase their power.

The (potential) leader has one additional determinant in the inter-channel competition.

The mail-order firms Jensen studied were operating some alternative channels competing with the main channel. The strategy used by the (potential) leader to fight the market power of other channel participants, is what Jensen calls experimental competition. The concept refers to (i) the introduction of real competition to the distributive channel from an alternative channel on a small part of the total market and (ii) the design and the intensity of use of the alternative channel “*has been manipulated over time*”. How effective the power situation is depends on the power’s domain, scope, and weight. (Stern, El-Ansary, & Coughlan, 1996)

The Importance of Power

I think that the importance for a firm to be able to exert power over another firm depends mainly on the following factors:

- The alternatives that the powering firm has and the additional costs for using them (direct- as well as indirect monetary and other costs)
- The demands that the firm lays on its cooperators regarding quality, costs, and other variables
- The strength of the reverse power (the powered firm has got power over the powering firm in some way)

2.2.4. Vertical and Horizontal Integration

Looking into vertical and horizontal integration might highlight the relationship between cooperation and competition within the sector of freight transport channels. To improve the competitive strength of a firm, or a channel, vertical alliances or integration are common. When one of the marketing flows is overtaken by one organisation, there is vertical integration. Different forms of vertical integration are normally supposed to reduce costs. In the transaction cost analysis this is the motive for performing a vertical collusion (Yongkyu, 1998). If the composite services are close substitutes, the horizontal effects (the effect on prices is positive) of the integration will dominate over the vertical effects (the effect on price is negative), i.e. prices will be higher if there is a joint ownership than if the ownership is independent. (Economides & Salop, 1992; Economides & Woroch, Nov. 1992)

Vertical integration is defined by Porter (1980) as “*the combination of technologically distinct production, distribution, selling, and/or other economic processes within the confines of a single firm*”. In the freight transport sector, it is ambiguous to define vertical and horizontal integration. I define the terms as follows: Horizontal integration occurs when two or more carriers, performing substitutable services, merge. Vertical integration, on the other hand, occurs

when two or more carriers, performing complementary services in the stages of the freight transport channel service, merge.

Problematic in the definitions above is that mergers more often than not will be horizontal to some extent and vertical to some extent, a problem that, of course, is not unique for my definitions. This could be exemplified by one of the most recent large mergers in the European market for freight transports – the merger between Danzas and ASG. As far as I can understand, Danzas and ASG supplied, on the one hand, many parallel services and in this respect there was a horizontal integration. But, on the other hand, Danzas' services on the Swedish market were rather limited, thus they merged with one of their suppliers in this respect, which would make it a vertical integration. According to Aronsson, Ekdahl et al. (2003) clear economies of scale exist in the freight transport industry and this is one of the reasons for the development towards larger but fewer carriers. This is, according to the authors, also the reason for fewer manufacturing companies performing their freight movements with a transport division in the company. Companies that still perform transports in a separate division, according to Aronsson, Ekdahl et al. (2003) do so e.g. because of their large volumes, and special demands on the vehicles.

How the channel should be organised is answered by the “make versus buy” distinction made by Stern, El-Ansary et al. (1996). Making is the hard vertical integration, while buying is the soft vertical alliance. The buying alternative implies that the channel consists e.g. of independently owned and operated institutions. This alternative is more of a socialisation than involving the companies in an ownership-relation in the channel.

The vertical system has a stronger formal dependence among the members than the conventional distribution channels. In the horizontal marketing system, companies on the same level join together in following a new marketing opportunity (Kotler & Armstrong, 1999). The relationship between the parts in, for example, a transport channel may vary in strength. In order for a relationship to be effective, the partners must adapt their services to each other. The use of the voice/exit-mechanism does not limit the competition within the channel. It might even be an assumption for the competition to work well. If voice is used to influence the partners' behaviour, this might call for a long-term relationship instead of a more short term, rent seeking, relationship⁹⁹. In Kranton and Minehart (2000), the authors compare vertical integration and networks in some respects. The main difference, according to them, is that in networks, firms invest in their own dedicated systems and sellers become “adaptable specialists”. Using vertical alliances is a way to avoid the costs of the hard integration and still earn

⁹⁹ Influenced by Andersson (1999).

its benefits. This alternative is about sociological integration instead of financial integration. In soft integration, services are bought instead of the whole firms/organisations.

To summarise, it can be concluded that vertical integration might lead to better control, distribution synergies, and scale economies but inefficiencies might also arise from the fact that the firm grows bigger, which results in lost control.

2.3. Channels and Logistics

This section discusses the organisation and management of freight transport channels. There are three different foundations of management and organisation of the freight transport channels. The foundations are (i) power, (ii) trust and commitment, or (iii) market setting. The latter is used in those channels where no pronounced leadership exists. The firms might, in this case, be of equal size. The first two bases, power and trust and commitment are to be seen as two extremes. When power determines how the organisation and the management issues in the freight transport channel are dealt with, there is one actor dominating, setting up the rules, for how the channel should be viewed and operated. The different bases for exerting power typically result in many firms involved having some degree of power, which can be used in different situations. In the other extreme, where trust and commitment is the base, the decisions, organisations, and management of the channel are taken to a certain degree in consultation between the involved participants. Between these extremes, we will find the market-based solutions in which a combination of the extremes is used in forming the freight transport channels. For a deeper understanding of what happens in this in-between situation, see the section discussing the theories of competition and the section dealing with cooperative issues. The market-based solution can be influenced by each of the two extreme situations to some extent.

2.3.1. Channel Concepts

The following section is about different types of channels that are often used in studies on transportation and closely related disciplines in the field of BA.

There are numerous channel concepts and the following presentation does not at all claim to be complete. Many channel concepts overlap each other in a greater or less extent. The tendencies of the channel concepts are that they aim at being rather comprehensive. This is not always beneficial. Even though there many channel concepts exist, none of them deals explicitly with the freight movement process. Therefore, the freight transport channel, which is about these matters, is introduced and discussed in this study. The logistics channel is rather close to the freight transport channel but it is somewhat broader.

Channel theorists, specialised in physical distribution issues, argue that the costs of distribution can be reduced through good planning and coordination. If the

physical distribution is managed as an integrated network, benefits could result (Schwartz, 1964).

Marketing/Distribution Channel

Firms involved in making products and/or services available for use are collectively called a marketing channel. Marketing channels¹⁰⁰ are defined as channels that “*can be viewed as sets of interdependent organizations involved in the process of making a product or service available for consumption or use*” (Stern, El-Ansary, & Coughlan, 1996). Marketing channels stimulate and satisfy demand. Marketing channels bridge the gap between some kinds of producers and users not only geographically, but also in terms of costs and time (Revzan, 1967). The objective for the marketing channel as a whole is to provide customers with the type of goods and services they want, in the quantity they want, on the location they want, at the time they want the goods, in an effective way. The concept of physical distribution¹⁰¹ is part of the marketing channel concept, which in turn is part of the even more extensive concept of supply chain management.

The distribution channel refers to the actual movement providing time, place, and possession utilities (Bucklin, 1966). The many functions of a distribution channel¹⁰² have three things in common. These are that they all use scarce resources, a specialist can perform them better, and the functions can shift among the members of the channel. An rather old, but still functional definition of a channel of distribution is given by Stern (1969). “*A channel of distribution shall be considered to comprise a set of institutions which performs all of the activities (functions) utilized to move a product and its title from production to consumption*”¹⁰³. Before the early 1980s, the distribution channel was used synonymously with the term marketing channel. Since then, the concept of distribution channel has been abandoned as the generic term for the more extensive concept of marketing channel. For a deeper insight into the channel concepts’ historical development, see Wilkinson (2001), who presents an exhaustive literature review of the development of the channel and network concepts dealing with distribution in the field of marketing.

¹⁰⁰ As a synonym to marketing channel, Johnson & Wood (1996) use ownership channel. The authors further hold that “*The same [the parties involved in the marketing channel] or related parties also get together in other channel arrangements, and these channels are called the negotiations channel, the financing channel, the promotions channel, and the logistics channel*”.

¹⁰¹ The activities in what is called physical distribution are planning and control of finished goods inventory, warehousing, material handling, data processing, traffic and packing (Schwartz, 1964).

¹⁰² See, for instance, Kotler & Armstrong (1999) The authors mention information, promotion, contact, matching, negotiation, physical distribution, financing, and risk taking.

¹⁰³ See Bucklin (1966).

Logistical Chain and Channel

Logistics as one part of the broad concept of supply chain management¹⁰⁴ is the subject treated in the following section.

The terms logistical chain and logistical channel are not uniformly defined in the literature (Rodnikov, 1996). A logistical channel can be defined as “*a partially ordered set of original supplier A, carrier(s), intermediary(ies) and customer B*”¹⁰⁵. The length of the logistical channels is the number of levels needed for the delivery from A to B and its width is the number of possible participants at each level¹⁰⁶. These participants must be evaluated and selected by a vendor or a customer. After this selection process, the channel turns into a logistic chain. The logistical chain “*represents vendor A, customer B; carrier(s) and intermediary(ies) that have actually participated in activities concerned with changes in ownership, physical supply of the given product or products, data processing, insurance and other services.*”

Supply Chain

Supply chain management (SCM) has been one of the fashionable concepts in BA related research during the late 1980s and the 1990s, since it emerged in the early 1980s (Cooper, Lambert, & Pagh, 1997). The first article explicitly treating SCM was written by Oliver and Webber (1992). Thereafter, the concept of SCM has been used by consultants as well as academics (Cooper, Lambert, & Pagh, 1997). Even though researchers are rather unified regarding what to be treated within SCM, there is no definition of the concept that is commonly adopted. One of the reasons for this is that the concept is very broadly defined, and, therefore, the limits are rather vague. Even though there are not as many definitions of the concept as there are “users” it is difficult to select one that can be said to be superior to the others or the most widespread and accepted definition. The main stream of the different definitions does, however, not differ very much in the respects that are of importance for this study. The definition used by the CLM¹⁰⁷ reads: “*Supply Chain Management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all Logistics Management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers. In essence, Supply Chain Management integrates supply and demand management within and across*

¹⁰⁴ See for instance Hultén & Jensen (2000).

¹⁰⁵ The definition is given in Rodnikov (1996) quoting the *Concise Dictionary of Business Logistics* (1995, Ekonomika Publishing Co., Moscow), which Rodnikov describe in the article.

¹⁰⁶ It can be noted that this definition regard the number of participants and not factors like the participants' size and how important they are.

¹⁰⁷ Source: <http://www.clm1.org/resource/downloads/glossary0903.PDF> 2003-09-09.

companies.”¹⁰⁸ Gattorna and Walters (1996), describe how the term SCM has emerged from “physical distribution management” by the concept of “logistics management”. They are among those finding the SCM concept and the logistics concept to be very closely related, according to Dubois, Hulthén et al. (2003).

There are basically three different flows in the supply chain, see, for instance, Paulsson, Nilsson et al. (2000). These are the financial flow (normally one-way¹⁰⁹), the physical flow (two-ways including reverse flows), and the flow of information (at least two-ways). If the supply chain is viewed as an engine, the flow of information is the oil greasing the engine and making it work with low friction. Without the oil, the engine will not work so well and finally the engine will stop and the distribution will come to a dramatic halt. The financial flow is the gas – without this flow the physical flow will stop rather quickly. The physical distribution part is the real action – this is like a car moving from A to B.

The concept of the supply chain consists of three elements. The first is to coordinate across organisational boundaries. The second element is to manage assets, specifically inventories in order to increase operational performance. Supply chain is a platform for supply strategy (Schary & Skjøtt-Larsen, 1995). Transportation is, thus, one of the most outstanding important single parts in SCM and very often, these transports are carried out by some kind of freight transport channel. Without having an efficient freight transport channel, the supply chain will never be as successful as it could be otherwise.

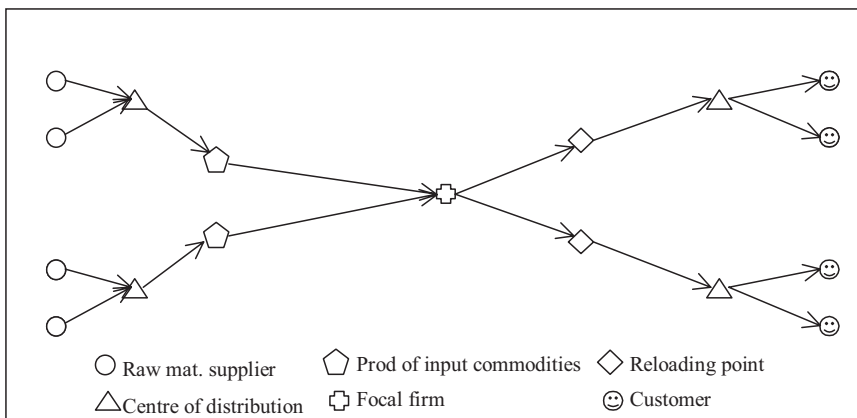


Figure 6. Material flows in a simple supply chain

¹⁰⁸ Accessed 2004-03-29. Another definition by “The Global Supply Chain Forum” reads: “Supply chain management is the integration of key business processes from end user through original suppliers that provides products, services, and information that add value for customers and other stakeholders”.

¹⁰⁹ It might be a two-way flow, if repayment for returned goods, etc. is taken into account.

The supply chain is the broadest channel-concept in use. It includes every supply- and demand-activity involved in producing and delivering a product from the suppliers to the end customers. Paulsson et al. (2000) say that for companies wanting to stay competitive in the 21st century, it is not enough to be individually efficient. In order to survive they have to be efficient throughout the supply chain¹¹⁰.

Supply chain creations are to improve the competitiveness of the channel. The basic idea results from two different paradigms. The first paradigm stresses the importance of information sharing and information collaboration. The second paradigm is based on the exclusion of useless and duplicate efforts. Recognised dependency is good for supply chain solidarity. Risk, power, and leadership are conceptions fundamental for understanding supply chains. Risk is unevenly spread among channel participants. Specialised participants generally assume less risk (Bowersox & Closs, 1996).

Freight Transport Channel

There are several different views on firms working in a channel. The major difference between the concepts is to a large extent given by their name in which the channels' main focus is revealed. One difference between them is connected with their width.

I introduce the concept freight transport channel. The reason for constructing this concept is that my research is focused on the physical flow of goods and to some extent the flow of information but I do not look explicitly into other functions such as flows of transaction, distribution of risk, etc. The definition of a freight transport channel is: *The freight transport channel is a (set of interdependent) organisation(s) involved in the dynamic process of moving a product toward a place of use or consumption.* Referring to Figure 6 above, freight transport channels can be found in several sequences going into or out from the focal firm. Several modes and/or companies are often taking part in the freight transport channels. In the supply chain, there are often companies involved, which are not active in the physical distribution. Those companies may, for instance, coordinate the services; perform loading/unloading services or stocktaking.

The channel, through which the transport is provided, may be integrated in different ways. There are, of course, an infinite amount of theoretical solutions. Ownership connections between some links in the distribution channel do not necessarily imply that the best solution would be to cooperate with one's own company.

¹¹⁰ For a further discussion of the concept of SCM see any basic SCM textbook, such as Bowersox, Closs, & Cooper (2002), Mentzer (2001), Simchi-Levi, Kaminsky, & Simchi-Levi (2003) or in a more condensed form (in Swedish) Hultén & Jensen (2000).

Chain vs. Channel

This thesis refers to channels directly and only indirectly with chains. This statement calls for a clarification of the differences between the concepts. In the majority of the literature dealing with chains or channels, the conceptual difference between what constitutes a chain and a channel respectively is not discussed and the concepts are viewed as synonyms. The terminological difference between a freight transport channel and a freight transport chain can be viewed in a similar way as the distinction between the concepts of transport and traffic¹¹¹. The carriers' natural core business regards the traffic while the shippers, for natural reasons is interested in the result from the service performed by the carriers – they will be interested in having the right service performed at the lowest possible price and the best possible quality. A detailed description of these matters can be found in Aronsson, Ekdahl, & Oskarsson (2003). The transport chain, as I view it, discusses the traffic while the transport channel discusses the broader transport concept involving the transport chain as a subset. Shippers, looking at the freight transport system as a channel, do normally not see (or care) what happens in e.g. the transitions involved in the channel as long as the qualitative aspects of the freight transport channel's service is sustained. In the freight transport channel, not only the movement of goods is involved but also the flow of information, the monetary flow, and other aspects making the movement possible. The shippers are, typically, only interested in the in- and the output from the system not in what really happens within the system itself. When an observer is interested in the freight transport chain, on the other hand, he discusses the carriers' characteristics and the movement process. The chain, thus often concern technical aspects of the service.

The chain-concept is thus viewed as the actual freight movement process and refers to the carriers involved in this process. The concept of channels is viewed as a broader concept involving information and payment flows, responsibility, coordinators, third parties, warehouses, and others whose main role from the shippers' perspective is to facilitate and smooth out the freight transport chains' work. This thesis can, thus, as stated above, be said to deal with freight transport channels directly and freight transport chains indirectly as parts of the freight transport channel.

Communication

In a freight transport channel (and in its' members relation with the shipper), as in most channels, the communication between the actors is very important for the channel effectiveness and long-term survival. The reason is that a well functioning communication may reduce the number of conflicts to a minimum.

¹¹¹ Traffic is (see the terminological discussion), synonymous with vehicle movements, while transport regards the process when goods are moved from one point to another. The carriers normally look at the traffic market, while the shippers are interested in the transport market.

Communication can be defined as “*an interchange of meanings between a sender and a receiver through a common set of symbols*” (Grabner & Rosenberg, 1969). The effectiveness of a message depends mainly upon four things (ibid):

- The understandability of the receiver
- The consistency of the message with the purpose of the system
- The compatibility between receivers’ personal interests and the content of the message
- If the receiver complies with the communication

Efficient communication in a channel, and with the shipper, is important. Communication is more likely between two parties if social contacts between persons of the firms exist.

Social Dimensions

The importance of roles, positions and social relations is stressed by Gill and Stern (1969). Clear definitions of roles and responsibilities are of great importance for the cooperation’s continued existence. The primary components of a social system are the set of individuals, their behaviour, and the relationships uniting them.

Burt (1992) stresses that non-redundant contacts are connected by “structural holes”. The concept of “structural holes” concerns the gap between two persons with complementary information. When a third person connects them, the gap/hole is filled. Competitive advantage is, to a large extent, about having access to structural holes. These social dimensions are important when firms buy or cooperate closely with other firms in the channel - they can then be said to have a vertical relation. The importance of the social dimensions is according to Gillis (2000), not to be underestimated – Gillis holds, referring to the transport industry, that “*There will always be big players... but do they know their customers? This is a people business*”. Kanter (1994) highlights the importance of the social dimensions. In order for a collaboration to be efficient, Kanter notes that it is important that the parties have long-term objectives for their relation and that the personal chemistry works well. The personal chemistry might be decisive when the relation is put to the test, according to Kanter (1994).

Inertia

Inertia, in this thesis, refers to the type of resistance to change channels and relations. Inertia might be based on e.g. a fear of changes, social relations, traditions and history, or a risk avert behaviour. Inertia is to be viewed as equivalent with the traditional description of the term in dictionaries. One example of such a description of inertia is given in (The Concise Oxford Dictionary, 2001), where it is described as “*a tendency to do nothing or to remain*

unchanged". Moscarini (2004) says that "*inertia emerges not as complete inactivity, but rather as a smoothly changing and perfectly predictable behavior...*". He continues to describe how more information not always implies that inertia's role diminishes, rather the firm might be "paralyzed by complexity" (Moscarini, 2004).

2.3.2. Logistics

The main role of logistics is to make material flow as efficiently as possible. Logistics is about planning, controlling, and monitoring information flows, materials, people, and energy in a system. Logistics is not a one-definition subject – for different definitions of what is to be included in logistics, see basic textbooks on logistics. Bowersox and Closs (1996) view logistics as the competence link between the enterprise, the suppliers, and the customers. The Council of Logistics Management (CLM) has defined logistics management as "*...that part of the supply chain process that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customers' requirements.*" (www.clm1.org)¹¹²

Since the concept of freight transport channels deal with what is normally a part of logistics, I find it useful to split up the concept of logistics. This thesis only deals with the physical distribution-part of what normally is included in the concept of logistics. Much of what is dealt with in this section is applicable to the freight transport channels studied, even though it is about another area.

Wandel and Ruijgrok (1993) described three major interrelated "megatrends" in logistics. These trends, or rather facts about the logistic environment, are still highly relevant and today. The trends, which improve the effectiveness of logistics, and freight transports are information technology, more and faster transports, and reduction of barriers between countries.

Partners involved in a successful logistic chain benefit, according to Loebbecke and Powell (1998), from many things such as better information, better productivity, reduced inventories, and enhanced customer services. The tendency of the companies' working in the field of logistics is to build, and develop, long-term partnerships with customers, suppliers, and third parties according to Hultén and Jensen (2000). When such a partnership concerns strategic issues and core competences, a strategic alliance exists according to the authors.

Integrated Logistics

The logistics framework has changed from the "old" separate logistical function to the new integrated material flow. In the latter, the material flow is managed as

¹¹² Accessed 2004-03-29.

an entity. Overall performance is what counts in the “new” integrated logistics¹¹³ (Möller, 1995).

Integrated logistics is built up by inventory and information flows. If the logistical integration also includes customers and suppliers, the process is called *supply chain management*. The logistics of the inventory flow can be divided into three areas. The first is physical distribution – the distribution of a finished product to the customer. The second is the manufacturing support – inventory flows between different stages of manufacturing. The third and last area is the procurement function (Bowersox & Closs, 1996).

Marketing Logistics

Physical distribution is sometimes also called marketing logistics. One definition of the concept by Kotler and Armstrong (1999) tells us that it “*involves planning, implementing, and controlling the physical flow of materials, final goods, and related information from points of origin to points of consumption to meet customer requirements at a profit*”.

Logistics leverage is, according to a article by Bowersox, Mentzer et al. (1995) about “*the ability to achieve marketing advantage through logistics superiority*”. The article refers to the relationship between marketing and logistics. Just-in-time (JIT) and quick response (QR) are time and quality based concepts respectively for competition in the area of logistics. QR differs from JIT by “*fact that they deal with the distribution of finished products from manufacturers to wholesalers and retailers*” (Larsen & Lusch, 1990).

Costs in Logistics

Besides the direct costs of logistics¹¹⁴, there are some other quality dependent costs. The costs of quality (i.e. the costs of not offering the right level of quality) are high. The costs of quality can be split up in two parts; the first is costs for preventing deficiencies. The worst part is costs for reducing effects of a deficiency that has already occurred.

Jensen (1990) concludes that choosing one transport solution brings on two costs to the logistical system. One of them refers to the direct costs of the transportation and the other is the sum of all other costs resulting from the specific choice. The costs of logistics, to a very large extent, depend on the

¹¹³ Integrated logistics management is described as “*The logistics concept that emphasizes teamwork, both inside the company and among all the marketing channel in the organizations, to maximize the performance of the entire distribution system.*” It consists of cross-functional teamwork inside the company, the building of channel relationships and third party logistics.

¹¹⁴ The somewhat broader and more generally held concept of transport cost functions is treated by Sergio R. Jara-Díaz in Polak & Heertje (2000).

quality of the logistic service¹¹⁵. A high quality service can, for instance, reduce the need for expansive inventories and the savings can result from staff as well as stock room and material reductions. The difficulty lies in getting the optimal balance between benefits from improved quality and the costs of improving the quality. The benefits from improved quality may be that the carrier can be able to charge a higher price and it might be a competitive advantage for the carrier. These and other benefits might come at once and/or be received in the future. In Figure 7 below, all benefits are assumed to be directly measurable in economic terms. The figure shows that the relationship between benefits, which might be converted to monetary units and seen as revenues, and costs of improved quality. The optimal level of logistical quality to be offered, given the costs and benefits is found to be q^* ¹¹⁶ where the difference between the benefits and the costs are the largest. Above this quality level the benefits from improved quality are less than the costs. Ballou (1987) deals with the subject of logistics offer in a similar way, such as several basic microeconomic textbooks.

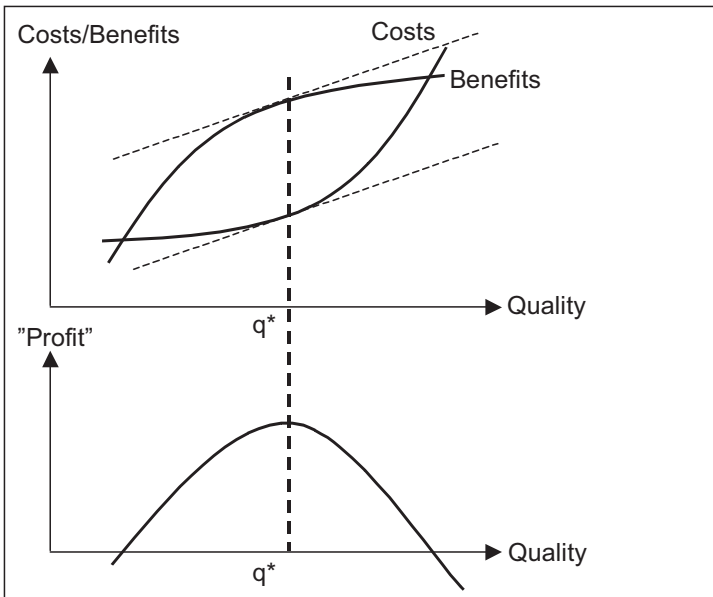


Figure 7. Optimising the level of logistical quality

In the following section the concept of quality is presented more in detail.

¹¹⁵ The service components in freight transports are: transit time, reliability, accessibility, capability, and security according to Coyle, Bardi, & Novack (2000).

¹¹⁶ At this level, the marginal revenue curve will intersect the marginal cost curve, since the slopes of the total revenue curve is identical to the slope of the total cost curve at this point.

Quality

The quality of logistics varies between segments in the market. The most central parts are, however, (i) communication between customers and carriers, (ii) correct and well timed deliveries and communications, (iii) fast and correct service after the delivery, and finally (iv) correct transferring of information within the internal as well as the external activities (Persson & Virum, 1996).

It is hard to define the concept of transport quality within the area of freight transport. The definition used by Transportrådet (1996) is (freely translated): “*transport quality is defined as the level responding to the agreed standard and the agreed assumptions regarding area demands, time demands, transport environment, and customer services for the transport in question*”.¹¹⁷

The different dimensions of quality specified in Jensen (1990) are: frequency, transport time, regularity “*the ability of the transport system to maintain the promised or scheduled time-tables...*”, goods comfort, transport security (protection against theft), controllability “*the possibility of following the transport process with regard to deviations from schedule (for example late arrivals) and of communicating these deviations to the recipient and/or shipper*”, flexibility “*the ability of the transport system to adapt changes in the pre- and post-transport systems*”, detachability (i.e. if the system permits the handling resources to be detached in time from the arrival and departure times), and expansibility “*the ability of the transport system to take over logistic functions from the pre- and post-transport systems*”. In Andersen (1997), it is concluded that the factors of quality can be split up in two groups. These groups are the directly and the non-directly measurable factors. In the first group, they include the following: Transport time, reliability, risk of damage, transport price¹¹⁸, and frequency. In the second group, the factors are: Accessibility of information, flexibility, and customer service. Further, they present the result of some interviews where the respondents have been asked to place some dimensions of quality in order of precedence. The results, which are presented in Table 7, are valid for the rail transports but the results for the road and waterborne transports, which they have also investigated, are almost the same.

¹¹⁷ Danish original text “*Transportkvalitet defineres som det niveau, der svarer til den aftalte standard og de aftalte betingelser omfattende stedkrav, tidskrav, transportmiljø og kundeservice for den pågældende transport*”.

¹¹⁸ I do not agree in calling the price of the transport one of its factors of quality. But I think that the quality must be viewed taking the price into consideration. If the price is called one factor of quality or not, does, however, not make the report and its results less interesting!

Rank	Factor (Buyer)	Rank	Factor (Producer)
1	Reliability	1	Reliability
2	Transport time	2	Transport price
3	Transport price	3	Customer service
4	Risk of damage	4	Transport time
5/6	Customer service	5	Flexibility
5/6	Flexibility	6	Frequency
7	System of information	7	System of information
8	Frequency	8	Risk of damage

Table 7. *Quality factors ranked*

Most interesting in these results is that the rankings of the buyers and the producers are almost the same. The major difference is that the buyers view the risk of damage as more important than the producers do. A possible reason for this is, according to Andersen (1997) that the buyer, generally, must bear the main burden of damages. The costs of damage may, though, be much higher than the value of the damaged goods¹¹⁹. According to Leif Enarsson¹²⁰, one of the most important factors mentioned by the shippers is flexibility.

Ludvigsen (1999) looks into twenty quality components of the service. How Swedish shippers perceive quality variables in the single mode and the intermodal services is shown in a table. The ranking differences are statistically significant for six of the 20 variables¹²¹. The author concludes: “*the Swedish informants were aware of quality differentials between the two modes of freight supply*”. Shippers that are large and have a strong position in the market may enjoy high qualitative intermodal transports due to their power.

There is a gap between the quality supplied and the quality demanded. The intermodal solution must have as high quality as the single modal transport. The cost of an intermodal transport will have to be less than the single modal equivalent. Shippers are willing to pay a premium for these quality factors. Shippers may, therefore, single out and concentrate on the most important variables. The Nordic shippers do, according to the study, not differentiate between quality requirements for intermodal and single-modal transits (Ludvigsen, 1999).

¹¹⁹ An example of this is that there may be a stop in the production process for a manufacturing company if it does not get a specific spare part for a tool fast enough.

¹²⁰ Dr Enarsson said this at a seminar at the School of Economics and Commercial Law, Gothenburg University (where my report on planning was discussed).

¹²¹ These variables was availability of tracing and tracking, availability of ULDs, efficiency at trans-loading stations, quality of freight handling, transit time, and processing of loss and damage.

Competitive Advantage and Logistics

In Sudharshan (1995), four main approaches for achieving a sustainable competitive advantage are discussed namely to (i) use authority to control the activities in the channel through vertical integration, (ii) use contracts supported by law, (iii) develop long-term relationships, and finally (iv) use market power.

The idea of these approaches is to get a value advantage and/or to get a productivity advantage. The approaches, to a large extent, involve some kind of power in order to get the advantages looked for. Two dimensions for characterising competitive strategies in logistics are value and productivity (cost) advantage. The strategies relate to logistics in the way described by Figure 8 below, reproduced from Möller (1995).

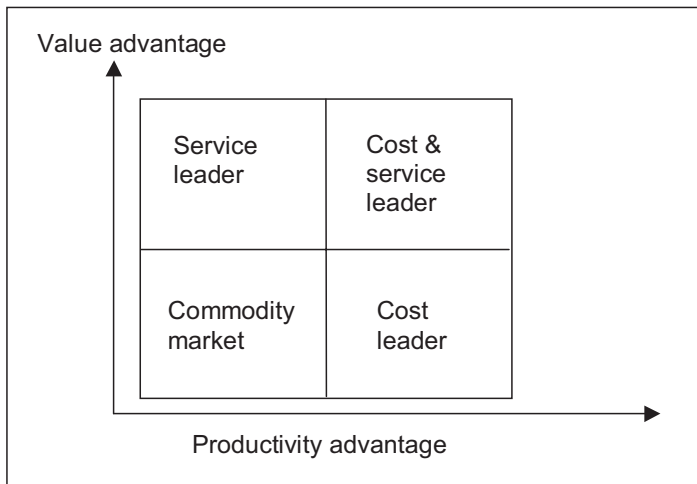


Figure 8. Logistics and competitive strategies

3. RESEARCH DESIGN

This chapter starts out by presenting the research questions that have emerged from the discussion in the earlier chapters. The following section discusses methodological aspects and consequences. Thereafter, focus is on case studies, since this broad method is used in investigating the freight transport channels. The last section of the chapter focuses on the qualitative aspects of research.

3.1. Research Questions

The importance of asking the “right” questions is emphasized by Tukey (1962) in saying that *“far better an approximate answer to the right question, which is often vague, than an exact answer to the wrong question, which can always be made precise”*. In the following section, the research questions will be presented. The research questions have been influenced by my theoretical knowledge, my experiences from the freight transport business, my supervisor’s theoretical expertise, and the relevant literature review. Two main research questions have been formulated. The second research question is divided into five subquestions. The research questions demarcate my area of research. The boundaries between the questions are somewhat vague, but such overlaps seem to be inevitable.

The first research question stems from the belief that the market for freight transport channels services is a theoretically undeveloped area. The area of freight transports has, which may be concluded from the discussion so far, a very important role to play for the members of our modern society. Competition is rather well analysed and is, in general, rather easy to analyse from an economics point of view regarding “simple” products. When it comes to the company/channel-perspective and services, things become more complicated. Competition needs to be developed in a company/channel context for the sake of theory as well as real life situations. From this, the first research question reads:

- 1) *Are any of the existing theories of competition adequate when analysing the market for freight transport channels? If not, could any theory of competition, or combination of such theories, be used after modification(s)*¹²²?

¹²² If the changes needed are extensive, it might be justified to say that there is a new theory of competition.

The second research question reads:

2) *What can be said regarding the surfaces of competition within and among freight transport channels?*

This question is wide and it demands a deeper understanding of the competitive issues within and among the freight transport channels. The question can be split up into the following subquestions:

- a) *In what aspects, and how, do the channel members and channels compete?*
- b) *Where are the most significant competitive surfaces in freight transport channels and their building blocks?*
- c) *What impediments to competition, affecting the competitive pressure in the freight transport industry, are there?*
- d) *Is intermodal competition strong?*
- e) *Is intramodal competition strong?*

The answers to these research questions have been sorted out from theoretical investigations, a contextual study¹²³ and from the case studies within the scope of this project.

3.2. Methodological Considerations

The special characteristics of the freight transport market in general and freight transport channels in particular call for an untraditional methodological treatment. My view in conducting research connected so closely to empirical phenomena as in this case is that it is necessary and important to think about some “traditional” methodological matters. But, it is also very important to use common sense¹²⁴ in combination with these matters. There are, of course, some good ideas in most methodological views and approaches. The method used in this project has, to a large extent, been given by the problem and the industry studied. For this reason, I have not clearly positioned the research performed in each of the subcategories of methodological considerations that will follow. However, my methodological position will be clear to the reader.

3.2.1. Fundamental Methodological Standpoint

Approach

To be able to perform an investigation and describe reality in a “correct way” from a research perspective, one has to make certain assumptions about reality and how it is constituted. For this purpose, it is possible to use different scientific approaches. Arbnor and Bjerke (1994), describe three different approaches applicable in business and administration research, the analytical, the system, and

¹²³ The contextual study will be presented in chapter 6.

¹²⁴ Since common sense is a subjective matter my common sense will quite naturally not always seem like common sense to another person.

the actor's approach. This thesis is basically using the system approach. Like the advocates of the system approach, I think that earlier investigations are useful as analogies in a new investigation. My research problem is partly analysed and highlighted by using earlier studies on the topic¹²⁵.

The positivistic ideal for research is based on the natural sciences. Positivists strive to find causal relations in explaining reality. Reality is studied objectively. Facts are clearly separated from valuations (Andersson, 1982). Positivists look for a testable objective truth and the approach is, in main, inductive (Mårtensson & Nilstun, 1988). Hermeneutics, on the other hand, emphasize the qualitative ideals of research. The advocates for this research ideal stress the importance of the subjective elements in research. They say that the researcher's individual experiences affect and help him to understand the research question (Andersson, 1982). This research problem is investigated using a research ideal positioned closer to the hermeneutic ideal than the positivistic one. This is quite natural since it is a problem studied in a social science context. However there are some rudiments in the positivistic approach that is well in line with the aim, and the mode of procedure, used in this thesis.

Attacking the Problem

This research follows a qualitative paradigm. The research conducted is of an explanatory nature. The differences between a qualitative and a quantitative study have, according to Creswell (1994), to do with (i) the point of view – qualitative studies generally apply a literary point of view by a) being the one “speaking” (using I or we) b) “speaking” to the reader (you is used). In a quantitative study, the writer usually is informing about the action (it can be used) (ii) the rhetorical differences – a qualitative study may use questions to guide the reader, while the quantitative study would be written in a more formal style (iii) view of the reality and the logic of the design. In a qualitative study, literature and theory are less apparent in the introduction. A qualitative study is typically inductive, which also suggests an emerging and not a static design. There are bigger differences in these aspects in qualitative studies than there are in quantitative studies.

The area of competition in complicated settings, such as freight transport channels constitute, has not been extensively researched. The qualitative paradigm fits, therefore, this thesis well. There are two fundamental ideas for using literature in qualitative research (Creswell, 1994). The first is that the literature should be used in an inductive way, and the second concerns the differences in the use of literature in different types of qualitative studies.

¹²⁵ Such studies regard research on competition and freight transports (performed by institutions such as TØI) and descriptions as found in industry journals (as will be described in chapter 6).

An inductive mode of research in a qualitative study, see, for instance, Alvesson & Sköldbberg (1994), or Thietart (2001), starts out by gathering information and after that, questions are asked. The researcher should, then, categorise the material and search for patterns (i.e. forming theories). Using the material, the researcher develops a theory or compares the patterns found with existing theories. The researcher, thus, observes and generalizes reality to form theories from empirical data. When opting for a deductive approach to research, one has a theoretical starting point. The theories are tested against reality. The abduction approach has an intermediate position. Abduction has an inductive base but it does not deny theoretical pre-understandings, which, then, is a deductive part. The researcher, thus, swings between theory and empirical data and reinterprets them several times. In the abductive approach used, channels and groupings of participants are compared to derive a meaning as described by Thietart (2001). Systematic combining is an approach developed by Dubois & Gadde (2002). They describe the approach as “...a process where theoretical framework, empirical fieldwork, and case analysis evolve simultaneously, and it is particularly useful for development of new theories.” The authors stress that the approach is closer to induction/abduction than deduction. The approach is based on continuously moving between the empirical world and a theoretical world. The theoretical framework, empirical fieldwork, and case studies evolve simultaneously.

The problem dealt with in the thesis calls mainly for an explorative approach even though it also has elements of theoretical contributions. An abductive approach is used in the thesis, since I aim to explore, interpret, and analyse empirical facts using theories. The theoretical findings constitute a “starting point”, which is followed by the empirical studies in several steps and, lastly, the empirical material is illustrated and analysed from the theoretical perspective. It is abductive since I start out with a theoretical pre-understanding and investigation, which is followed by empirical collection and comparison with the theoretical findings in several steps. Parallel to the theoretical framework and the empirical data collection and analysis, a contextual study is performed. The empirical material was, as the collecting of the same progressed, exposed to a pre-analysis and a comparison with the theoretical findings in an abductive way. The systematic combining has similarities with the approach used in this thesis i.e. to use multi-case studies in an abductive way. This thesis, however, does not primarily aim to develop theories.

3.3. Case Studies

A case study is “an empirical inquiry that investigates a contemporary phenomenon within its real life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” (Yin, 1994). A case study may be explanatory as well as

descriptive and exploratory, according to Yin. The research questions are in how- or why-form and the case study does not require control over behavioural events. It focuses on contemporary events. Yin (1994) holds that case studies are a broad method in several ways. First of all it can be based on single- as well as multiple cases. Secondly, case studies can contain quantitative as well as qualitative evidences. Thirdly, case studies can be used to explain, describe, illustrate, and explore phenomena and it can also be used as “a study of an evolution study”. Case studies are generalized by “analytic generalization” (Yin, 1994). The cases are generalizable to theoretical propositions and not to populations.

One advantage of the case study approach is the focusing on few examples, which makes it possible to deal with the fragility and difficulties of complex commercial and social situations. A researcher may struggle with relationships and social processes in a way that would not be possible if he uses the survey approach. The case study analysis is holistic rather than based on isolated factors (Denscombe, 1998). Mentzer and Flint (1997) are advocates of case studies and they argue: “*Case studies are strong in realism, internal validity, and parts of construct validity; but they suffer from statistical conclusion validity, statistical generalizability, external validity, and replication.*”. According to Yin (1994), a case study has a distinctive advantage as compared to other research strategies when “*a ‘how’ or ‘why’ question is being asked about a contemporary set of events over which the investigator has little or no control*”. This description is well in line with the purpose of this thesis. The channels investigated are in use at the time of the interview. In section 1.5, the purpose of this thesis was stated to be to “*... explore, describe, and develop the view on competition and competitive forces in the complex setting of freight transport channels*”. This purpose can be answered by asking questions of how- and why-form. The questions asked aim to improve the understanding of the respondents’ perception of a certain competitive phenomenon. The respondents’ subjective feelings are important to understand and explain how the markets function. Such questions are mainly of how, and why-type, such as: “*How does competition occur within and among freight transport channels?*”; “*Why do you (not) use a certain instrument to become competitive?*”. However, some questions of what-type will also be used looking for explanatory answers e.g. “*What solutions to the freight movement demand compete with the channel studied?*” This question can, in a natural way, be followed up by the subquestions “*How?*” and “*Why?*”.

One of the most frequent criticisms of case studies as a methodology is the problem of generalization. Yin (1994) argues that the number of cases is of minor importance for the generalizations, if the cases meet the established objectives. I believe that generalizations performed using common sense can be a practicable way to obtain research results. However, it is important that the researcher and the reader have common sense in writing/reading the research report. In an

article, Ellram (1996) holds that case study research “...*is not well understood in general and in purchasing and logistics management in particular*”. This is highly likely to be valid for the study of transportation as well. However, I think that case studies, as a method, can provide with extensive knowledge to the theoretical as well as practical fields of logistics.

This thesis is based on case studies, which are used to collect empirical information. A case is in this study, synonymous with the shipper and the adherent freight transport channel studied, and, therefore, each case study typically consists of 3-4 actors (i.e. shipper, coordinator, and carriers). With each actor, an in-depth interview has been conducted. I have not formulated any hypotheses whose strength is investigated through my case studies but my research method has been more fundamental to analyse the competitive behaviour in the industry. The freight transport industry characteristics calls for this methodological approach. This thesis takes on a broad perspective on the cases and the freight transport channels studied. It is broad in a geographical as well as a product dimension, since the channels dealt with regard national and international channels of varying length and the channels regard high as well as low-value goods and it covers channels of several industries. Since the focus, thus, is broad in several aspects, the multiple-case study design is appropriate here, see Yin (1994).

3.3.1. Sources of Information

In case studies, Yin (1994) says that three principles should be followed. These are (i) use more than one source, (ii) construct a case study database, and (iii) present a chain of evidence, i.e. links between questions, data collection, and conclusions.

Primary data is information that has been gathered by the researcher for a specific project. Secondary data, on the other hand, is data gathered by someone else than the person conducting the research project. There are several advantages as well as disadvantages of using secondary data. The most important advantage of secondary data is that it is less time consuming, and, therefore, less expensive to gather than primary data. On the other hand, the most important drawbacks are the reliability of the data and that it often is designed for another purpose. The secondary data is mainly used for validating the results based on the primary data. The main drawback of secondary data is the limited insight one has into the material. This makes it difficult to form an opinion of the reliability of the information. As a researcher one must, be cautious when treating primary data but even more cautious when treating secondary data. In addition to the ordinary carefulness, one will, then, have to consider things like: Who collected the information, what was the purpose of the collection, has the data been treated in

some specific way, how was the information obtained and how “extreme” is the data.

Table 8 below, reproduced from Yin (1994), shows the strengths and weaknesses of six ways to collect data. Below the table, I give my view of how helpful these are to me in relation to the purpose of the thesis. To fulfil the purpose of the study, one needs to catch subjective feelings and perceptions about competition within and among freight transport channels. This restricts the sources possible to use.

Source of Evidence	Strengths	Weaknesses
Documentation	Stable – repeated review Unobtrusive exist prior to case study Exact names, etc. Broad coverage-extended time span	Retrievability – difficult Biased selectivity Reporting bias-reflects author bias Access – may be blocked
Archival Records	Same as above Precise and quantitative	Same as above Privacy might inhibit access
Interviews	Targeted – focuses on case study topic Insightful – provides perceived causal inferences	Bias due to poor questions Response bias Incomplete recollection Reflexivity - interviewee gives what interviewer wants to hear
Direct Observation	Reality – covers events in real time Contextual – covers event context	Time-consuming Selectivity – might miss facts Reflexivity – observer’s presence might cause change Cost – observers need time
Participant Observation	Same as above Insightful into interpersonal behaviour	Same as above Bias due to investigator’s actions
Physical Artifacts	Insightful into cultural features Insightful into technical operations	Selectivity Availability

Table 8. Case study sources (Yin, 1994)

Documentation

Documents can be useful as a secondary source of information in highlighting how competition occurs in freight transport channels. However, since companies’ published documents show a embellished picture of competition and are written not to reveal any secrets, they are unlikely to show how the shippers and channel participants perceive, and act in terms of competition. Furthermore, competition, especially subjective feelings about competition, is seldom discussed in documents from the companies. The subjective part of competition and competitive behaviour is important and this will not be covered in documentations to a sufficiently large extent. However, one important use of

documentation is that it may reflect the context in which the shippers and channel participants understand the company, channel, and competitive matters. Therefore, documentations may be useful, but not as a primary source of information, but rather for triangulation¹²⁶ and as complementary sources of information.

Archival Records

Archival records will not be used since it has many of the drawbacks in common with the documentation, and since such information seldom can be assumed to show any up-to-date information regarding specific channels. Furthermore, it is most likely difficult to get access to such archival records if there are any interesting documents discussing competition.

Interviews

Interviews are by far the most important way to collect information to fulfil the purpose of this thesis, even though documentations, virtual (e.g. in terms of web pages, e-mails, and newsletters) as well as traditional ones, and industrial journals are also used. Due to their importance to this thesis, interviews will be further discussed below. However, it should be kept in mind that interviews, like the other sources of information, have some drawbacks, one being that the respondents may have a motive for not always telling the truth. Furthermore, as Yin notes in the table, the interviews might give a biased result.

Direct and Participant Observation

Not usable since much of the phenomena studied is likely to deal with subjective feelings and background variables which could not be observed.

Physical Artefacts

No such artefacts are likely to be helpful in describing the competitive phenomena investigated.

Interviews

Since data primarily has been collected by personal interviews, these will be given extra attention here. Since the market for freight transport channels has special characteristics, I decided that the best way to explore and illustrate the industry regarding matters of competition was to make interviews with people in the trade. Collecting data through interviews makes it possible to modify the line of enquiry, to follow up certain answers/comments, and to investigate underlying motives. One of the most important advantages of using interviews as a data collection method is that they provide opportunity to gain knowledge about the respondent that would have been difficult to gain by questionnaires.

¹²⁶ Triangulation means collecting data from several sources of information in order to control the presence of certain phenomena and/or the truth in the information (Bell, 2000).

The strength of the interview is in the possibility of catching different opinions in order to give a realistic picture of the studied phenomenon, according to Kvale (1997). The interviewed person should be briefed before and after the interview. The type of interview treated in Kvale (1997) is called semi-structured life-world interview¹²⁷, which is defined as: “*an interview aimed to receive descriptions of the interviewed persons ‘life-world’ in order to interpret the ideas of the described phenomenon*” (freely translated). The questions asked by the interviewer should be short and simple. Kvale treats twelve aspects of the qualitative research interview. These, which are translated from Kvale’s original, are:

- **Life surroundings** – the subject of the interview is the life surroundings of the interviewed person and his/her relation to it.
- **Meaning** – interpret the meaning of the central themes in the life surroundings.
- **Qualitative** – seek qualitative knowledge expressed in normal language.
- **Descriptive** – describe different aspects in the life surroundings.
- **Specific** – describe specific situations and actions, not common opinions.
- **Awareness of presuppositions** – be open to new phenomena instead of bringing up ready-made categories and schemas of interpretation.
- **Focusing** – focus on fixed themes. The interview should not be too fixed in its structure with standardised questions but it does not have to be totally “non-controlling” either.
- **Ambiguity** – the statements can sometimes be ambiguous and mirror the multifaceted reality that the interviewed person is living in.
- **Changes** – an interview may result in new knowledge and the interviewed person may, during the interview, change his/her description or perspective of a theme.
- **Sensitiveness** – different interviewers may get different answers due to the different sensitiveness for, and knowledge of the matter of the interview.
- **Interpersonal experience**– the knowledge obtained in an interview is brought up by the interpersonal experience.
- **Positive experience** – a well-conducted research interview may be enriching for the interviewees, they may gain new insights into his/her life situation.

Bryman & Bell (2003) distinguish between what they refer to as “qualitative interviews” and interviews used in quantitative research. Robson (1993) distinguishes between interviews based on how formal they are. So does Lantz (1993) who discusses four forms of interviews. These are the open, the directional open, the semi-structured, and the structured interview. In the open

¹²⁷ Originally stated as: “*halvstrukturerad livsvärldsintervju*”.

interview, the respondent decides what is important regarding the phenomenon dealt with in the interview. This type of interview does, therefore, not suit my problem very well. In the directional open interview, the researcher controls the situation by asking broad questions. This form of interview depends on not asking specific questions as I to some extent had to do. Therefore, I did not benefit from using such technique. Using the semi-structured interview makes it possible to control the interview to some extent, but still lets the respondent speak freely enough to catch every dimension of his/her understanding of competition within and among the channel studied. Therefore, I find this form of interview to be the best one for the purpose of this thesis. Lastly, in the structured interview, the researcher is in complete control of the situation. Such an interview is more like an oral inquiry, according to Lantz. Since I need to catch the respondents' feelings, attitudes, and views of the phenomena studied in order to describe, and understand, how competition occurs in freight transport channel settings, the structured interview does not fit my purpose. When doing research on such phenomena as competition, which to a large extent deals with perceptions and subjective experiences, I think that it is necessary to be open to the experiences of the interviewed person. The interviewee's knowledge of the situation is seldom separable from his/her previous work and experiences.

Having decided that performing interviews is the best way to gather relevant information to answer the research questions and fulfil the purpose of the study, one must consider the type of interview to be performed. Basically, there are three different types of interviews¹²⁸ (Creswell, 1994). These are to perform the interview face-to-face, by telephone, or in a group (i.e. where several respondents are interviewed simultaneously). The last type of interview was the one that most easily could be excluded, since the respondents are likely to feel restrained in giving their view on the subject of competition in freight transport channels, since these matters deal with the other respondents. In a group interview, it is likely that some participants will dominate, and, therefore, the picture one gets might be biased. It is possible to perform such group interview in different settings, interviewing the shipper and participants of a certain channel as one group, or to interview the actors according to their subgroup (i.e. shipper, coordinator, or carrier). However, irrespectively of what such a grouping would look like, I find that the drawbacks outweigh the costs. The telephone interview has both advantages and disadvantages. The main advantage is that it is inexpensive and not as time-consuming as face-to-face interviews. The main disadvantage, on the other hand, is that it is difficult, for the respondent as well as the interviewer, to fully explain and describe alternatives and meanings of ideas and thoughts. Another disadvantage is that it is harder to perform a loosely structured interview

¹²⁸ It is, of course, possible to talk about other forms of interviews distinguishing them by another base. This is, for instance, done by Schmidt & Conaway (1999). According to them, the different types of interviews serve different functions.

and to follow up ideas and lines of thought. It is harder to get the respondent to talk freely about the subject on the phone than in a face-to-face interview. Furthermore, it is easier to get the respondents' confidences when seeing them face to face. Lastly, the interviewer misses seeing respondents' physical expressions when conducting a telephone interview.

In-depth interview

In performing an in-depth interview, one should switch between three levels of abstraction, according to Banaka (1981). These are (i) the levels of information (is the interviewed person aware of the fact that he/she is being interviewed?), (ii) the level of opinion (what are the interviewed person's opinions?), and finally (iii) the level of action (what has been done?). Banaka (1981) defines an in-depth interview as (freely translated): "*Collection of sufficient information (input) of the right kind in order to perform a careful analysis (analysis) aimed at drawing correct conclusions from the interviewed person's actions given certain conditions (output).*" The words in parenthesis represent the three stages of in-depth interviewing. The interpersonal communication consists of two parts, the formal contents, and the interpersonal processes, the former referring to the words spoken during the interview. The latter part can be viewed in two ways. The first is the logical way regarding the process of thinking and the second is the relational way regarding the emotional process. In-depth interviews are also discussed by Lantz (1993) and Kvale (1997).

Interpreting interviews is an important task but not an easy one. The subjective elements occur in many steps in research based on interviews (see, for instance, Schmidt & Conaway, 1999) such as the selection process, the choice of questions to ask, how the questions are followed up, how the material is treated after the interview, etc. However, to make the interpretation of the interviews more reliable, it is helpful to follow a procedure making sure that the interviews are performed, understood by the researcher as well as the interviewees, and interpreted in uniform way. It is important, according to Alvesson & Sköldbberg (1994), throughout the research process to interpret and reflect on the steps involved in the process. How the interviews were analysed and interpreted is further described in chapter 5.

3.3.2. Triangulation

Case study method is a triangulating research strategy, since several methods are used for collecting data. The triangulation can occur between data, investigators, theories, and methodologies (Tellis, 1997). To highlight the importance of triangulation in logistics research, one can cite Mentzer and Flint (1997) "*The only way to thoroughly research any concept in logistics is through the research concept of triangulation*". Triangulation, in this thesis, occurs principally

between interviews, different forms of documentation/sources of information, and theories.

To summarise: in collecting the material upon which this thesis is based, I have mainly used in-depth-interviews. As complementary information, I have used annual reports, industry papers,¹²⁹ and papers published by companies and interest groups¹³⁰.

3.4. Quality

Securing the quality, in terms of high reliability and validity, in social studies is not easy, since it often deals more with subjective feelings than hard measurements. To reach high quality caution must be taken when collecting, preparing, and analysing the material. In multiple case studies, Yin (1994) says that replication logic should be used. The cases are to be selected either to predict similar results (literal replication) or to predict contrasting results (theoretical replication).

3.4.1. Reliability

Reliability deals with the trustworthiness of the research. If a study is reliable the results would be the same if the study was replicated¹³¹, see e.g. Bell (1995) or Eriksson & Wiedersheim-Paul (1997). Kerlinger & Lee (2000) hold that a reliable behaviour is a predictable behaviour, i.e. a behaviour that does not change over time and in different settings. A reliable process is, according to Kerlinger & Lee, characterised by lack-of-distorsion.

A high reliability can be reached by letting the data collection follow well thought out procedures. According to Patel & Davidson (1994), one way to assure the reliability in social sciences involving interviews is to record the conversations. This reduces the risk of missing or misinterpreting the information told. Patel & Davidson also stress that using pre-constructed interview templates further improve the possibilities of conducting a reliable study.

3.4.2. Internal Validity

Validity, a concept that originates in quantitative research, deals with the ability of the study to describe what it aims to describe, i.e. the accuracy of the study. Kerlinger & Lee (2000) say that: “*The most common definition of validity is epitomized by the question: Are we measuring what we think we are measuring?*”. Validity relies, to a large extent, as described by Kvale (1997), on

¹²⁹ Mainly the journals *Transport iDag*; *Transport och Hantering*; *VTI Aktuellt*; *På Hugget* (an e-journal).

¹³⁰ Mainly the journals *Svensk Åkeritidning*; *Transport Journalen*; *Svensk Logistik*.

¹³¹ It is naturally hard to replicate an investigation in the social sciences, since you will always have some differences that might change the result.

the “quality of craftsmanship”. Kvale holds that to validate is to check, question, and theorize.

Content validity deal with the representativeness of the material and it is basically judgemental according to Kerlinger & Lee (2000). They further hold that face validity, which is similar to content validity, is more applicable to qualitative studies. To reach a high validity of a study, it is necessary that the aims of the study is clearly specified, and that the study’s purpose is answered (Halvorsen, 1992). According to Mentzer and Flint (1997), internal validity deals with determining whether the relationship is casual or not. They say that internal validity regards the validity of the investigated objects. This is, according to the authors “*where case studies do bring considerable value to logistics research*”. Yin (1994) writes that internal validity is relevant “*for explanatory or casual studies only, and not for descriptive or exploratory studies*”.

Construct validity is a complex concept, which is further discussed in, for instance, Garver and Mentzer (1999) and Kerlinger & Lee (2000). The concept deals with how one knows that the theoretical phenomena are correctly defined and measured. Reliability is a necessary but not sufficient condition for construct validity. The most commonly used test for reliability in case studies is, according to Garver and Mentzer (1999), inter-judge.

3.4.3. External Validity

External validity can, according to Mentzer and Flint (1997), in turn be subdivided into three concepts: statistical generalizability (i.e. if other business people would have the same reactions as those who responded to the sample), conceptual replicability, and realism. Even though the concept of external validity has its roots in experimental planning the concept is useful in other fields of research as well. External validity regards to what extent the results from a certain investigation are usable in other situations than the one studied (Merriam, 1994). Using a heterogeneous material strengthen the external validity. Kvale (1997) refer to a certain type of generalizations as analytical generalizations. Those should be based on a sound judgement of how, and if, the results from a certain study are usable to guide what might happen in another case. The validity of the generalizations, however, depends on the similarities between the analysed material and the material that is being generalised. One of the targets of generalisation, which Kvale discusses referring to Schonfield (1990) is to study *what is*. This type of generalization aims to establish what is typical for a broader segment than the one studied. Another target Schonfield (1990) identifies is *what may be*. High-qualitative research must have both high reliability and high validity. This section is finished off by quoting an example by Kirk and Miller (1986) that describes the relation between the concepts of reliability and validity using an example: “*A thermometer that shows the same reading of 82 degrees*

each time it is plunged into boiling water gives a reliable measurement. A second thermometer might give readings over a series of measurement that vary from around 100 degrees. The second thermometer would be unreliable but relatively valid, whereas the first would be invalid but perfectly reliable.”

4. RESEARCH MODEL

4.1. *Introducing the Model*

In this chapter, the model used in the analysis of the case studies is developed and described. The most fundamental idea in the analysis of the material is to split up the phenomenon of competition in some structural and functional dimensions. These dimensions are described in great detail in sections 4.3 and 4.4.

The research model is used as an analytical instrument and it is developed to facilitate and structure the analysis and the interpretation of the empirical material. The structure of the research model has four bases (i) my pre-understanding of the topics, (ii) the theoretical influences, (iii) the contextual study, and (iv) a preliminary partial exposition of the material collected in the main study.

4.1.1. **The Pillars of the Model**

Competition is such an important element of every modern economy that it needs to be understood, highlighted, and interpreted from different angles. From the previous discussion, it may be concluded that competition is an ambiguous concept. Actors in the freight transport industry, politicians, and researchers with their different perspectives and backgrounds view competition differently. This regards, for instance, the (ideological) conditions¹³², the threats, and opportunities it provides, and how it affects different groups.

This thesis goes further than other research in analysing competitive matters within and among freight transport channels. Here, a new way of thinking about competition is presented, treating the different dimensions of competition central to the analysis of the empirical material. The model has been developed throughout the research process. Even though the research has been performed in terms of these dimensions during the process, the actual research model has been developed at a late stage. The model is, therefore influenced by the theoretical framework and the empirical foundations¹³³.

¹³² Part of which is of an ideological nature.

¹³³ These dimensions have been developed after the interviews. The interviews did, therefore, not intentionally follow these dimensions even though they naturally reflect the dimensions quite well.

4.1.2. Introducing the Dimensions

This section develops the dimensions of competition that will be used throughout the thesis. The development of competition in terms of dimensions serves as (i) a fundamentally new way to analyse matters of competition (ii) a superior way to describe how competition works in complex settings like freight transport channels (iii) the constitution of the research model and the connecting thought followed in the analysis of the empirical material. The dimensions treated here deal specifically with the sector of freight transports but they are generalizable and can, slightly modified, be adapted to most areas of research on competition.

The structural dimensions treated are¹³⁴:

- Competitive Instruments
- Competitive Strategies
- Efficiency Improvements
- Shipper Behaviour
- Motives and Objectives
- Forms of Competition
- Market Structure

These dimensions, individually as well as jointly, influence how competition is perceived and understood. There are no clear dividing lines between the different dimensions. The correlation among them is extensive and they affect each other – this does, however, not make it less important to analyse competition from the perspective of these dimensions. The capturing of synergy effects calls for the dimensions to sometimes be treated individually and sometimes simultaneously.

The discussion and the treatment of the structural dimensions will have an effect on the two functional dimensions. These dimensions are:

- Competitive Pressure
- Surfaces of Competition

The dimensions vary extensively in terms of the range they cover, and, therefore, the descriptions of the different dimensions¹³⁵ in sections 4.3 and 4.4 differ greatly in length. Other dimensions might suit other research contexts better.

¹³⁴ It should be noted that the dimensions are used in this setting, since they suit this particular phenomenon well. Other dimensions could suit other phenomena better. There are numerous ways to find different aggregations for the dimensions of competition and other bases for the dimensions than the ones used here. For instance, competition could be treated using the dimensions chosen by Brian B R Elliot: price, quality, delivery, speed, and design (<http://basil.Acs.Bolton.ac.uk/~bbel/dimenofcomp.html>; Accessed 2003-06-03). These variables then, deal more with how the companies compete to gain a competitive advantage.

¹³⁵ Firms can use the dimensions of competition in several ways. The dimensions can, for instance, more or less deliberately be used to create and/or hold on to a competitive advantage

The dimensions discussed here are very different in terms of (i) their individuality (ii) their scope, and (iii) their analytical depth. Some of them are more freestanding than others, while some overlap each other to some extent. However, it will be made clear in this chapter what these dimensions are supposed to cover in this thesis and how they have been used in the analysis and as a foundation for the conclusions drawn.

The reasons for analysing the empirical material in terms of these dimensions of competition are several. First of all, following this structure benefits and facilitates the analysis, since it becomes systematic. Secondly, it makes the conclusions drawn more stable, since the analysis has been performed stepwise and then, when applicable, brought together in analysing and describing larger blocks of the theme for this thesis. Thirdly, following this structure makes it easy to check the results against the material as well as to check/compare it with the results of other similar studies. The fourth and last advantage from the structure is that it makes the suggestions for further research and developments more close to reality, accurate, and from theoretically as well as practical points of view more interesting.

Within the dimensions, the analysis of the material is divided into a horizontal and a vertical section. In the horizontal analysis, actors of equal positions (i.e. shippers, coordinators, and carriers) are discussed. In the vertical analysis, the interviews are discussed and analysed in a case/channel manner.

4.1.3. The Model – An Overview

The model, which has been developed and used to analyse the empirical data, is special, since the area of research is freight transports while the topic of the research is competition. To some extent, this implies that two worlds collide on one hand the practical, empirical world where the respondents live and on the other hand the theoretical world, where competition as a research subject lives. This does by no means imply that the actors in the “real world” do not face, react to, or understand competition. They certainly do. Competition might be a life-and-death struggle or at least a struggle between becoming economically successful or facing an economic failure to these actors. However, they generally have a different perspective on competition than the advocates of the classical

for the focal firm. Actors in the trade seldom view competition in dimensions. They normally use clear strategies, etc. instead of staying or becoming competitive where different aspects from many dimensions are used. The split up of the phenomenon of competition is motivated by making the analysis more easy but it also has clear pedagogical advantages and each participant in a freight transport channel would be able to benefit from understanding the different dimensions of competition and how these affect themselves, their partners in the channel, and their competitors.

theories of competition. Therefore, one of the contributions of this thesis is the development of the dimensions of competition and the concept of surfaces of competition, which is closely related to the dimensions. Thanks to these dimensions, the concept, and phenomenon of competition can be analysed, described, and understood in a theoretically deeper and practically more correct way. The dimensions make it possible for the complex empirical world to be more understandable from a theoretical point of view and vice versa. Therefore, it has been of great importance in the development of the research model to analyse the concept of competition in terms of its relevant dimensions.

The research model has been developed and refined throughout the research process. The split up in the structural and functional dimensions were performed after having conducted and transcribed the interview with the shippers and the channel participants. The interviews and the transcription can be regarded as some form of pre-analysis. By then, my pre-understanding of how the actors think and act in terms of competitive behaviour had been founded. This pre-understanding was sometimes supported by the analysis and sometimes it was not. At this stage, the actual dimensions in each group were also starting to be crystallized. Even though the model partly is developed after, and influenced by, the interviews, it should not to be regarded as a result of them, but rather as a theoretical means helpful to structure and analyse the extensive material.

Figure 9 below visualises the model used to highlight and analyse the competitive situation in the freight transport sector. First, the basics of the competitive situation are decided by the conditions and the requirements put on the service demanded. Such conditions and requirements are set up by political decisions, on a national as well as an international level, and by interest- and pressure groups. Furthermore, the shippers and actors in the freight transport market set up such conditions and requirements. Then the structural dimensions of competition, which are affected by the set of presumptions and requirements, are analysed. From these structural dimensions, where competition is broken down to its elements, the functional dimensions are discussed. The structural dimensions, as well as the set of presumptions and requirements, thus affect the functional dimensions. However the functional dimensions also affect each other and “live their own lives”. The functional dimensions are described in a similar way as the structural dimensions. The conclusions about how competition occurs within and among freight transport channels drawn in this thesis result from these structural and functional dimensions of competition. There is a feedback effect from the structural and functional dimensions affecting the presumptions and conditions as indicated by the dotted arrows. Thus, the conclusions drawn in this thesis are mainly based on the functional dimensions, but the structural dimensions also directly have impact on the conclusions.

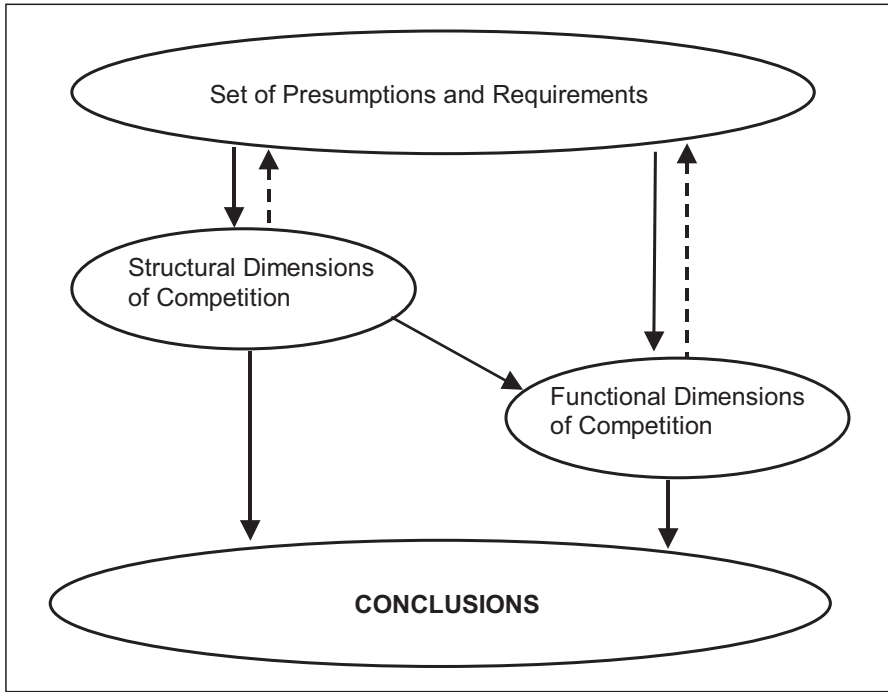


Figure 9. Research model

4.2. Conditions and Requirements

Before discussing the dimensions of competition found and treated in this research project, it is necessary to decide under what conditions and what requirements the freight transport channels work. These sets of conditions and requirements deal, among other things, with the legal aspects of how competition may occur but also with conditions on the demand- as well as the supply side¹³⁶. These aspects are brought up in the following section dealing with two broad groups, namely (i) the level of aggregation on which the observer and the actor understand the phenomenon studied and what perspective the industry is viewed from (ii) the specific conditions set up by politicians affecting the actors through systems of laws but also through encouragements/impediments like subsidies and taxes.

Since most of the topics dealt with in this section and the dimensions of competition have already been discussed in the theoretical framework, I have kept the number of references to a minimum.

¹³⁶ The demand-side is important since it is in the mind of the observer where it is decided if two solutions compete or not.

4.2.1. Level of Aggregation

The level of aggregation at which the economy and the freight transport channels are illustrated and analysed, affects the competitive phenomena and objects found and treated. The levels of aggregation seen from an economic point of view are the macro-, meso-, and micro-economic levels¹³⁷. Analyses performed at different levels often result in different but not necessarily contradicting results, see for instance, Parkin (1990). A market that, when it is viewed from one level of aggregation, seems to be characterised as one market structure, will often, when understood from another level of aggregation, seem as quite another market structure. Some research questions can be highlighted and analysed at several levels, while others are level specific. This thesis principally regards the micro-level but, to some extent, the meso-level is treated as well. The macro-level of freight transport systems is not dealt with here.

The micro-level focuses on individual companies, their customers, and their interrelationships, that is, the objects in focus are the shippers and the channels' building blocks. On the microeconomic level, the individual companies and the channels are studied¹³⁸. On the meso-level, questions dealing with the full freight transport channel seen as an entity, and its substitutes, are treated. Furthermore, the system of channels, cooperating and/or competing in the market is analysed on the meso-level. Competing channels might work on the same relation, with the same products, and/or offering the same services as the channel studied on the micro-level. Since there are no clear dividing lines between the levels of aggregation, it might be a good idea to use delimitations in time, space, and/or product market. Thus, at the mesoeconomic level, which is the most vaguely defined level, the focal channel's actual and potential competitors are treated. These channels, and questions related to them, constitute the meso-channel. Thirdly, on the macro-level, focus is not on individual actors or channels but on the aggregates and averages of behaviour. Focus is on issues of competition and the conditions for the networks of channels and groups of actors working in the industry. Questions studied mainly deal with the conditions that the transports are given from a political level. The macro-level is, naturally, of great importance for the companies in the trade, since it deals with the conditions that the companies work under. Focus in an analysis on the macro-level should be on an international- and a system level rather than the channel level. For each of these levels, different sublevels can be found. The relevant market definition will be decisive for understanding what is to be included in each sublevel.

¹³⁷ Micro-, meso-, and macro stem from the Greek words *micros*, *mesos*, and *macro*s meaning "small", "middle", and "large" respectively.

¹³⁸ Typical variables studied are how they act to gain a competitive advantage, what partners to cooperate with, the actors' relevant market (geographical delimitation, products, modes to be used, etc.).

4.2.2. Political and Legal Presumptions

As discussed in Chapter 1 it is important to correctly understand how the freight transport industry works for several reasons. The industry is frequently the subject of policy interventions, for budgetary, or and external effects, reasons, as discussed in, for instance, Godstransportdelegationen (2000), Kommunikationskommittén (1997), Näringsdepartementet (2001), or The Commission of the European Communities (1997; 1998; 2001). It is helpful to be able to predict the carriers', coordinators', and the shippers' actions as a reaction to a certain governmental measure. The split up of competition in its dimensions can facilitate such an understanding, and it can be a helpful tool for shippers and service suppliers in striving to improve on their competitiveness.

The conditions under which the carriers work affect not only them and their competitive situation but indirectly also coordinators and shippers. The conditions under which carriers work in the businesses are formed by political decisions on a regional, national, as well as a supranational level (as discussed in section 1.2.3 above). The conditions influence the decisions made by every actor regarding the characteristics of the service as well as the choice of carrier. Often, in decisions regarding the freight transport sector, the political conditions in the sector aim at internalising the external costs. As with most political decisions, there are those benefiting from certain decisions and those losing from the same decisions. Even though it is not an explicit purpose to describe how the actors in the industry understand the political presumptions that the industry works under, it is unavoidable to deal a little with these presumptions, since they are such an important element of the actors' everyday life. The respondents' perceptions of these aspects are likely to influence their answers in the interviews.

4.2.3. Horizontal and Vertical Analysis

One of the strengths of this thesis is that multiple channels have been investigated, which makes it possible to analyse the material horizontally as well as vertically. In the horizontal analysis, as mentioned above, the corresponding positions (i.e. shippers, coordinators, or different constellations of carriers) in different channel settings are compared, contrasted, and further analysed. Also, the entire channels (including the shippers) can be used as a base for a horizontal analysis¹³⁹. The horizontal analysis deals with common views, differences, as well as unique characteristics since these aspects are of importance for understanding the phenomenon of competition from the companies' perspectives and to be able to draw conclusions on a theoretical basis.

¹³⁹ This case, when the full channels and the adherent shippers, are compared and contrasted with each other, is a special case, which, in this thesis, is viewed as a kind of horizontal analysis.

In the vertical analysis, focus is on the shippers and the channel members. The channels can be clustered according to the type of goods moved or based on the channels' structures, and, therefore, several channels can be considered to be an aggregate. The dimensions and topics treated in the horizontal and the vertical analyses do not differ very much. However, some dimensions and topics are only to be found and discussed under one of the topics, and, therefore, the description in the section is asymmetric.

Given this background, it is now time to develop the dimensions of the phenomenon of competition.

4.3. The Structural Dimensions of Competition

The dimensions of competition brought up in the previous sections are important parts of this model and they are used in order to structure the analysis. It should, though, be kept in mind that these dimensions to some extent overlap each other, therefore, the division of the aspects brought up in the analysis to a certain degree becomes a matter of choice.

The first three dimensions¹⁴⁰ are closely related, see for instance, Porter & Kramer (2002). These dimensions could, therefore, have been treated as one large dimension but since they are such a significant part of the work presented in this thesis and for pedagogical reasons, I treat them as different dimensions. This split-up will facilitate the analysis.

4.3.1. Dimension I: Competitive Instruments

This dimension, treating the competitive instruments, deals with the variables that the actors focus on when discussing the competitive situation in their respective markets. The instruments are the means that the carriers and coordinators use in striving to gain and/or keep a competitive advantage. Creating and holding on to a competitive advantage is what competition is all about from the competing companies' point of view, see, for instance, Porter (1987), Hoffman (2000), Hunt (1999; 2000b). If a company has achieved a competitive advantage by using its competitive instruments, from the customers' point of view, the company's offering is preferred over the competitors' offerings, which can motivate a higher price. The competitive instruments¹⁴¹ are used on a daily basis and as a strategy in

¹⁴⁰ Treating Competitive Instruments, Competitive Strategies, and Efficiency Improvements respectively.

¹⁴¹ Without having the intention of providing a complete list of instruments, one can see that at least the instruments brought up in this section are among the most important ones. It is often difficult to separate the variables from each other. Among the "hard" variables, which are easier to measure/quantify, we will find: price, frequency, quality (time for the movement, reliability, flexibility, environmental influence, etc.), service (customer service, information system, use of IT/EDI, etc.), risk. For a more detailed treatment of the benefits and barriers that international freight forwarders and their customers see from using EDI, see Murphy & Daley

the longer perspective by the companies in the trade irrespectively of them knowing what effect this will have on the market and the other actors. The competitive instruments are, thus, important as building blocks in the competitive strategy that the company forms to improve its efficiency and its attractiveness in the eye of the customer. The actors should use all the instruments available in order to position themselves and to maintain a competitive advantage. This means that the actors should try to work with several instruments simultaneously so that there is a unique package to offer to the customers. It should not be ignored that competitive advantages can be achieved by illegal and/or immoral actions.

The analysis of dimensions I and II is facilitated by dividing them into five sections, since each of these sections discuss demarked areas. The competitive instruments which coordinators and carriers have access to will, thus, in accordance with one of the most well-known and traditional concepts of the marketing literature, be split up into some areas. The foundation for the split is an extended view of McCarthy's 4P-model¹⁴², see, for instance McCarthy (1981). The analysis is extended in so far as a fifth variable is added to the marketing mix's Product, Place, Promotion, and Price. This fifth variable is also a P-variable, namely Power. It might, correctly, be argued that power can be included in one or several of the other Ps in the marketing mix but since power turns out to be such an important variable in studying the competitive phenomenon in freight transport channels, the analysis benefits from power being treated separately. The P's and their characteristics are, thus¹⁴³:

Product

The product, or service, offered deals with its physical attributes and all the characteristics of the service that can be traced to its functioning.

(1999). One of the most interesting conclusions in the article is that international freight forwarders and their customers seem to have asymmetrical perceptions of benefits and barriers. Ferguson, Hill, & Hansen (1990) have listed the benefits and barriers of EDI. Among the "soft" variables we find presence, promotion, history, traditions, and personal contacts. The soft variables are, thus, qualitative variables (that are not easily quantified) that typically do not deal with the actual service performed and its characteristics. These instruments are, for the sake of simplicity, divided into four groups, namely price, quality, service, and soft variables as an instrument.

¹⁴² Popularised by, among others, Kotler (1991) in a textbook that many regard as a cornerstone in marketing literature.

¹⁴³ The characteristics are mainly based on my pre-understanding and the pre-study. However, it is easy to find theoretical support for most characteristics, see, for instance, Kotler (1991) or Kotler & Armstrong (1999).

Place

The place deals, traditionally, with distribution. In this setting, focus is on the services' geographical aspects. Different channel settings might be composed of links over different geographical nodes. Therefore, the demanded service, i.e. to have some goods moved between a certain OD-relation, might involve several "places". For this very reason, two services offered between completely different nodes might actually compete as parts of two freight transport channels.

Promotion

Promotion as a concept is broad and according to Kotler (1991) it deals with the marketing variables personal selling, sales promotion, public relations, advertising, and direct marketing. Kotler (1991) says that promotion "*stands for the various activities the company undertakes to communicate its' products merits and to persuade target customers to buy them*". In this context, most aspects of promotion deal with carriers and coordinators trying to sell their product and how the coordinators and shippers, as buyers, perceive the products, therefore some marketing variables are more important than others. Promotion might be relation specific, general, and/or personal. Further, promotional activities depend on the customers being actual or potential. Promotion might be a pro-activity but it might also be a way for the sellers to "maintain" the relation.

Price

The price-variable deals not only with price but also with supply in a broader sense. There are several aspects that the price manager has to consider. The price set will, of course, have to reflect the basic business financial aspects. However, the pricing procedure is often far more complicated. There might be strategic or tactic reasons for setting a high or a low price for a longer or a shorter period of time. Since the price can be used to signal quality, it is possible that too low a price can be deterring to some freight transport buyers. There might, thus, be other than purely financial considerations in pricing. These matters deal with the competitive situation, the costs, the relation but another group of variables that is very important for setting the "right" price is the soft, emotional grounds. Psychological motives might prevent a low price, since a buyer, in his mind, associates it with poor quality. Furthermore, "soft" reasons like e.g. emotional feelings, bonds of friendship play an important role in the coordinators' and carriers' price offerings to a shipper regarding a service.

Power

Power is an instrument that can be used in combination with the other instruments. This is most obvious when dealing with services sold as a package, where several carriers and coordinators interact and to a higher or lower degree depend on each other. Power will depend on the actors' alternatives and it can be used more or less skilfully. Power can be used without the powered party

understanding that he is being, to some extent, controlled. The buyer of a service, intuitively, is more often than not viewed as the one possessing power but it is also possible for the seller to have and exert power.

The Use of the Instruments

The actors' use of the competitive instruments they possess affects their present status, their understanding of the competitive situation, their financial performance as well as the future opportunities and threats of their business and the market structure of the industry. The competitive instruments that the carriers and coordinators have at their disposal are basically the price, or the rate, the quality-, and the service-dimensions. The most frequently adjusted P-variable, and what also seems easiest to adjust is the price, or the rate, of the given service. This might, normally, be changed during a contract period when the costs for the factor inputs have been changed. This might, for instance, reflect oil price or exchange rate fluctuations. The changes might result from efficiency-improvements, changes of the service/qualitative aspects, or they might reflect cost changes. These might also interact of course – it is quite possible that instead of performing a price increase, the coordinators and carriers can offer a lower service or a less qualitative service. The possibility to change the price is limited during the contract period. But when the service is tendered, the carriers are free to set the price. Theoretically, there should, in competitive markets, be a close link between the price offered and the other dimensions of the service, see, for instance, Begg, Fischer, & Dornbusch (1994), Parkin (1990), or Wonnacott & Wonnacott (1986). If the service is better than the average, the price is likely to be higher and vice versa.

4.3.2. Dimension II: Competitive Strategies

The carriers and coordinators working in the freight transport channel-market will, like participants in most markets, develop and follow a dynamic competitive strategy. Even though strategies of competition in themselves are not in focus in this thesis, the concept needs to be highlighted as one dimension of competition. Strategies are important in order to gain knowledge about how the actors compete and how they are likely to act in the future. The strategies used are not always a conscious choice. Furthermore, the members of the organisation to a higher or lower extent support these strategies. The strategy chosen influences the actor's perception of the competitive situation. The strategies concern what to be offered, how this should be done using the competitive instruments, and to whom the offer should be directed. The strategies that actors develop depend, among other things, on the relevant market, the competitors, the size of the actors and their network.

Porter (1996) holds that “*operational effectiveness means performing similar activities better than rivals perform them*”. Strategic positioning on the other hand means, according to Porter, “*performing different activities from rivals*’ or

performing similar activities in different ways’ and “*the essence of strategy is choosing to perform activities differently than rivals do*”. According to Porter (2003-09-19), strategy is characterized by¹⁴⁴:

- A unique value proposition versus competitors
- A different, tailored value chain
- Clear tradeoffs, and choosing what not to do
- Activities that fit together and support each other
- Continuity of position with continual improvement in realizing it

In the strategy, it is decided how the actor, by using the competitive instruments, will develop/maintain a competitive advantage, which puts pressure on the other market participants. This thesis does not use such a clear distinction. Rather, strategy is used in a broad sense as a concept dealing with developing and keeping competitive advantages independently of whether they are developed by operational effectiveness or by strategic positioning as viewed by, among others, Porter. The main reasons for treating the strategic issues in a broader sense than the view provided by Porter is that it came clear from the interviews performed within the limits of this project that the general apprehension of what a strategy is among the respondents dealt with gaining a competitive advantage in ways that often really deal with operational efficiency aspects. Strategies are, therefore, considered in this thesis to be the players’ possible lines of action that not always are taken to gain a competitive advantage. Carriers in a freight transport channel must, individually as well as collectively in the full freight transport channel, take competition into account when forming their strategies for achieving a competitive advantage. The role of management is, therefore, to form a strategy which, given the resources, achieves a competitive advantage.

In developing and holding on to a competitive advantage gained by the instruments or otherwise, it is of great importance for the individual firm as well

¹⁴⁴ Furthermore, Porter said, in a lecture called *What is Strategy?* given at Gothenburg University; School of Economics and Commercial Law 2003-09-19, that a strategy is not characterized by:

- Best practice improvement
- Aspirations
- A vision
- Learning
- Agility
- Flexibility
- Innovation
- The Internet or any technology
- Restructuring
- Mergers/Consolidation
- Alliances/Partnering

as for a conglomerate of firms to have a well developed competitive strategy to follow. Alderson (1937; 1965) was a pioneer in understanding competitive strategies from a marketing perspective. He understood that the suppliers in order to meet the diverging demand by the customers and to gain a competitive advantage over their competitors would have to adapt their offerings so that the customers would gain in utility from the modified offering. Alderson said that the strategy for the firm should be to gain a competitive advantage through an active search for a competitive advantage. Several decades after these early thoughts, other theorists have rediscovered, developed, and expanded on these ideas, like David A. Aaker and Michael E. Porter.

Porter is probably the single one theorist that has had the most important influence on the field in developing and describing four basic forms of competitive strategies that a business can use, namely (i) pure cost leadership, (ii) pure differentiation, (iii) cost and differentiation advantages, (iv) no competitive advantage¹⁴⁵. According to Porter (1985), a competitive advantage is gained when the company increases the advantage the customer derives from a product without raising the costs for producing the product (Rask, Igeklint, Karlsson et al., 1999). In my view, this is a far too narrow way to look at competitive advantages. There is no need for this creation to be costless (neither is it likely). There are basically three possible, non-exclusive ways for a company to gain competitive advantage. The first is to have a cost leadership; the second to differentiate or improve the output of the company, and the third is to focus the resources on a segment in the market. In order to develop and maintain a competitive advantage, the actors have to use the competitive instruments efficiently. These instruments will be used differently by different coordinators and carriers and at different times, and for different customer or segments.

Most contributors to the field of competitive strategy have focused on how one firm should develop and follow a strategy to become successful. There are, however, some theorists in the field of business network that have brought up some inter-firm aspects, for instance Thorelli (1986), Jarillo (1988), and Gulati & Singh (1999) who are among the most important ones (the issue of networks was also treated in section 2.2.2).

Miller and Friesen (1986) state that there are two main strategies for differentiating the company's products; you either modify the product to give it some renewed value or you intensify the marketing of the product. In the strategy to modify the product, many different things can be included, such as using the competitive instruments or going for a new market. Traditionally, when analysing

¹⁴⁵ Porter (1980) discuss how to analyse competitive situations in industries. Three generic strategies are brought up. These are: price leadership, differentiation, and focusing on specialised markets.

the different competitive strategies of companies, it is most common to look for similarities between companies. Because of the market dynamics, it is important to understand and estimate the dynamic aspects in the competitive strategy. There is an interesting and challenging task in understanding how long to hold on to a strategy, since it should not be abandoned too easily, since the effects might take a while to show up. However, it should not be held on too obstinately long if the desired results are not achieved.

Strategies are about deciding how to use the competitive instruments in different geographical- and product markets at different times in order to gain competitive advantage over the competitors. This will then put a pressure on the competitors to increase their competitiveness through using their instruments and strategies.

4.3.3. Dimension III: Efficiency Improvements

This dimension deals with the potential for improvements and efficiencies that can be made in the freight transport channel on a whole as well as the individually participating firms. The efficiency improvements are affected by, and affect, the competitive instruments and strategies (i.e. dimensions I and II). Therefore, this section is held short. Efficiency improvements can be performed on a channel-level as well as on the individual firm level as building blocks of the channel (see, for instance, Lumsden, Dallari, & Ruggeri, 1999; New, 1996; Van Hoek, Commandeur, & Vos, 1998). The channel-level is regarded as a higher, more aggregated, level.

The improvements may be split up into a direct and an indirect group. Direct improvements are measures taken to improve the specific freight transport channel studied, while the indirect improvements regard the focal firm's general business. The latter group of measures, thus, bears affect not only on a specific freight transport channel but on the general business as well. Some measurements will naturally have direct as well as indirect effects.

4.3.4. Dimension IV: Shipper Behaviour

The shipper's behaviour strongly affects the competitive situation¹⁴⁶. The characteristics of the shipment together with the shipper's set of conditions sets the basis for the competitive situation, since these presumptions are decisive for whether the coordinators and carriers can offer the demanded service (see, for instance, Ludvigsen 1999). In this dimension, some of the most important aspects of how the shipper affects the competitive situation are highlighted.

¹⁴⁶ This has already been touched upon in earlier dimensions (see, for instance, dimension I in section 4.3.1). Due to its importance, this subject is treated as a separate dimension here.

In most cases, the shippers have possibilities for solving their need for freight transports in different ways. They may either perform the service themselves¹⁴⁷; buy the service from a coordinator who then is responsible for putting the channel together; or they may buy the services of the different parts of the transport and act as a coordinator themselves. What is specified in the contracts¹⁴⁸, their length (see, for instance, Donaldson 1996) and when and to what they apply affect competition in the industry.

McGinnis (1990) stresses that shippers act in stages when selecting the mode and carrier in order to perform a service. When shippers have evaluated the quality, some suppliers are assessed. Thereafter, the shippers select the offering with the best price, given that the criteria are met.

Demand and Information

The shipper, as the end customer, and generally influenced by the receiver, wants a door-to-door transport. Shippers' demand for these transports constitutes demand markets. What complicates the situation is the fact that the buyer behaviour differs between shippers and product markets. Whether demand differences come from different real needs or simply from different traditions, etc. is beyond the scope of this thesis to decide, but it might be important to remember when performing/reading the analysis section. Differences exist in different branches of business in, for instance, their modal choice due to voluminous or high-value goods reasons.

For the shippers to make the best solution about what carriers and coordinators to use, they will need to have as much high-quality information as possible. Then, and only then, can they be able to make, and know that they are making, the best decision about what coordinators and carriers to contract for the freight transport channel. This was a well-known fact for economists when formulating the neoclassical theory of competition. According to Ekström (1982)¹⁴⁹, there are most likely no significant differences in the access to information between the different freight transport market. This is probably depends on the transport buyers' need to have enough information before making a decision, since large direct and indirect costs are associated with making the wrong decision.

¹⁴⁷ If the company has a transport organisation of its own, which is in use, the situation will be somewhat specific, since it is not sure that the company profit will be maximized.

¹⁴⁸ For a deeper description of the importance of contracts as management tools, especially in third-party logistics relations, see Pruth (2002).

¹⁴⁹ NB! This information is rather old and should, therefore, be treated with caution. I have, however, not found any other sources that contradict this finding, so it is still likely to be valid.

Dynamic Perspective

The demand for freight transport varies somewhat with the relations depending on conditions for the manufacturing industry, which in turn depend on external and internal factors. Among the external factors, one finds political decisions, business cycles, and exchange rates. Another characteristic of the demand for freight transports is that it fluctuates heavily over time. It varies over the day, week, month, year, and business cycle. One effect of this is that parts of the industry from time to time have excess capacity and from time to time shortage. A shipper having the possibility to make use of excess demand has, at least theoretically, advantageous conditions for being able to get a good contract.

Impediments for Changing Supplier

Shippers, as well as coordinators, might, as has been discussed earlier in this thesis, face different forms of difficulties and obstacles in switching from one service provider to another. Such obstacles might e.g. be mental, contractual, practical, or direct restrictions. Mental barriers might be manifested in, for instance, personal feelings, moral aspects, and attitudes.

Competition In and For the Market

There are mainly two possible competitive situations in contracting a service. The first is that the competition is *in* the market, that is when the buyer of the freight transport channel buys a service letting the coordinators and carriers in the market (channels as well as different separate firms) compete for the job as a whole and the positions in the channel. If competition is in the market, the channels are likely to be contracted for a short period of time or for a single transport. There is, so to speak, ongoing competition in this case. The second alternative is when there is competition *for* the market. If this is the case, the buyer tenders the transport, letting the winning firm perform the service over a predetermined period of time. The contracted party must comply with some conditions specified in the tendering process. Competition in this case is for the contract. Once a service supplier has won the contract, he is bound by the contract's conditions. On the other hand, he does not face any direct competition during the contract period. For the shippers, as the buyers of the service, these alternatives are not necessarily exclusive. They might tender the contract among transport channel leaders/co-coordinators letting the winner be responsible for performing the transport specified in the contract. Winning coordinators have some alternatives for performing the transport. Either they perform the transport themselves; if they have the possibility of doing this, or they might let forwarding agents compete about positions in the channel. We, then, have competition for the market from the buyers' perspective but we have competition in the market from the forwarding companies' point of view. Other alternatives like competition for the market in several steps are also possible. Furthermore, there are combinations

of competition in and for the market, for instance, when the shipper contracts¹⁵⁰ several carriers and then lets them compete during the contract period.

Erixon, Bogdanoff et al (2003) generalizes the railway market in holding that freight transports performed by rail are characterised by competition in the market (track), while passenger transport operators compete for the market (track). I stress, however, that this generalization should be interpreted with caution since the type of competition depend on the length of the contracts, etc. Therefore, exceptions from this generalization are easy to find.

Contracting a Service

As was seen above, competition can take place in the market as well as for the market. This may naturally affect how a service is contracted. There are many choices that the shipper has to make in contracting carriers or a channel to perform the required service. There is often a choice to be made between using privately owned vehicles and for-hire services, according to Ballou (1987). Ballou states that different types of decisions are needed if private vehicles are used as compared to for-hire vehicles, since much of what the for-hire carrier does will, otherwise, have to be managed by the decision-makers in the company. When shippers are involved in the carrier selection process, they face several different questions regarding the intermodal as well as the intramodal choice. The infrastructure presumptions and the characteristics of the goods quite often make demands on what mode can or cannot be used. In a study of Norwegian exporters, which does not specifically discuss freight transport channels, by Pedersen and Gray (1998), it was concluded that the exporters found the transport price to be the most important criterion in selecting the carrier. According to the authors, this finding might be a result of the relatively (in an international comparison) high transport costs that the Norwegian exporters face¹⁵¹.

Written contracts differ considerably regarding length of approval, formality, how detailed and specific they are, and so on, and they may be written on many different levels of aggregation of the shippers' as well as the coordinators' and carriers' organisations. How detailed the contracts are differ, and they can be more or less controlling. Some shippers make great demands on the speed of the movement, others focus on reliability, and still others focus on goods comfort as the most important variable. It is, of course, possible to make high demands on every characteristic of the freight movement.

¹⁵⁰ These contracts are, then, rather vaguely formulated.

¹⁵¹ Which to a large extent can be explained by insufficient organisation of the transport functions and a lack of planning on the part of the carriers working in the industry, Schultz & Hagen (1989).

The way in which the services involved in the freight transport channel are tendered and contracted is likely to be of great importance for the actual and the perceived competitive situation, as it is perceived by shippers, coordinators, carriers, as well as politicians, and decision-makers.

4.3.5. Dimension V: Motives and Objectives

Why are the carriers' and coordinators' objectives (broadly viewed) to be regarded as a dimension of competition? Different coordinators and carriers¹⁵² have different objectives. Each coordinator/carrier can also have different objectives as regards different relations¹⁵³ and different objectives at different points in time. These objectives strongly influence their understanding of the competitive situation in their segment. Even though these objectives can be more or less explicit and supported or not supported by the staff, they will typically influence what surfaces of competition the companies' decision-makers regard as the most important ones.

The motives for the coordinators' and carriers' behaviour are not always perfectly rational. Shippers can be said to have the intention of moving their products over an OD-relation (the motive can, of course, be dealt with on a higher level, where one e.g. stresses survival, profit maximization, or market expansion to be the motive). Coordinator and carrier often intend to maximize profits, since the service is their main occupation. It is possible for them to work with other motives instead of, or in parallel with the financial motive. Furthermore, the motives might be set up as short- or long-term motives. On the personal level, one can expect to find partly similar partly different motives than on the firm level. The personal motives might be closely connected to the company that they are working at but these motives might also be strictly financial.

Carriers and coordinators in a freight transport channel may have similar over-all long-term objectives but their objectives for the specific service offered in each unique freight transport channel may differ greatly. Some of the different objectives they may have as regards their participation in the freight transport channel are to increase profit, revenue, sales growth, market skimming, market share, or simply survival reasons (see, for instance, Coyle, Bardi, & Novack, 2000). However, the objectives of firms participating in the same channel are often contradictory. The channel participants' objectives need, at least partially, to strive toward the same goal for good channel performance. A carrier might

¹⁵² Groups of actors segment according to variables like: mode used; geographical relations; size of the actor; capacity, etc.

¹⁵³ It might deal with financial objectives for the individual company, they might have set up specific objectives for the actual participation in a specific channel. It might be a question of channel objectives worked out individually or in partnership with the other actors in the channel, etc.

have one traffic specific objective as regards the participation in a channel and another general business objective. Furthermore different individuals working in the same company might have different objectives, which can be reflected in the organisation.

4.3.6. Dimension VI: Forms of Competition

This dimension, which is the most extensive dimension treated in this thesis, deals with different forms of competition. Competition can be found and analysed on several organisational levels on the supply-side as well as the demand-side of freight transport services¹⁵⁴. Here, the focus is, as has been seen from the previous discussion, on the supply-side. The demand-side has been dealt with in the dimension called Shipper Behaviour and is, therefore, not treated further here.

Coordinators and carriers working in a freight transport channel compete with other channels, *interchannel competition*, but they also compete within the channel, *internal competition*. Furthermore, the coordinators and carriers will face *external competition* from other service providers competing to take their place. Competition, thus, occurs in many forms within, and among, freight transport channels. These, non-exclusive, forms are, as discussed in section 1.3:

- Internal and external competition
- Interchannel competition
- Horizontal and vertical competition

In Figure 10 below, the arrows indicate the different forms of internal, or intrachannel, competition. The freight transport channel in the figure performs a service between X and Y and it consists of one coordinator and three carriers. Depending on the role of the coordinator, they may perform a freight movement service as well. Therefore, the coordinator is put in parenthesis, since his existence is not necessary in the freight transport channel and the participation as a carrier is optional. The channel in the figure may compete with other partially or totally different channels, for a job. This is, then, what is referred to as interchannel competition.

¹⁵⁴ This thesis focus on a part of the total freight transport service namely the physical distribution. This distribution can, however, not simply be separated from the other, necessary or optional, services provided by the total solution. One might, for example, in order to compare two channels see if there is a need for any complicating additional services in any channel. A switch of mode might for instance require reloading, which is time-consuming.

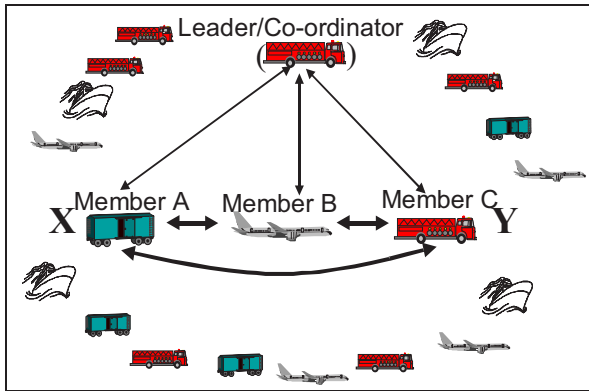


Figure 10. *The competitive situation in freight transport channels*

Internal and External Competition

Internal competition, or intrachannel competition, deals with the different forms of competition that can occur between the freight carriers in a channel. Competition among the participants might occur within levels as well as between levels. External competition results from (i) other channels (inter-channel competition), (ii) other carriers, (iii) alternative solutions, such as re-localisation or a phase-out of one or several “fixed” points in the channel.

In freight transport channels horizontal competition regards competition between service suppliers, or combination of service suppliers, which are willing and capable to perform a certain service. It might thus regard competition between different carriers, coordinators, or channels. This form of competition can be inter- as well as intramodal. Horizontal competition does not only occur between carriers running parallel on the same route. Horizontally competing alternatives does not necessary have to be of the same length offering their service between the same nodes. Furthermore, the shipper might view the “zero-alternative”, i.e. to avoid the movement by “shutting down” that movement, as a possible alternative to a freight transport solution.

Vertical competition occurs when a service supplier tries to expand his role in the freight transport channel at the expense of another member of the channel. When service suppliers try to expand their role in a channel, they will inform the service buyer about them being able to take on a larger role in the channel. Vertical inter-channel competition occurs, for instance, when a freight transport channel being responsible for an ingoing transport of raw material, tries to expand their business to include one of the shipper’s outbound movements as well. However, this form of competition is beyond the scope of this thesis to treat.

Intra- And Intermodal Competition

There are many interdependent factors influencing the modal choice and the choice of what operator or transport channel to be used (see 2.3.2, to some extent this is also discussed in 4.3.4). Some of the most important factors are, according to Abrahamsson & Sandahl (1996), type and quantity of the goods, destination, costs, time/date of delivery (includes speed, frequency, capacity, accessibility, and dependability), and terms of delivery and payment. The specific characteristics of each mode often limit the actual choice. When choosing a mode, three variables are of primary interest, viz. cost, volume, and transit time (Schary & Skjøtt-Larsen, 1995). The logistics service extends beyond transport alone therefore, it is often difficult to evaluate different logistical offers (Schary & Skjøtt-Larsen, 1995). Coyle, Bardi, & Novack (1994) hold that the most important aspects in choosing carriers are in turn¹⁵⁵: reliability, transportation rate, total transit time, willingness to negotiate, and the financial stability of the carrier. Many other authors have also found those variables to be decisive in modal choice and carrier selection, see i.e. D'Este & Meyrick (1989), Pedersen & Gray (1998), Premeaux (2002) who highlights the importance of information, Stock & LaLonde (1977), or McGinnis (1990). A parallel can be drawn between intermodal competition and intrabrand competition as described by Tirole (1988). When there are several carriers that are potential or actual competitors, it is possible that they split the market in segments, or, using the words of Tirole, form exclusive territories. According to Coyle, Bardi et al. (1994), the most important variables in intramodal competition are, in order of priority: reliability, transportation rate, total transit time, willingness to negotiate, and the financial stability of the carrier.

International Competition

For the past few years, competition from non-domestic carriers has become a phenomenon in the domestic freight transport market, a phenomenon refer to as cabotage. From the supply-side, the presence of this type of competition, and other forms of international competition, has to be considered before the service suppliers' offer the shippers their services.

Mega-Carrier Competition

More often than not, large shippers have a general agreement with a mega-carrier¹⁵⁶ who performs a significant share of the shipper's movements. Agreements of this type are usually constructed so that discounts increase with increasing shipments and they might also imply different prices for different seasons. The quantity-discounts also fluctuate over time. These agreements limit

¹⁵⁵ The authors' deal with the US market.

¹⁵⁶ A mega-carrier is a carrier, which often is multinational, with nationwide footprints offering movements by several modes.

the possibility for other firms to compete for the job until a new tendering process has started.

Potential Competition

A thing that complicates the situation further is the fact that it is not only actual competition that should be taken into account. The potential competition will also influence the outcome, see, for instance, Baumol, Panzar, & Willig (1982), and Morrison & Winston (1987). The strength of the actual and the potential competition does, of course, vary considerably from case to case.

The fact that potential competition has an important role in controlling the market power is highlighted by, among others, Gilbert (1989). Gilbert's study indicates that potential competition is important for controlling market power but it is not as important as the theory of contestable markets implies.

4.3.7. Dimension VII: Market Structures

This dimension is about the market structures (the industrial organisation) and it is very much influenced by the discussion above regarding the level of aggregation and from what perspective, with what "glasses", the market is viewed. In theoretical discussions about market structures, the extreme ones are most frequently discussed even though they seldom or never occur in reality. The reason is that, in the market structures between these extremes, very little can be said on a general basis. Therefore, the "extremes" should be used and interpreted as just extremes. In spite of the fact that they seldom occur in reality, they can be helpful in guiding the actor working in a market structure between perfect competition and monopoly to the "right" decisions.

A market structure is described by Wonnacott and Wonnacott (1986) as the "*characteristics that affect the behaviour in the market, such as the number of firms, the possibility of collusion, the degree of product differentiation, and the ease of entry*". The market structure dimension concerns how the supply and demand in an industry interact to determine price and quantity. It includes conditions affecting the market that are exogenous to the actors in the short- to medium-term. From the theoretical point of view, the (neo-)classical market structures as treated by mainstream economic literature¹⁵⁷. For instance, Begg, Fischer, & Dornbusch (1994), Parkin (1990), Wonnacott & Wonnacott (1986) present a close connection between the number of firms, the firms control over price, the ease of entering a market, and the degree of competition in the market. Each structure has its benefits and drawbacks depending on the perspective taken. To use the classical market structures when analysing competition can be motivated by the fact that most people, with some basic economic knowledge,

¹⁵⁷ That is: perfect competition, monopolistic competition, oligopoly, and monopoly.

have an intuitive feeling for the connection between competition, market outcome, and these structures.

Adam Smith (1970) held that “*The monopolists, by keeping the market constantly understocked, by never fully supplying the effectual demand, sell their commodities much above the natural price*”. This is theoretically correct, given that the monopoly works and acts as a profit-maximising company¹⁵⁸. A profit-maximising monopoly should, theoretically, set a price so that the market is understocked and overpriced, in the words of Adam Smith. Customers willing to pay more than the marginal cost, but less than the price charged if the firm is not able to discriminate are excluded from the product/price. If the market situation is characterised by perfect competition, the individual firm cannot influence price by altering the quantity supplied. The firm is, therefore, said to be a price-taker (see, for instance, Varian 1992). Between the extremes, very little can be said on a general basis. When there are more than one but less than “many” coordinators or carriers respectively, they will be able to influence the price. But, of course, other players will also be able to influence price. Therefore, analyses of these situations often include game theory and the conclusions drawn are very uncertain, since every firm possesses some kind of monopoly power.

From the empirical point of view, the market structure is one of the most important external factors that a company has to take into consideration in many crucial decisions regarding pricing and/or market expansion, for instance. For any practitioner, it is the effect that matters and not the theoretical labelling of the actual market structure. This distinction is of importance, since the theoretical market structures and the perceived market structure often differ. There are markets where the presumptions imply one market structure, while characteristics of the offerings are those of another market structure.¹⁵⁹ The actor, then, bases his decisions on the understanding of another market structure than the prevailing one. A firm sets its market offerings in one way if it believes that it has enough monopoly power and in another way if it believes that it works in a highly competitive market.

4.4. The Functional Dimensions of Competition

The following two dimensions constitute the functional dimension. They are strongly formed by each and every one of the structural dimensions discussed so far but the functional dimensions also interrelate and thereby affect each other. The structural dimensions, individually as well as jointly, affect the functional

¹⁵⁸ Assuming that the market is understocked when the quantity traded is lower than it is when the marginal cost curve or the average cost curve intersects with the demand curve.

¹⁵⁹ There might, for instance, be monopolies offering lower prices than could be expected to deter potential challengers from entering the market.

variables. In the analysis, the functional dimensions are treated in a separate chapter, since the structural dimensions affect these functional ones.

The functional dimensions, i.e. Competitive Pressure and Surfaces of Competition, which, as described in Figure 9, are affected by (i) conditions and requirements, (ii) the structural dimensions, and (iii) each other, are discussed in the following sections.

4.4.1. Dimension VIII: Competitive Pressure

This and the next dimension deal with the functional variables. They are called functional variables, since they, by and large, are formed and affected by the dimensions discussed earlier.

Competitive pressure is a driving force for firms, and channels, to improve their efficiency, effectiveness, and innovation forcing firms and channels to offer the consumer a better service and pushing the actors to improve their performance. These improvements may not only benefit the customer but also the carrier¹⁶⁰. Competitive pressure can be found at many levels in every day life of the participants of a freight transport channel as well as in theory.

Sources of Competitive Pressure

According to the classical model of Porter (1987), five driving forces determine competitive pressure. Two of them deal with power, two with competition, and the last one deals with pressure from substitutes. Jensen (1998) develops this view, focusing on transportation firms. He adds two forces, namely dynamic demand and political pressure. Here, these driving forces are rearranged and expanded to better suit the purpose of analysing the competitive situation of freight transport channels. The sources are divided into those giving rise to internal and external pressure on the freight transport channel and its actors respectively. The internal and external pressure-groups are further subdivided as made visible in Figure 11.

¹⁶⁰ For instance, when the benefits from lower costs are not fully passed on to the customers and/or higher sales.

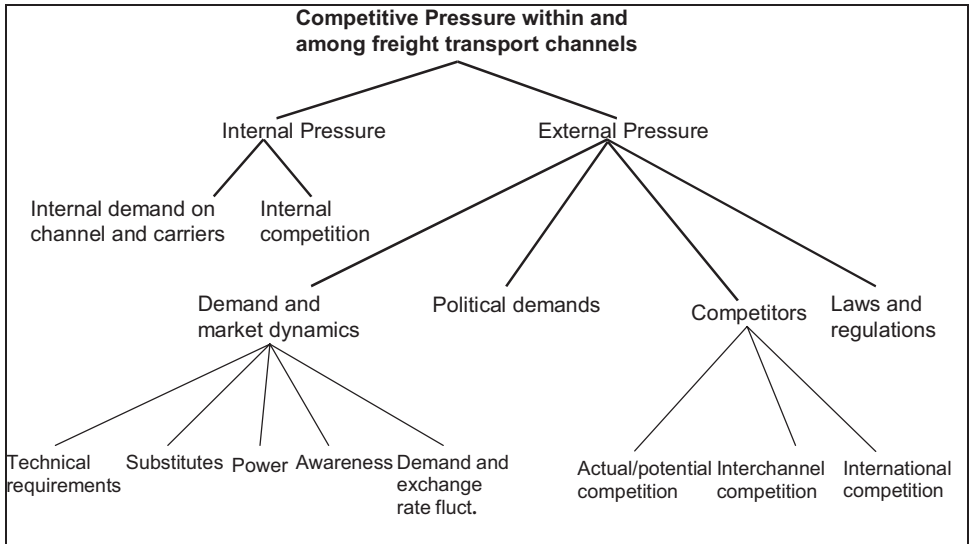


Figure 11. *Competitive pressure in the freight transport industry*

Internal Pressure

Internal pressure is derived from actions taken, or not taken, by actors in the freight transport channel studied. The competitive instruments and the strategies that the channel's participants use affect the internal pressure. Internal pressure stems from the firms'/channels' never-ending strife for "better" performance. Also competition among companies in the freight transport channel puts pressure on the actors. The demands result in a perceived pressure that might come from the shipper, the coordinator, or other carriers working in the channel. Internal pressure is also derived from the carrier putting pressure on himself. Pressure can be put on individual carriers as well as on the channel as a whole. One of the key terms in analysing the pressure is the well-known concept of power. There are two main categories of internal pressure:

- Internal demands on the channel as well as on individual carriers
- Intra-channel competition

External Pressure

The actors and the channels depend on conditions they have to comply to and the markets they are active in. Such conditions and presumptions differ on different types of markets. External pressure is derived from changes in these areas. Changes in the political demands and laws/regulations affect the conditions for competition. This might be done e.g. through taxes, subsidies, working conditions, rules for mergers, demands on profitability, and rules for foreign competitors. The shipper puts external pressure on the channels and the carriers regarding effectiveness and other variables. Besides political demands and/or laws and regulations, external pressure can be derived from competitors, and/or

demand and market dynamics. The last categories need some further attention and explanation.

Two main factors should be considered when looking at pressure from competitors of the freight transport channels and the individual coordinators and carriers. First, the perception of the competitive situation is what really matters and not the actual competitive situation. It might sound trivial but this is probably one of the most important factors in explaining why theoretical predictions often differ from real outcomes. If an actor underestimates the competitive pressure, he is likely to offer a price/service-combination, which is inferior to that of the competitors. As a consequence, he will lose the service. If he overestimates the pressure, he will provide an unnecessarily generous offer. It is possible that he will not be aware of this – resulting in a perpetuation of a situation where profits are not maximised. Secondly, the actors and channels have to be pro-active. They have to consider who the potential competitors are and what might cause them to enter the market. The strength of the actual and the potential competition varies considerably from case to case. The variables underlying the variation can, for example, be: expected profitability, type of goods to be transported, distance, geographical presumptions, number of competitors, or laws and regulations. To figure out who the potential competitors are is difficult, since changes outside the actor's control might cause the shipper to use a different solution¹⁶¹. The external pressure from competitors can further be split up into actual/potential competition, inter-channel competition, and international competition.

Shippers, being the buyers of the freight transport channels' services, make demands on coordinators and carriers regarding technical aspects and qualitative¹⁶² variables. The power that the shipper has behind these demands is based on the alternatives and how aware he is thereof. These alternatives might be to use other freight transport alternatives, perform the freight transport himself, or move the business. Shippers may also suspend unprofitable operations.

Since demand for freight transports is derived from demand for goods, it fluctuates over time. In a boom, there is, obviously, much higher activity in the

¹⁶¹ For instance, if the shipper decides to use another supplier of raw materials, it is possible that another freight transport channel set-up will be selected as well.

¹⁶² This thesis does not distinguish between qualitative variables and service variables. The latter group is included in the former. In some cases, it would be helpful to split what in general is called the qualitative variables into the groups qualitative variables (including characteristics like reliability, transport time, risk of damage, and frequency, etc.) and service variables (including customer service, flexibility, and system of information for instance). The former group of variables is specific to a certain movement, while the latter group of variables is general attributes of the transport movement suppliers' business and their service-mindedness.

sector than in a recession. Variations are strong over short periods of time as well. Demand varies over the business cycle, year, month, week, and day. Supply is, for natural reasons, less adaptable. This results in the industry having excess capacity from time to time, pressuring firms in the trade to lower their profits. On the other hand, when demand for freight transports is high, companies will have more joyful readings to do in their profit and loss accounts, since the price sensitivity of the shippers, then, is low. Dynamics in the global market and changing exchange rates are reflected in import and export variations. This is very important for some channels and carriers. Thus, the external pressure from shippers and market dynamics can be split up into requirements as regards technology, substitutes, power, awareness, and demand fluctuations and exchange rate effects.

4.4.2. Dimension IX: Surface of Competition

The following dimension differs from the other ones, since it is less commonly used as a theoretical concept. The theoretical references in this section are, therefore, few. The dimension is influenced by the contextual study, see chapter 6.

The presentation of competitive phenomena and the analysis of the dimensions of competing freight transport providers can be made easier using the *surfaces of competition*. Researchers (or practitioners) focusing on competition do not commonly use the concept¹⁶³. The concept has been used in some Scandinavian documents and studies such as Godstransportdelegationen (2000), Johansson (2000), Dagnæs, Boeshave, & Christensen (2000), Skarstad (1996), and Østmoe (1986)¹⁶⁴, but it does not have an unambiguous definition¹⁶⁵. In the analysis of problems relating to the concept of competition in freight transport markets, these competitive surfaces are of major interest and powerful as an analytical model. Surfaces of competition might exist within as well as between modes, carriers,

¹⁶³ Those few researchers, and others, that are using the concept are, almost exclusively, Swedish, Norwegian, or Danish. Furthermore, it should be noted that the concept almost exclusively is used when treating the transport sector.

¹⁶⁴ The concept is used in the Swedish, Norwegian, and Danish languages and it is called *konkurrensyta*, *konkurransflate*, *konkurrenceflade* respectively. In Skarstad (1996), it is made clear that the surface of competition mainly is a matter of physical accessibility that, in turn, depends on geography and investments. There are, however, many other factors determining where the surfaces of competition are positioned in the freight transport sector. According to Hovi (2001-06-08) (e-mail), Hovi, Skyberg, & Bøe (1999) translated the term “konkurransflate” which is the Norwegian word for surface of competition into “*Competition between transport modes in the freight industry*”. It should be noted that this definition, thus, does not include modal competition.

¹⁶⁵ When I was looking for a description or a definition of the concept, the persons who wrote the reports were approached but none of them had seen any definition or had defined the concept formally themselves. Ankner (2003-02-25) at the Swedish Competition Authority wrote, in an e-mail, that nobody at the authority had ever heard about the concept.

and channels in time and space. The Norwegian Road Administration (Statens Vegvesen), uses The Norwegian Ministry of Transport and Communication's (Samferdselsdepartementet) definition of the term surface of competition, (see, for instance, the report "Nasjonalt Transportplan 2002-2011-Nasjonalt Transportnett") which reads¹⁶⁶: "*If transport users are faced with more than one alternative for the solution of their transport needs, we may speak of competition between transport modes*".

Defining the Concept

Surface of competition is a specification of the competitive situation in some dimension(s) like time, space, freight load, customer, or organization. While competition might be used on a more abstract level, surface of competition is used on a figurative level. The surface of competition can, therefore, be a wider or a closer conceptualisation than the general term competition.

In the light of the discussion so far, and for the purpose of this study¹⁶⁷, the concept surface of competition is defined as: *Those alternatives that constitute a solution to a shipper's/coordinator's need, belong to the same surface of competition.*

Critical in this definition is, thus, what belongs to the observer's choice set. In the definition, it should be noted that the observer is a general description and it could be a researcher, shipper, carrier, or basically any person, group, or company with interest in the solution. When the potential buyers of a product have more than one alternative in their choice set given their budget constraints and requirements, a surface of competition exists between the alternatives.

Describing the Concept

The concept of surface of competition is considered to be a functional dimension, since it, to a large extent, can be explained and understood using structural dimensions. Before, it has only vaguely, and not uniformly, been defined in non-academic reports. For this reason, there is a need to more formally define the concept, as is done below, and explain how the concept can be used. The concept is important for describing and generalizing competitive phenomena. Correctly understood and used, the concept provides the user with a tool useful in analysing competition from a theoretical as well as an empirical perspective. Surfaces of

¹⁶⁶ As translated by Øen (Division Manager at the Norwegian Ministry of Transport and Communications) in an e-mail (Øen, 2002-03-22). The Norwegian text reads: "*Med konkurranseflater menes at to eller flere transportformer dekker de samme behovene og at fordelingen mellom dem kan endres ved bruk av ulike virkemidler*" (Samferdselsdepartementet, 29 March, 1996).

¹⁶⁷ The definition could easily be made more general but since this study focuses on the freight transport sector, I have chosen to be more specific in the definition above.

competition depend on “hard facts” as well as subjective valuations and impressions, and, therefore, they are likely to be perceived differently by different analysts.

A potential buyer of a product or a service chooses among the companies belonging to his choice set. The offerings made by the companies in the choice set are typically rather similar in terms of utility from the potential buyer’s perspective, since they all comply with the shipper’s basic requirements¹⁶⁸. The sellers’ offerings (belonging to the buyer’s choice set) differ in variables, such as price or lead-time, and their level, which can be decisive for the actual choice¹⁶⁹. When discussing the surfaces of competition, several concepts partly covered by other dimensions of competition are treated. Among the most important concepts discussed here are the modal choice, the time- and geographical perspective, the channels and their building blocks. How the relevant market is defined is crucial when deciding the surface of competition in a given case. The question of what characteristics of the freight transport solution one has to consider in treating the concept of surface of competition is not possible to give a general answer to. It is the observer who must decide what variables should be regarded. However, variables that should be treated in one way or the other¹⁷⁰ are: Price, service (including spatial dimensions as well as more traditional service aspects), quality, and modal aspects.

The nature of a surface of competition can be one-sided or two-sided. A one-sided surface of competition is one in which only one party views the other as a competitor. The reason might be well motivated or not but as long as the parties have different perceptions about each other as competitors, one will typically not find symmetric surfaces of competition. For instance, the railway sector often perceives the road sector as one of its competitors, while the opposite more rarely is true. Depending on what dimensions of the issues of competition that are in focus, different surfaces of competition can be found. If one, for instance, focuses mainly on the economic aspects of the service, some low-price carriers might be found belonging to the same surface of competition. But if the qualitative aspects are in focus, the carriers might compete with some other carriers. It is, thus, of great importance to describe clearly what dimensions are in focus. This does,

¹⁶⁸ Otherwise the offerings would not belong to the choice set.

¹⁶⁹ A researcher (or any other party having an interest in the market but not as a potential buyer) using the concept of surfaces of competition will have to understand the market “from the buyer’s perspective” when performing an analysis. This calls for a good understanding as to how the actors in the market behave and think - the researcher should naturally be able to state and motivate the categorizations.

¹⁷⁰ It might, in some cases, be enough to clarify why a specific variable is not of interest in the case studied.

however, not imply that focus has to be on one dimension only – several dimensions can be found to be of, more or less, equal importance.

Analysing the market situation using the surfaces of competition in terms of the dimensions of competition and the characteristics of the service is a line of thought that can benefit the user independently of whether it is a regulator/governing party; a researcher; a shipper; a coordinator; a carrier, or any other party with an interest in the industry.

Using the Concept to Analyse Competitive Surfaces

So far, the background and the concept of competitive surfaces have been treated. In the following discussion, it will be made clear how the concept can be useful in analysing the freight transport market. The surfaces of competition found are often individual, since the observer/participant will have to decide what characteristics to include and their relative importance.

The concept is called *surface* of competition since the firms and services compared and contrasted compete only if they, in some respect, belong to the same surface (i.e. those solutions offering a service that solve the demand in a certain situation). Since it is possible to compare the offerings in the choice set in some variables, they can typically be described graphically.

To highlight and further explain the competitive surface approach, a hypothetical example is used in Figure 12 below.

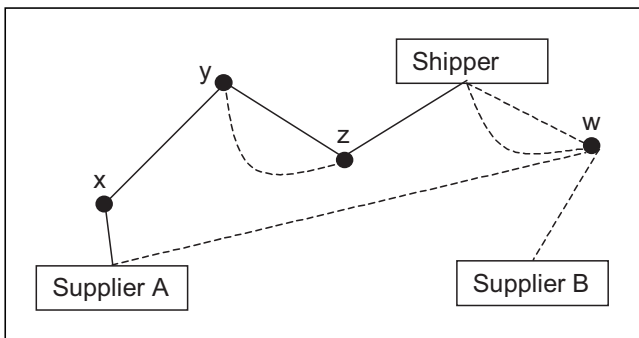


Figure 12. Six channels sharing the same competitive surface

Figure 12 shows a shipper with two possible suppliers and six partly different freight transport channels able to perform the movement between the origin and the destination. Assume that it is the non-dotted sequence that makes up the freight transport channel used, while the dotted links and channels show possible solutions. From supplier A, is it possible to use four different freight transport channels. On the links between the nodes y and z and between w and the destination, is it possible to select one out of two carriers. The carriers working

on these links will, most likely, view the other part as sharing the same competitive surface. It is less likely that the carrier working on the link between the nodes x and y thinks that he (indirectly) belongs to the same surface of competition as the carrier working on the relation between Supplier B and the node w. In the empirical material several such examples, often referring to indirect intermodal surfaces of competition can be found (see chapter 7).

PART B

MODE OF PROCEDURE & CONTEXTUAL STUDY

All models are wrong but some are useful.

George E.P. Box¹⁷¹

This subsequent part consists of two chapters. Chapter 5 is titled Mode of Procedure. The part deals with the conduction of the thesis and the empirical investigation. The latter is outlined with a short description of the selected shippers and the adherent freight transport channel. Chapter 6 - Contextual Study is devoted to investigating the opinions of the freight transport industry's representatives (in whatever form this might be) about freight transport in general and regarding competitive matters in particular.

¹⁷¹ See Box (1976).

5. MODE OF PROCEDURE

The purpose of this chapter is to describe the line of thought underlying the case studies (i.e. the shippers and their adherent freight transport channels) selected, and the analysis conducted. The chapter describes the procedure that has been followed, involving the selection of the shippers, the channels to be studied, and how the interviews were prepared for the analysis.

5.1. Research Process

The research process started out with a phase studying articles, books, industrial journals, etc. aiming at improving my knowledge of how the freight transport sector is discussed, viewed, and treated among theorists as well as the persons working in the trade. This process formed the theoretical base that the thesis is based on to a large extent. This base has, however, continuously been updated during the research process. To a large extent, this base was described in chapter 2, and the view that the market has on the freight transport industry will be described in the contextual study presented in chapter 6.

As discussed in chapter 3 case studies, where the shippers and the channels constitute the cases, were considered to be the most suitable methodological design for (i) a theoretically correct understanding of the research topic, and (ii) guaranteeing industrial relevance of the study. The next phase was the shipper selection process. After selecting the case study approach focusing on in-depth interviews, some shippers and channels to start with were selected. Thereafter, additional cases were added until the material seemed to have reached a level of saturation. Below, some guidelines followed in selecting the cases and the interview respondents are described.

5.2. Selecting the Channels

The cases were selected in a two-stage process. In the first stage the shippers were selected, and in the second, the focal freight transport channel was selected after consultation with the shipper.

The Shippers

Shippers were asked to take part in the study so that a large part of the door-to-door freight transport market should be covered regarding e.g. modal choice,

distances, and type of goods. Shippers dealing with different branches of industry were selected.

The shippers interviewed represent, at least, five branches of industry. If the analysis shows on industry specific differences between the channels, these differences can be highlighted and further investigated. Information was gathered about the contemplated shippers, their branches of industry, and their freight movement characteristics (ingoing as well as outgoing), as an essential part in the case studies. This information collection phase was carried out for two reasons. Firstly, it gave a hint of whether the freight transports of the selected shippers were likely to be of any interest in this research project. This concerned aspects such as their freight flows regularity, their (assumed) use of freight transport channel settings, and the (assumed) importance of the freight flows for their business. Few shippers were excluded at this stage. Secondly, it gave me some background knowledge, useful in the continued research process, and when contacting the selected shippers. This knowledge has also been important to guarantee the quality of the study.

Shippers were selected based on (i) recommendations made by my supervisor and my reference group, (ii) the shipper's field of profession (their products and/or branch of industry belonging), (iii) their geographical location, (iv) the type of transports, transport alternatives, relations, type of goods, etc. In most cases, several criteria were used simultaneously.

The Freight Transport Channels

When the shipper had been selected, the freight transport channel was discussed at the time for the interview. Sometimes, such a discussion took place by phone or by e-mail before the actual interview was conducted. The channel selection was, thus, carried out in consultation with the shipper. Some channels deal with incoming goods, while others deal with outgoing goods.

The shippers could influence what freight transport channel should be selected. Therefore, this thesis could involve only "best practice" cases, something that has not been the intention. In the channel selection process, it was important that the channel studied was not extreme, but rather representative of the shippers' movements. I tried to avoid studying "success stories", since this thesis does not aim at describing best practice. I regard the "risk" that I should have studied "success stories" as low. This view is based on (i) some shippers did not, as mentioned above, know exactly what channel was to be studied, since they only provided me with the name of the person I should contact at the coordinating company (ii) all shippers told me things that did not make them "look good" and not very flattering things about their businesses, (iii) some shippers stated that they hoped to be able to benefit from having these subjects thoroughly discussed

from an academic perspective. Therefore, they thought that it was better for them if a representative “normal” freight transport channel was selected.

In some cases, I received the coordinators’ and carriers’ names, and the contact persons’ names, directly by the shipper, while others only gave the coordinator’s company name and the name of his or her contact person there. From the coordinator I received further information about the carriers. Therefore, the shipper has in several cases not known what persons I interviewed in the freight transport channel. This also reduces the risk of studying only best practice.

5.2.1. Describing the Cases

Some shippers were selected on Freddy Sandahl and Lars Hallsten’s suggestions and some on the suggestion of Arne Jensen, my supervisor. Some were also selected on my own initiative. In the following section, these shippers, and the freight transport channels studied, are described briefly. The shippers are divided into five different categories, the branch of industry could in some cases be questioned, but it is not decisive for the thesis if they are included in another industry. The figures refer to 2002 and come from the database “Affärsdata” if not otherwise stated.

Retail and Clothing Industries

IKEA of Sweden AB: IKEA had a total turnover for the financial year 2001¹⁷² of 10,4 billion Euros. (www.ikea.se)¹⁷³ and close to 4000 employees (2003). IKEA of Sweden was a pioneer in using the railway for international movements, and, therefore, they were rather heavily exposed in media at the time when I selected what shippers to approach. The channel studied involves rail- and truck movements and it starts in Älmhult and ends in Stockholm.

The clothing/fashion industry is an industry where changes are rapid, but from the freight transport perspective, predictable - at least in the time-dimension but in most cases also regarding the volumes. To a large extent, the industry receives the products from distant markets.

Indiska Magasinet AB: Their business concept is to use “*inspiration from India and the Orient and our own shops as outlets to sell a modern and attractively priced range of clothes, accessories, home furnishings and consumer goods*” (www.indiska.com)¹⁷⁴. Indiska Magasinet has in total 54 shops (2003), mainly in Sweden but also in Denmark and Finland, 380 employees, and a turnover of

¹⁷² 1 September 2000 - 31 August 2001

¹⁷³ The full Internet address from which the information is taken is www.IKEA.se/about_IKEA/facts&figures/facts_figures.asp

¹⁷⁴ The full Internet address from which the quotation is taken is http://www.indiska.com/eng/om_indiska/fakta/indexpop.asp (2003-10-11).

about 450 million SEK. The channel I have followed uses water carriers and trucks and it starts in India and ends in Indiska Magasinet's shops in Stockholm.

*KappAhl AB*¹⁷⁵: KappAhl is another fashion company I have made use of in this thesis. “*With almost 280 stores throughout Europe, KappAhl is one of Scandinavia's largest fashion and apparel chains.*” (<http://www.kappahl.se>)¹⁷⁶ In 2001 they had about 1 550 persons and turned over 2 800 million SEK. KappAhl was a choice of my own to complement the Indiska Magasinet-channel. The channel I have followed uses railway and trucks and it starts in Göteborg and ends in KappAhl's shops in Stockholm.

Jofa: Jofa has, from its position in Malung, become a well-known supplier of hockey equipment worldwide. Jofa is a world leading supplier of hockey protective devices and on their home page you can read: “*99% of the pros wear at least one piece of Jofa protective device*” (www.jofa.com). Jofa has 100 employees and turn over 390 million SEK. The channel I have followed starts in Malung and ends in USA/Canada. Jofa could alternatively be regarded as a manufacturing company.

Manufacturing and Petroleum Industries

The manufacturing industry is one of the most important factors for countries' welfare and competitiveness. The manufacturing industry in Sweden is not an exception.

ABB Automation Products AB: ABB is a representative of the heavy Swedish basic industry. “*ABB Automation Products develops and delivers products and IT solutions for force measurement, control, optimisation and protection in industrial processes and in power applications.*” The turnover of ABB Automation Products is 2,4 billion SEK. Their products are used all over the world. (<http://www.abb.com>)¹⁷⁷ The channel I have followed uses road and air freight, and it starts in Västerås and ends in Singapore. My reference group suggested ABB as a study object.

Duni AB: According to Duni's home page (www.duni.se), “*Duni is a world market leader and trendsetter in concepts, services and products to enhance any eating and drinking occasion*”. Duni's turn over is 2,3 billion SEK and they have

¹⁷⁵ See also Transport & Hantering (2001).

¹⁷⁶ The full Internet address from which the quotation is taken is <http://www.kappahl.se/index.asp?url=about> (2003-10-01).

¹⁷⁷ The full Internet address from which the quotation is taken is

<http://www.abb.com/global/seabb/seabb360.nsf>.

[OpenDatabase&db=/global/SEABB/seabb361.nsf&v=6FA6&e=us&c=73A6827161C76013C125685500496F64](http://www.abb.com/global/SEABB/seabb361.nsf&v=6FA6&e=us&c=73A6827161C76013C125685500496F64) (2002-12-11).

880 employees. The channel I have followed starts in Halmstad and ends in England. The channel uses trucks and water carriers.

AB Sandvik Steel: On Sandvik Steel's home page (www.steel.sandvik.com) it can be read "*Sandvik Steel is a world leading producer of tube, strip, wire and bar products for users with high demands on economy, safety and performance. Our products are made of stainless steel and special alloys*". Sandvik Steel is today called Sandvik Materials Technology and turned over about 14,5 billion SEK and had 800 employees in 2003. The channel analysed starts in Sandviken and ends in Orleans (France) and it uses road and rail freight.

SKF Sverige AB: SKF is a large employer based in Gothenburg. They have a successful transport organisation. SKF is the leading global supplier of products, solutions, and services in the rolling bearing and seals business (www.skf.com)¹⁷⁸. The SKF group had about 38 000 employees in 2001 and then turned over 44 billion SEK. The interviews in this channel were, for different reasons, never completed, but the interviews with the shippers have been used in this thesis to highlight the shippers' perspective.

Volvo Transport Corporation: Volvo has large freight flows of incoming as well as outgoing goods and a separate transport unit competing with other coordinators and carriers. Volvo Transport Corporation is now called Volvo Logistics and employ 460 persons turning over 6 billion SEK. Volvo was not only a natural choice, it was also a recommendation from my supervisor and my reference group. The channel study was for different reasons never completed.

Every modern society depends on oil. Since oil movements often make special demands on the transport solutions due to the environmental risk, it seemed interesting to include such a case in the study.

AB Svenska Shell: Again, reading Rask, Enarsson, & Foberg (1997) inspired me to approach Shell. AB Svenska Shell had a turnover of 10,7 billion SEK employing 370 persons. The channel followed starts in Göteborg and ends in Södertälje and it uses water carriers and road freight carriers.

Food Industry

The food industry is an interesting objective of study for several reasons, e.g. that the quantities produced and moved are very large, food transports often need to meet special demands, and that the transports are becoming more important for the industry as the food industry concentrates into larger manufacturing units. This often results to a larger dependency on the transport industry.

¹⁷⁸ The full Internet address from which the quotation is taken is www.skf.com/group (2003-12-01).

Abba Seafood AB: Abba's warehouse is in Uddevalla, where I was growing up, and, therefore, I came to think of them. Abba Seafood is the market leader in Sweden, Norway, Denmark, Finland, and Poland on herring, caviar, and fish quenelles¹⁷⁹. Abba Seafood is part of the Orkla concern. Abba Seafood employs 580 persons and turns over 1,1 billion SEK. The channel I have followed starts in Uddevalla and ends in England, where Abba has a strong, but not dominant, position. The channel uses road freight carriers.

*The Absolute Company*¹⁸⁰: In a report written by three researchers at the university of Växjö (Rask, Enarsson, & Foberg, 1997) I read about Absolut Vodka. I found it interesting and my curiosity of their freight movements was aroused. Absolut Vodka is one of the Swedish industry's most important container shippers. Absolut Vodka is one of the true export success stories in Swedish industry. The channel I have followed starts in Åhus and ends in USA using road, rail, and water carriers.

Göteborgs Kex AB: Göteborgs Kex, located in Kungälv, is interesting since it can be compared and contrasted to Abba Seafood since it makes some different demands on their movements. Göteborgs Kex is, as Abba, a part of the Orkla concern. According to Göteborgs Kex home page (www.goteborgskex.se), they are "... *the leading manufacturer of cookies/biscuits in Scandinavia*". Göteborgs Kex has about 550 employees and a turnover of about 683 million SEK. The channel I have followed uses road freight carriers. It starts in Kungälv and ends at the Norwegian provision merchants.

The freight transport channels investigated can be assumed to be typical of most freight transport channels. The channel participants are the coordinator and the carriers, while the shipper is the buyer of the service. The dividing line between a coordinator and a carrier is not always self-evident, since many carriers work with coordinating responsibility and some coordinators work closely with the carriers or even have a carrying responsibility themselves. With a few exceptions, the cases studies consist of three firms. The exceptions are Abba Seafood and Göteborgs Kex AB, where four firms participated, and SKF and Volvo Transport Corporation, which, for different circumstances, was never followed. Two independent interviews were carried out with each shipper in these cases.

Table 9 below, shows every firm that has been taking part in this study. It also shows from what perspective they, most often, have been answering. It shows the three broad groups of actors discussed, i.e. the shippers, coordinators, and

¹⁷⁹ According to Abba Seafoods' informant Paulina Larsson in an e-mail correspondence (Larsson, 2002-03-04).

¹⁸⁰ See also Paremo (2002).

carriers. In constructing the table, it is difficult to decide in which category to place the different companies. For instance, a firm might work as a coordinator as well as a carrier, or a shipper might coordinate the channel himself. When a respondent works in a freight transport channel where the firm has several roles, I have separated the answers depending on the perspective of the answer. Such firms might, therefore, be regarded as for instance coordinator in one perspective and carriers' in another. Since many respondents thus have had more than one role, the respondents could not be grouped in an exact way. Roughly, however, the respondents' firms can be said to belong to the types as described in Table 9 below.

Shippers	Coordinators/ Forwarders	Carriers
ABB Automation Products AB Abba Seafood AB (Sweden) The Absolute Company Duni AB Göteborgs Kex AB IKEA of Sweden AB Indiska Magasinet AB Jofa AB (a subsidiary of The Hockey Company) KappAhl AB Saetre A/S AB Sandvik Steel Aktiebolaget Svenska Shell SKF Sverige AB (two separate interviews) Volvo Transport Corporation (two separate interviews, today called Volvo Logistics)	ABB Support AB Abba Seafood AB (Denmark) The Absolute Company Aseco AB Duni AB Excel Expeditors Int. Sverige AB Green Cargo (two separate interviews for different channels) GeoLogistics AB Hakon Distribusjon A/S Kuehne & Nagel AB	ABB Support AB Atlantic Container Line Sweden AB Allroundtjänst Transporter AB Andreas Andresen A/S Aseco AB BK Tåg AB Danzas ASG Eurocargo AB DFDS Tor Line AB Euroute AB Frode Laursen A/S Green Cargo Road & Logistics Green Cargo (two separate interviews for different channels) Gestrikefrakt - Gefab Hecksher Transport AB Skandinavisk Tanktransport AB <i>[An anonymous carrier]</i>

Table 9. Companies taking part in the channels roughly grouped according to type

The carriers are of all types of firms, from small local carriers to large mega-carriers. In the relations studied here, international, national, and local road freighters, railway operators, shipping companies, airline companies are involved. The reason for using a comprehensive material is to avoid to be too industry specific. This thesis represents research that is close to reality, which is something that the industry and the decision-makers might benefit from.

5.3. Data Collection

In this section, the in-depth interviews are described and how they were prepared, carried out, and analysed. The arguments for using case studies focusing on in-depth interviews were described in chapter 3, and they will not be repeated here.

5.3.1. Preparation

The preparation of the interviews consisted of:

- Getting in contact with the right company and person and convince them to participate in the study. This was done by telephone calls and by sending e-mails. Further, a date was set for the interview.
- Gaining synoptic information about potential and actual respondents' firms from the Internet, industry journals, newspapers, etc.
- Listening, or after transcription reading, through the material from earlier interviews in the case, when applicable.
- Creating a loosely structured interview guide. Often, this was made easier by being able to benefit from interview guides used in the earlier interviews, in the focal case study and with respondents representing other cases. Preparing the questionnaire, see Appendix III. As was described in section 1.6.2, the shippers and the channel participants understood the questions in uniform ways.

Most shippers that I found interesting could rather easily be convinced to participate in the study. However, a few shippers were not willing to participate and some dropped out for other reasons. Since no shipper was considered to be crucial for the study, this was not a problem. Some shippers were dropped after a short telephone interview. This was done in agreement with the respondent. The coordinators and carriers could easily be convinced to participate.

5.3.2. Conduction

The empirical data collected is extensive. Eleven full, and two partial, case studies have been investigated in 40 interviews, lasting from 2 to 3,5 hours. The interviews' length depended on the firm's role, the respondent's personal background and experience, and the respondent's talkativeness. Some respondents answered the question with a short statement while others gave a more exhaustive answer.

The interviews, which in the vast majority of the cases took place at the respondent's office, were recorded on an MD Player. A few respondents were sceptic to being recorded initially. However, when I had explained the purpose of recording nobody objected to the interview being recorded. Recording the interviews (i) improved the quality and reliability, since the answers and their context, as well as my comments would not be hidden in the same way as it is when taking notes, (ii) made the interviews run more smoothly, since I did not

have to take notes, and (iii) made it easy for me to go back to an interview to understand the context in which a certain statement was made. Furthermore, I promised the respondents that nobody but me had access to the tapes.

I had the opportunity to talk with some respondents under less “formal” conditions before, or after, the interview. Sometimes such conversation gave information that most likely would not have been revealed during the interviews. The respondents sometimes told me things that he did not want me to use in the study. A few respondents asked me to, temporary, turn the recorder off during the conversation; one nodded at the player and made a gesture, while still others said on tape that they did not want a certain statement to be included in the thesis. I am convinced, however, that none of this material would have had any impact on the study even if it had been included. Such comments in most cases dealt with specific companies or persons, and, often, the respondents believed that if their opinion were made public they, personally, would stand out in an unfavourable light.

5.3.3. Working Up and Arranging the Interviews

The interviews were transcribed as soon as possible, generally within five days, so that contexts, facial expressions, body language, and comments off the record were not forgotten¹⁸¹. Transcribing is the first important step in analysing the material. Many channels investigated have most likely gone through some major changes since the interviews were carried out. This is, however, not too interesting since the analysis and the results drawn in this thesis are not case specific.

In the analytical phase of the study, the transcribed interviews were compared and contrasted using traditional methods and a software called WinMax Pro developed for analysing qualitative data. The analysis was conducted using the dimensions of competition and followed the structure described in section 4.1 and, specifically, in Figure 9 on page 101 above. The respondents are treated anonymously regarding the case, company, as well as the interviewed persons' title and name in the analysis.

¹⁸¹ The transcriptions of the interviews ran to about 800 pages.

6. CONTEXTUAL STUDY

This chapter reports on the view of the market (i.e. shippers, coordinators, carriers, and interest organisations) of the subjects of importance for this thesis, as reported on in secondary sources to be described below. This chapter, thus, gives the context from which the empirical material is interpreted. It aims to help me to understand and interpret the empirical material collected by interviews. The chapter gives a picture of how the freight transport market is described in media. It constitutes a second source of information, after the interviews, from which conclusions can be drawn about competition in the freight transport industry. Even though this chapter reports on what frequently has been publicly debated in one form or another, it does not imply that everything in this debate has been correct. If the perspectives, views, and ideas brought up are right or not is not all that important, since the chapter should reflect the actors' perspective of the market regarding the trade. This section, thus, describes how the outlooks on the freight transport industry, and what views are brought up in media. How the industry is described affects how participants and different kinds of observers perceive it. Competition and competitive behaviour are, as discussed in earlier chapters, to a large extent more about perceptions than facts.

The aim of this chapter is to contribute to the fulfilment of the purpose of the thesis by (i) describing the “buzz” of the industry i.e. the market perspective on issues relevant to this thesis, (ii) facilitating the exploration, interpretation, and the analysis of the empirically collected material. The chapter describe the industrial journals' etc. view on the industry and how it is viewed. This perspective is important to regard when analysing their answers. The reliability of the findings is, therefore, less interesting than the fact that they mirror the perspective the interviewed participants have. The findings presented here are likely to influence how the shippers' and channel participants' view the market.

6.1. Background

This chapter reports on what started out as a traditional pre-study, but, due to the dynamics of the competitive aspects in the freight transport industry, it turned into a continuous study that has been a source of inspiration, support, motivation and doubt, throughout the empirical and analytical phases. It should, thus, in many respects, be viewed as an ongoing study conducted in parallel with the

main study for a time. This section refers to references from the past few years, as well as references from the time before the empirical studies were started.

Conducting this contextual study kept me up to date with market changes, and improved my comprehension about the empirical world investigated in this thesis. I mean that highlighting the market's perception and view on the phenomenon of competition within and among freight transport channels improve the industrial relevance of the thesis.

6.1.1. Sources

This chapter is based on secondary data¹⁸². The sources presented here are, therefore, “worked up” to a larger extent than the interviews. The findings are reported on in a condensed and sparse way. It does not intend to give a complete description of the different perspectives of the subjects dealt with, but rather to describe the fundamental perspectives of the market.

The contextual study describes freight transports as they are comprehended and reported on by politicians, representatives of different firms and organisations in the trade, and by other interest parties. The opinions have been brought up at conferences, in industrial journals¹⁸³, newspapers,¹⁸⁴ and other media sources¹⁸⁵. Some articles are written as contributions to the general debate on these issues, others aim at bringing forward, and arguing for, specific opinions, while still others try to clarify the conditions and function of the freight transport industry and are written by “independent” reporters.

¹⁸² Secondary data sources are industry journals, official reports, financial reports, personal communication, newspapers, and “material” from the Internet. The distinction between primary and secondary data is not always self-evident. Three interviews/conversations were conducted that influenced the outlining of the study. The respondents were Claes G Berglund *Marketing Manager Schenker-BTL AB* (2000); Lars Hallsten *Responsible of Transport Policy Federation of Swedish Industries* and Freddy Sandahl *CEO of the Swedish International Freight Association* (2000), and Yngve Olsson *Manager SKF*, 2000.

¹⁸³ The most important industrial journals studied are: (the years indicate the volumes): *Inköp & Logistik* (2002-2004), *På Hugget* (2002), *Pris och Konkurrens/Konkurrensnytt* (1975-2004), *Svensk Logistik* (2000-2004), *Svensk Sjöfart* (1998-2004), *Svensk Åkeritidning* (2000-2004), *TH Transport & Hantering* (1974-2004), *Transport-Journalen* (1996-2002), *Transportnytt* (1968-2002), *Transport iDag* (1996-2004 from 13/14-01 called *Transport iDag & iTrafik*), *VTI Aktuellt* (1996-2003).

¹⁸⁴ Information regarding newspaper articles have mainly been found using databases covering most of the large (and many small) Swedish newspapers. Most of the newspapers have been accessible from the early 90s or even earlier. For these papers, as opposed to the journals, I have not read in the hard copies if the papers due to the amount of papers covered, accessibility, and expected benefits.

¹⁸⁵ Titles refer to the responding persons' titles at the time when the article was written.

Independently of the correctness of the referred sources, they represent an opinion of the industry that is likely to be shared by several interest parties and groups. How right the sources are is not important as long as they can be perceived to influence the actors and the market outcome. Many of the sources that this chapter reports on play more than one role. In some cases they will therefore, give expression to one perspective and in other cases to another perspective. The descriptions brought up in this chapter must, therefore, be read and interpreted with caution. Most sources are public, written journals. Such journals are seldom completely objective.

6.1.2. Industry Characteristics

Perspective on Freight Transports

Holm (2000) says that transports need to be perceived from a holistic perspective. Far too many shippers view transports as an isolated phenomenon. Holm further notes that the shippers' demands to be able to use freight transport channels, independently of the number of carriers and modes it consists of, increases. Christoffer Pålsson of the Institute of Shipping Analysis, stresses in Andersson (2001) that the industry often demands a holistic perspective on the freight transport systems instead of a perspective looking at the system as components. This is in line with what is pointed out in SIKÅ (2002). Stefan Back, the Secretary General and Managing Director of the Swedish International Freight Association, said, "... transports to and from one of the largest ports in the country is subject to a fee. This shows an enormous lack of understanding for the freight transports significance for Stockholm and Sweden, which, unfortunately, is much too common among politicians today" (Back, 2003a, 2003b). This statement was caused by a proposal about road tolls, where public passenger transports are excepted while freight transports are not.

External Effects

The interest in the modes' and carriers' environmental influence has increased in the last few decades even though it is not an entirely new phenomenon. In 1976, the then Minister of Transport and Communications, Bo Turesson, said that he wished to see the railway take a large portion of the future increase in freight movements, since the railway is environment friendly and stands for traffic safety (Transport & Hantering, 1976).

In an polemical article in Sandberg (1999), the CEO of the Swedish Road Freight Organization, Jan Sandberg, holds that it is naive to believe that the environmental problems will be solved by moving goods from road freight haulers to the railway, since the modes hardly compete. This is also the opinion of Sandberg in Transportnytt (2002a).

Conservatism

The conservatism in the freight transport industry seems to be widespread. Many sources trade papers support this view, see, for instance, Dahllöf (1988; 1997b); Corkhill (1999-09-29); Wennberg (2002); or Paremo (2002a)¹⁸⁶. Jörgen Ekberg, the then CEO of the ASG Group, said in *Svensk Logistik* (2000) that the personal relation between the transport service supplier and the buyer is surprisingly important still. Johan Carlén, holds in *På HuGGeT* (2002f) that the conservatism regarding Volvo Logistics' choice of forwarding agents is less widespread than it is often perceived to be. Carlén says that they do not change suppliers for the sake of changing. Instead, the not contracted forwarding agents, in most cases, are less unique than they believe that they are, according to Carlén.

6.2. Buyers' Perspective

Shipper Demands

From Hillerström (1998b), it appears that shippers' demands on carriers and coordinators have increased over the years. Shippers find an important competitive advantage in having an efficient logistics system, and, therefore, they make heavier demands on the service providers. In the article, the transport manager of Stora, Stefan Sundin, states that carriers and coordinators are welcome to approach Stora, since they themselves do not have the time to search the market for the best solutions. Sundin, thus, calls for the service providers to be more active in trying to sell their services.

Many shippers, and others, bear witness to the increased demand for complete transport solutions see, for instance, Holm (2000); Paremo (2002b; 2003); or Garberg (2003). The number of, and the content in, the articles imply that demand for such channels, where the shipper's contact surfaces are minimised, has increased in the last few years. In Garberg (2003), it appears that, more often today than earlier that large shippers want to conclude an agreement with a service provider that takes care of the full freight transport channel. The shippers' demands are seldom discussed in detail in the industrial journals and papers covered by this contextual study.

Shippers' and carriers' common demands regarding the freight transport policy are a good infrastructure, a free and harmonised transport market regarding the taxes and fees within the countries in the EU, and that the policy should promote knowledge within the fields of transportation and logistics (Transport iDag, 1999).

¹⁸⁶ In which Stefan Back, Secretary General of The Swedish International Freight Association was interviewed.

In the e-journal På HuGGeT (2002a), Volvo Logistics' Manager of Contracts, Pia Ljunggren, holds that the carrier selection in broad out-line depends on the lead time and the overall logistics costs. In the same issue, it says that the European Shippers' Council fears the possible effects that mergers might have on the competitive situation in the market. The article refers to Deutsche Bahn's purchase of Stinnes/Schenker. The shippers' opinions about the likely effects from this acquisition are dealt with in Dahllöf (2002b). The shippers' opinions are divided. Some believe that the business deal will have no, or a moderate, effect on the market, while others believe that the effects will be considerable.

Competition

Environmental effects are often brought up as one of the most important variables for shippers shifting from using road freight carriers to using the railway (Transportnytt, 1998a). Two researchers, Thomas Laitila and Kerstin Westin, hold that a study that they have conducted shows that shippers are willing to pay more for an environmentally friendlier road freight movement¹⁸⁷ (Olofsson, 2001). Ingemar Hertz, CEO of Eurowaggon and Elog, holds, according to Grolik (2003), that the shippers often talk about the environmental demands they make on the transports, but when the carrier selection is done, these demands are often forgotten. Björn Axelsson, Professor at Stockholm Business School, stresses, in Axelsson (2003), that firms seldom are as interested in switching partners as economic theory presumes¹⁸⁸. The reasons for many business relations being stable over time are, according to Axelsson, several. Most important is that the relations deal with a learning phase, an adaptation phase, and trust.

Guy Ehrling said, in an interview in the journal *Transport & Hantering*, regarding the deregulation of the Swedish railway that shippers have a large responsibility in letting new carriers get jobs. This is the only way for them to prove themselves to the shippers (Grolik Gerhardsdotter, 2000). The shippers have, according to Ehrling, three important roles in price pressuring, developing, and supporting structural change.

Contracts

How the contracts are written and formulated is, according to Hansson (2000), among the most important aspects in freight transport agreements. Hansson holds that the carriers' attitude towards the customers, i.e. shippers or coordinators, is sometimes decisive for winning the contract. This attitude can be reflected in formulation, the words, and language used, according to Hansson, who further suggests that the contracts should be written in a simple way. The author

¹⁸⁷ See Laitila & Westin (2000). The study is available at:
http://www.umu.se/trum/rapp_lastbil.PDF (2004-04-07).

¹⁸⁸ This assumes that buyers are rational and buy products/services from the seller that provides the best offer.

concludes, by stating that the same conditions can be expressed in both a provoking and a gentle way, it is up to the author to choose.

The e-journal *På HuGGeT* (2002d), reports on Volvo as a well-known tough contractor, since Volvo's demands on the forwarding agents (coordinators) and carriers are many. Volvo does not guarantee the forwarding agents any volumes, and Volvo demand, among other things, all-inclusive rates. Furthermore, Volvo requires that 95% of the movements should be on time, according to the news item. Johan Carlén of Volvo Logistics holds, in the same issue of the newsletter (2002e), that some of these demands are negotiable.

6.3. Modes of Transportation

The four modes of transportation, i.e. road, rail, shipping, and aviation, are not treated to the same extent in literature. The road and rail freight industries are far more frequently discussed, and analysed, than aviation and shipping. The road freight industry is the most frequently debated industry in journals and papers¹⁸⁹.

When asking shippers, coordinators, and carriers what variables they regard as the most important in the future, the most frequent answer regards environmental and IT-issues, according to a survey made by *Transport & Hantering* (Dahllöf-Crooks, 1999). Further Dahllöf-Crooks frequently mention the infrastructure as a variable of significance. The study also discusses the most important developments within each mode during the second half of the 20th century. Even though the participants' opinions differ, the most commonly aspects mentioned are:

Road: Infrastructure and the large and heavy vehicles.
Railway: Deregulation and customer orientation.
Shipping: Containers and satellite navigation
Aviation: Jet engines, jumbo jet aircrafts, and the development of the integrators.

6.3.1. Road

Within the EU, the road freight sector is deregulated, and, therefore, Swedish carriers face competition from international road carriers on domestic as well as international markets (see, for instance, Godstransportdelegationen 2000). In *Svensk Åkeritidning* (2003) it says that Swedish trucks perform 87% of their total transports domestically. The road freight industry is far less detrimental to the environment today than only a decade ago, according to the CEO of Scania, Leif Östling, in Karlsson (2001a). He holds that the trucks of today (i.e. 2001) pollute only one tenth of what they did ten years ago. The road freight sector mainly

¹⁸⁹ I believe that one likely reason for this is that road freight is of significance to the industry itself as well as they are important for others in complementing the other modes.

competes with the railway on distances over 300 km. In the road freight industry, one usually perceives the railway as a potential partner of cooperation rather than a competitor (Godstransportdelegationen, 2000)¹⁹⁰.

Financial Situation

The costs for Swedish carriers are higher than they are for their international competitors, according to Godstransportdelegationen (2000). Jocke Larsson, CEO in Road Haulage Association East¹⁹¹, holds, in Svensk Åkeritidning (2003), that haulers in the road freight industry have too low an interest in making a profit. If the road freight industry is compared with other service industries, these service providers have one single reason for offering their service, which is the profit they can make. Most people practising a profession, in any service industry, would, according to Larsson, take up occupation if it were profitable. Road freight haulers, Larsson continues, do not change until they are forced to do so. Anna-Karin Neikter representing The Swedish Road Haulage Association observes, in a study of the road freight industry reported on in Josephsson (2003a), that all financial key figures point in a positive direction from the investigated carriers. One explanation of this finding can, according to Neikter, be that the haulers have become better at charging the shippers for the service. The low average profitability in the road freight segment is often blamed on the carriers' possibility of charging, see, for instance, Tamme (2002), Josephsson (2003), or Silander (2003).

Competitive Advantages and Disadvantages

In Karlsson (1998b), it is made clear that many road freight haulers are familiar with the thought of moving their business abroad to get more financially advantageous conditions. Kersti Karlsson, deputy assistant undersecretary, in a seminar, advised the road freight haulers to go abroad and “*use their possibilities*”, according to Lindell (1999). In the same article Karlsson says that she has been misunderstood. The Minister of Transport and Communications, Inees Uusmann, said, as reported in Lötberg (1998), that the higher taxes the Swedish road haulers have to pay to, by comparison to their European colleagues, are nothing but a myth. Uusmann held that the difference was not to be found between countries with low and high taxes, but rather between firms that are efficient and those that are less efficient.

¹⁹⁰ The description is to a large extent based on the work of Godstransportdelegationen (2000). The reasons for giving such a weight to their word are two. First of all, the report was perceived to be a correct description of the market by the vast majority of the professional and industrial groups and freight transport representatives in their comments on a proposal circulated. Secondly, the description provided is general. It is presented as a short overview of the market.

¹⁹¹ Free translation of Åkeriföreningen Öst.

The Swedish carriers used to have a competitive advantage regarding domestic freight transports in being allowed to drive longer vehicles than most international competitors. Now, foreign carriers might connect a “dolly” to the truck (25,25 m) and, therefore, this competitive advantage has diminished in importance. It is possible that Swedish carriers will register their company under a “flag of convenience”, if their competitive disadvantage is high enough, according to Godstransportdelegationen (2000).

Östling (Karlsson, 2001a) says that the road haulers provide shippers with a more efficient service than the rail or the combined transports does, in spite of the congestions in the central European countries. Östling further holds that it is difficult to convince the politicians of the benefits of the trucks and to make them see the drawbacks of the railway (Karlsson, 2001a).

6.3.2. Railway

There are about ten operators performing freight transports on the railway in Sweden. The rail sector has typically been transporting low valued bulk goods over long distances but it is now focusing on high valued products as well (Godstransportdelegationen, 2000).

Thomas Johansson, a journalist specialised in railways, says, in Ivarsson (1999), that the railway can be its own worst enemy, since the railway is keenly aware of the shippers’ demands and requirements.

The railway is by far the most frequently criticised mode of transport, justly or unjustly. The criticism come from shippers, coordinators, and their professional and industrial organisations (see, for instance, Dahllöf, 1991, 1994, 1995b, 1997c, 1997d; Lindström, 2001a; Paremo, 2000b), representatives from other modes (see, for instance Dahllöf, 1997c; Karlsson, 2001a, 2001b), the railway representatives themselves, and their professional and industrial organisations (see, for instance, Dahllöf, 1988b, 1994; Grolik, 2003; Lindström, 2001b) In 1988, the then Director General of SJ, Stig Larsson, criticised the railway administrations in Europe, including Sweden, for being old-fashioned and conservative (Dahllöf, 1988). Researchers (see Möllerberg, 2000) and politicians (see, i.e. Karlsson, 2001c; Paremo, 2000b; Transport & Hantering, 1995b) can also be found to criticise the railway from time to time. The criticism has to do with what the respondents often perceive as, a poor and unreliable service, the costs and investments, and the problem with the international railway movements. Severe criticism was brought up in an interview with the CEO of Scania, Leif Östling, in Karlsson (2001a). Östling says that the European railway network is based on the conditions from the 17th century and it is out of date, inflexible, and expensive. Further, Östling holds that it is a matter of time before the railway network for freight trains is gone. This criticism was not left without

contradiction. Christer Beijbom, CEO of IKEA Rail, says that congestion is the most important drawback of the road freight industry, and the best reason for developing the railway system (Karlsson, 2001d). Beijbom says that deregulations of the European railways are necessary if we want intramodal railway competition, a form of competition that might develop the industry. The Minister of Industry, Björn Rosengren, agrees, in large and much, with Leif Östlings's view on the railway discussed in Karlsson (2001c). Rosengren says that the railway industry is old-fashioned and that there are no entrepreneurs in the railway industry. However, the minister cannot agree that the road freight industry lacks competitors, since he says that shippers often choose the mode according to the characteristics of the goods to be moved. Jan Sundling, CEO of Green Cargo, partially agrees with Östling's dark picture of the railway in Karlsson (2001e). Sundling says that if the railways are not renewed, national obstacles are removed, and the railways in Europe are deregulated, the railways will not survive in the long run. Sundling points out the importance of the modes of transportation working together.

Financial Situation

In Wiberg (1997), it is stated that the market share for the railway for freight transports within the EU was reduced by more than 50% from 1970 to 1995. The European Commission says that the railways in Europe have to become more market-oriented, competing with each other as well as with other modes of transportation to stop this development (Wiberg, 1997). SJ¹⁹² has, for many years, been cutting down on the organisation. Efficiency and profitability of SJ are higher than they are in SJ's European equivalents, see, for instance, Grolik (1998), Godstransportdelegationen (2000), or Karlsson (2001g).

When SJ raises prices, or takes other measures trying to improve business, the reactions from the market, i.e. their customers and others as well, are often immediate and strong. Some prices were raised dramatically in 1995, which SJ, as well as the Minister of Traffic, Inees Uusmann, defended, see, for instance, Dahllöf (1995a), or Uusmann (1996). In an interview with SJ's Director General, Daniel Johannesson in Tamme (1998), Johannesson states that the transport industry has developed slowly. He says that since there is no money to be made in the business, no investments are made.

Competitive Advantages and Disadvantages

In Ivarsson & Lindell (1997), Christer Beijbom says that the railway has a major competitive disadvantage, or lost a former competitive advantage, when trucks were allowed to increase their axle load. This is, according to Beijbom, the most

¹⁹² SJ here regards the old Swedish State Railways, known as SJ. At the end of 2000 SJ was converted to six independent companies. Thereafter, SJ is the company dealing with passenger traffic.

important reason why the railway lost market shares. Beijbom also said that road haulers always, in good times as well as in bad, have been complaining about their situation. The railway has, and can furthermore, increase the efficiency, but Beijbom says that it is tough to compete with road haulers since they, according to Beijbom, practise price dumping.

Gunnel Sundbom, Director of Information at SJ, holds that it provides SJ with an competitive advantage to be able to offer an environmentally friendly transport system strengthen by the customers' growing consciousness of environmental issues (Sundbom, 1996). According to SJ's former Director General Daniel Johannesson, the environmental aspect is one of the most important sales arguments for the railway (Tamme, 1998). Johannesson also says that some factors point at better possibilities for the rail sector in the future. Among these factors he sees decreased costs for using the tracks, increased loading possibilities and loading gauge, higher axle loads, and infrastructure investments. The motives for investing in railways, from the Government's, as well as the carriers' and shippers' perspective, have to do with environment and the congestion on the roads (Godstransportdelegationen, 2000).

SJ does, since 1988, not carry any mixed cargo, only wagon loads and dedicated trains, according to the former director-general of SJ, Stig Larsson (Grolik, 1998). In *Transportnytt* (1998), Christer Beijbom said that Green Cargo® was launched to get away from the shippers' preconceived idea that tracks are needed right outside the door for anyone to use the railway. In *Transport & Hantering* (1999), it says that SJ's Green Cargo-concept, which was introduced to the market on 7 September 1998, is not new. Beijbom also stated "the resources have not been expanded or changed"¹⁹³. Green Cargo was introduced since shippers did not realise that SJ could pick up and deliver the goods using the road freight carriers, according to the article.

Green Cargo will phase out their road freight organisation called Green Cargo Road & Logistics, according to *Svensk Åkeritidning* (2003). The reason is, according to the article, several years of profitability problems. The division manager of Green Cargo Road & Logistics, Roland Hoijar, said in *Svensk Åkeritidning* (2003) that the possibilities of successfully running a road carrying firm are better for small carriers that are more flexible¹⁹⁴.

¹⁹³ "resurserna har inte utvidgats eller förändrats"

¹⁹⁴ Authors' comment: This statement implies that there are diseconomies of scale in the markets in which Green Cargo Road & Logistics are active.

According to Axelsson & Hedkvist-Petersen (2000), freight trains from Sweden to the southern parts of Europe never exceed an average speed of 20 km/h¹⁹⁵. Many interest organisations, political institutes, and others have investigated, and made statements about the railway sectors' problems, prospects, and possible solutions. The Swedish Competition Authority held¹⁹⁶ that the railway industry could benefit from the Swedish State Railways losing their monopolistic position in the market. The Confederation of Swedish Enterprise states in a report, by Ramberg (2002), that an efficient cross-boundary freight railway is necessary for the competitiveness of Swedish industries.

Shippers often stress that the railway services must be reliable and efficient for them to start using them to a larger extent, which makes demands on politicians, according to Hallsten (2000). Evert Wijkander, General Manager at Avesta Polarit and Chairman of the Swedish Shippers Council's railway group, says that the European railways face big problems. He refers to the organisations structure, and the lack of cooperation among the national railways as the most important problems. He does not think that the railways are out of date (Karlsson, 2001f). Freddy Sandahl, CEO of the Swedish International Freight Association, stresses that all modes of transportation play an important role and he further holds that the railways, in the long run, might benefit from a removal of the subsidiaries (Karlsson, 2001g).

6.3.3. Shipping

Shipping is mainly used for long distance bulk transports (Godstransportdelegationen (Godstransportdelegationen, 2000). In Littke (2002), Lars Vieweg and Per Jessing, representing Maritime Forum, say that shipping in Europe is more and more perceived as an international business. Vieweg and Jessing say that it is amazing that this has taken so long time, since shipping has always been a very international industry.

The intramodal competition is obvious in the shipping industry but the industry also competes with the railway to some extent (Godstransportdelegationen, 2000). The main intermodal surface of competition is often said to be between the rail and sea sectors (see, for instance, Svensk Hamntidning 1998).

Financial Situation

The shipping sector is characterised by very varying profitability over time and in different segments. Many articles report on this phenomenon, see Lindell

¹⁹⁵ According to Svensk Logistik (2003) the average speed is 18 km/h and more than 50% of all combined transports reach their destination with a delay.

¹⁹⁶ From "Konkurrensverkets Ärenden juni-augusti 1995 " The registration number of the case is 714/95. The case deal with passenger transports but shows on the Competition Authorities attitude in such matters.

(1999a)¹⁹⁷. The shipping companies may sail under a flag of convenience if conditions are more advantageous in another country. This calls for a harmonising of the rules (Godstransportdelegationen, 2000). Godstransportdelegationen (2000) further holds that the shipping industry has got full coverage of its costs and that it is an environmental friendly mode.

Competitive Advantages and Disadvantages

The conferences in the deep-sea shipping industry are discussed from time to time. According to Dahllöf (1995c), Stig Karlsson, who is the Head of Shippers' Council¹⁹⁸, says, that nobody (i.e. no shipper) needs conferences today, since they protect the least efficient shipping companies and raise prices. Another discussion is referred to in Transport & Hantering (2001a) where some major shippers (transport buyers) say that the conferences have a negative influence on prices, but some of the shipping companies stress that this is not a fact. The shipping companies, on the other hand, say that the conferences make sure that capacity is sufficient, and, therefore, movements can be performed, independently of the market situation.

The liner shipping industry's exception to the rules of competition, in the form of allowed conferences, is questioned now and then. The European Commission would like to have the Governments' and the industries' opinions regarding this exception, which is reported on in Konkurrensverket (2003). Mario Monti said, according to the same article, that it is time to investigate if the very generous exception of the liner shipping industry from the rules of competition is consistent with modern market conditions.

The EU wants to see goods transferred from the congested roads to the railway, but also to the shipping markets. For this reason, it is possible for some shipping companies to get subsidies through the PACT¹⁹⁹-program for taking such cargo. This is described, and exemplified, in Ståhl (2001). One of the most important problems in transferring goods to the shipping industry, reported on in the article, is that the shipping market depends on long-term contracts, due to the heavy investments involved in hiring or building ships.

6.3.4. Aviation

Aviation has as its natural market segment high-graded goods, and goods needing fast movement. The international freight transports using aviation have increased since 1993, while the domestic freight transports have decreased. The freight

¹⁹⁷ Lindell's article deals with the high profitability of P&O as compared to other shipping companies.

¹⁹⁸ Free translation of "Chef över Befraktarrådet"

¹⁹⁹ PACT is an abbreviation for Pilot Actions for Combined Transports.

transports performed by foreign carriers to/from Sweden are extensive (Godstransportdelegationen, 2000).

Trucking, a phenomenon where road freight carriers move airfreight has attracted more attention in the last decade even though it is not a “new” phenomenon. Transportnytt (1984) says that trucking to the central European airports is becoming more and more common. It can be read in Hillerström (2001) that 54% of the air cargo from Göteborg is moved directly by an aircraft, while 46% is trucked to other airports in Europe. Air cargo is often trucked to northern Europe as well (Godstransportdelegationen, 2000).

The Swedish Competition Authority states, in a report dealing with the deregulation of the domestic aviation²⁰⁰, that one problem is that the airlines compete in departure times and not in prices (Bergman, 1996)²⁰¹. The Swedish Competition Authority welcomes a merger between two smaller actors in the aviation market, since they then might be able to compete with SAS who is the large service provider²⁰².

The aviation sector is often criticised for poor competition in the market. The EU Commission has imposed fines on many freight transport actors. Among these are SAS and Maersk Air who, according to Mailund (2001), were found guilty of dividing the market. Even though they seldom deal with freight flights specifically, these discussions have effect on freight flights as well, since passenger and freight flights are often combined. These issues are discussed in a report written by the representatives the Nordic competition authorities called “Competitive Airlines - Towards a more vigorous competition policy in relation to the air travel market”. In the report, which is discussed by Murray (2002), some measures the group believes would improve competitiveness among the aviation carriers are brought up. The group finds that, even though there are “many”, often national, carriers (flag carriers), the hub- and spoke system strongly limits competition. Further, the group calls for strong actions to be taken by the European Union’s Competition Authority to increased competition in the aviation sector.

Financial Situation

Since the September 11 attack in New York 2001 the aviation industry (not the integrators) have, according to Hillerström (2001), been through a period with decreasing passenger- as well as freight revenues. This calls for fast restructuring of the industry, according to the Chairman of Ryanair, Michael O’Leary, as well

²⁰⁰ See Bergman (1996).

²⁰¹ See also “Konkurrensverkets Ärenden september 1996”

²⁰² See, “Konkurrensverkets Ärenden september 1996” The registration number of the case is 789/96.

as the secretary-general of The Swedish Aviation Society, Harald Rosén (Hillerström, 2001). The future seems far brighter for the integrators, according to the same article.

6.3.5. Combined Transports

For several years, combined transports²⁰³ have been attractive to politicians and decision-makers, see, for instance Dahllöf (1988c); Wallner (1992); Uusmann (1996); Storhagen (1999); or Back (2002), academics, see, for instance, Jensen (1990), or Helsingborgs Dagblad (1999), carriers, see, for instance, Tidningarnas Telegrambyrå²⁰⁴ (1996), Killander (1998); or Nyström (1998a) as well as shippers, see, for instance, Johansson (1996), or Nyström (1998b). More recently, combined transports and the requirements these put on the infrastructure are discussed in Godstransportdelegationen (2004).

Financial Situation

In 1988, the Swedish Government decided to invest 500 million SEK in combined traffic, with an aim to improve the position of the combined traffic in the market Dahllöf (1988c). The reason was, according to the same article, that combined transports are considered to have several advantageous characteristics as seen from the society's perspective.

In a debate article, Thomas Hanbo²⁰⁵ says that the Government has to explain why money invested in combined transports since 1988 has not yield any return (Hanbo, 1996). The minister of Transports and Communications, Ines Uusmann, said that one part of the answer, besides the drawbacks of railway traffic as viewed by the shippers, is that the traffic should be concentrated to a few profitable relations (Uusmann, 1996). Uusmann further holds that the unprofitable relations are subsidised by the profitable ones.

Competitive Advantages and Disadvantages

The road freight industry and shippers are harder to convince about the benefits from combined transports than are railway representatives (Lundberg, 1988). The perspectives and the perceived advantages and disadvantages differ between politicians, carriers, and shippers. Politicians have tried different forms of incitements to attract the traffic, but with little success, see, for instance, Lundberg (1988). Jan Nilsson, co-CEO of Blue Cargo, a company working in the combined transport segment, said in Andersson (2003) that a subsidised railway,

²⁰³ Here interpreted as movements where the railway, partially, substitute the road freight relation.

²⁰⁴ The Swedish Central News Agency

²⁰⁵ Thomas Hanbo used to be the responsible person for SJ's project dealing with combined transports. He is then became CEO of Skandinavisk Frakt AB.

or increased taxes for the road freight industry, is necessary for combined transports to prosper.

6.4. Competition

Mainly three factors prevent competition in transports, according to Sundbom (1992); these are Governmental rules/regulations, concentrated markets (with one or a few large providers), and cooperation between companies when setting prices. Further, the author states that probable reasons for deregulating transport markets have been that (i) it is difficult, or impossible, to govern the market in the desired direction (toward efficiency and increased customer surplus), (ii) there is a lack of motivation to become cost efficient, (iii) there is a need of an improved knowledge of the different modes needing different conditions for competition to provide a useful and efficient service, and (iv) focus has, in many respects, been on the interests of the producer rather than on the consumer. The companies have been able to build up a strong market position during a regulated period, and, therefore, it often takes many years for the deregulation to have a positive and obvious effect for the consumers.

The director-general of SJ, Daniel Johannesson, said in TFK (1999), that competition is a necessary condition for service development. He further said, regarding SJ and competition, that SJ mainly faces competition in the dedicated trains segment, while the business carried out by Green Cargo faces less intense competition. He also said, referring to SJ, that the dominating company in a business has a responsibility for the competitive situation in large. In the same booklet, the director-general of the Swedish Competition Authority (KKV), Jörgen Holgersson (TFK, 1999), said that KKV finds horizontal cooperation as worse than vertical cooperation, since the former tends to harm the customer more.

The Director-General of the Swedish Competition Authority, Ann-Christin Nykvist, stated in Nykvist (2002) that part of the problem with competition can be found in the Swedish attitude towards competition. Nykvist holds that people in general are in favour of competition as long as they are not exposed to it themselves.

6.4.1. Intramodal Competition

Articles, statements, and other forms of publications regarding intramodal competition deal, mostly, with road freight transports. Many articles discussing road freight carriers focus on the Swedish haulers' less favourable taxes and fees as compared with the conditions the foreign competitors are given, see, for instance, Göransson (1997); Larsson (1998a); Lithander (1998); or Johansson (1999a).

Cabotage/International Competition

In a study, carried out by the journal *Transport & Hantering* in 1995, it says that only a few road freight forwarding agents held that the competitive pressure increased shortly after Sweden joined EU (Transport & Hantering, 1995). In Ivarsson (1999), it is stated by the Swedish Road Haulage Association vice-CEO, Göran Forssén, that shippers might not be negatively affected by a weakened competitiveness for the Swedish road freight carriers, but it will strike on jobs in the industry. The article further discusses the low profitability levels of the road freight industry.

The Swedish road haulers are in a problematic position regarding the competitive situation, according to Peter Jeppsson, CEO of Transportgruppen in Karlsson (1998), since they face competition from other countries' haulers, which operate under more favourable conditions, and that they compete with less responsible Swedish haulers. Some road freight carriers felt that the conditions in Sweden were too tough, and, therefore, they have moved their business abroad. This is also reported on in Karlsson (1998b) among others. One question that remains unanswered is for how long the cabotage drivers are allowed to continue to operate on the domestic market, see, for instance, Wiberg (1998; 1999). According to Wiberg (1999), the interpretations differ between different countries, but it typically varies from one to three months. Wiberg (1999) sees cabotage as a potential threat to the Swedish road freight haulers and the Swedish society as a whole.

As mentioned above, many articles deal with the conditions given to the road freight haulers, in which comparisons to other European countries are made, see, for instance, Transport & Hantering (1997a); or Jeppsson, Sandberg, & Wahlström (1998). In a symposium in 1998, reported on in Hillerström (1998a), when the cabotage rules were recently introduced, many road freight carriers gave expression to a fear of being driven out of the market, since the varying conditions would give the foreign carriers a competitive advantage (lower costs) resulting in the shippers finding their offerings attractive. According to Svensk Åkeritidning (2000), cabotage in Sweden in 1999 corresponded to 270 towcar equipages. They conclude that these transports, most likely, relate to long-distance traffic. Transport iDag Express (2001) says that cabotage is a growing phenomenon in the transport industry. The business ratios of the towcar industry indicate a though competitive situation resulting from domestic as well as from international competition (Josephsson, 2003). In the road freight industry's journal, Svensk Åkeritidning, an article (Svensk Åkeritidning, 2003) referring to SIKA-data, states that Danish trucks move about six times as much goods to and from Sweden as the Swedish trucks moved Danish goods.

The railway industry's organisational/structural matters are highlighted from an EU perspective in Svenska Dagbladet (2003), reporting that the international rail freight transports within EU will be opened for competition in 2006. According to the same article, the domestic rail freight will be opened for international intramodal competition two years later.

Legalities

In Jeppsson, Sandberg, & Wahlström (1998), the authors hold that Swedish road haulers are forced to break the law to compete with the cabotage haulers. The minister of Transport and Communications, Ines Uusmann, said in Lötberg (1998) that competition is distorted by some haulers who are not obeying the law, which Uusmann regarded to be an international problem.

Jan Sandberg, who is CEO of the Swedish Road freight organization, held in Transportnytt (2002b) that shippers in the forest industry are not willing to cooperate with the Swedish Road freight organization in order to reduce overloads. Overloading is necessary for profitability for the carriers today, according to Sandberg. The Swedish National Road Administration shows (using hidden measurements) that 87% of the trucks in the forest industry are overloaded (Andersson, 2002d). The heavy vehicles bring on two effects. First, the safety risk for the drivers of the vehicles, as well as the fellow road-users, and second, the heavy vehicles, according to the article, destroy the roads. The tendering process is, according to the person responsible for the forest transports at the Swedish Road freight organization, Uno Kjellman, the basic problem, since the forest industry turns to individual road haulers in order to increase the price pressure (Andersson, 2002c). Those haulers act very short-sightedly, out of pure ignorance, according to Kjellman. He further notes that this affects some organised haulers, who, then, do not see any other alternative than to offer the same low prices, according to Kjellman. In Forssén (2004), Göran Forssén, the CEO of the Swedish Road Haulage Association says that competition shall take place between serious companies that follow the laws and contracts. He holds that there are carriers breaking the laws, which is dangerous to all carriers.

From time to time, the road freight industry is depicted in dark colours when discussing how the members act from a legal perspective. Besides the industry journals and newspapers describing the illegalities in the business, one finds the National Council for Crime Prevention²⁰⁶. In Lammi-Björklund (2002a), a report by Brottsförebyggande Rådet (2002) is described and one of the authors is interviewed. Among the illegal measures mentioned in the report are: violating the working hours' regulations; smuggling to increase profits, and "grey" payments in the form of diesel, tobacco, and clothing. The structural problems are the most important ones in explaining criminality in the business, according to

²⁰⁶ Bråttförebyggande Rådet

the authors of the report. They refer to the fact that the trucks often are like mobile warehouses and the tough international competition following the EU membership.

In Andersson (2000) it is stated that faults are found in 15-20% of the checked vehicles. Lars Hallsten, of the Federation of Swedish Industries, comments on the problem in the same issue of the journal, saying that this is not a major problem in practice, even though the securing of the goods is insufficient sometimes. Anund, Kecklund, & Larsson (2002) have performed a study focusing on the fatigue of the drivers. The authors conclude that drivers often work under an intense pressure, which they hold can lead to the law-abidingness. Furthermore, they state that many drivers would like to have more flexible driving hour regulations.

6.4.2. Intermodal Competition

Many writers and representatives for different modes have a wish that the modes of transportation should compete on equal terms. This wish is, however, not new. In 1963, it was decided that the transport policy should be liberalised in order for the different modes to be able to compete on equal terms, according to *Transportnytt* (1970; 1970b). Sveriges Transportindustriförbund²⁰⁷ (1999a) points out that intermodal solutions will be necessary to a larger extent in the future.

Road/Rail

The most extensive intermodal surface of competition is often reported to occur between road and rail haulage, since these modes are similar regarding costs and quality of service.

In Hillerström (1997), the CEO of BTL, Håkan Larsson, and the head of freight transports in SJ, Christer Beijbom, said that there is no cutthroat competition between the railway and the road freight industry. Larsson held that the lack of a comprehensive view in freight transport is a myth. He continued by stating that this finding is also valid regarding the perception of the cutthroat competition in the road freight industry. The reports on intermodal competition between road and rail are two-way reports. For instance, it says in Tenfält (1999), that the railway sector started to move goods that previously was moved by road freight carriers over some distances in Sweden (one of the cases reported on turned out to be one of the cases studied). Tenfält says that SJ, being subjected to intermodal as well as intramodal competition, faces a tough time. However, he highlights that SJ will not necessarily be the loser of this game, since SJ might be stimulated by the competitive situation. For rail haulage to be cost-competitive it is required that one can send the goods directly from the senders' terminal to the terminal of the consignee (Nelldal, 2000). In Sandberg (2001), the author asserts that there

²⁰⁷ The Swedish International Freight Association

really is no extensive competition between the road- and rail sectors²⁰⁸. According to Sandberg, the modes rather complete each other than compete, see also Hillerström (1998a).

In Transport & Hantering (1995b), it says that the Commission of the European Communities finds that the railway loses market shares to the road sector. The Commission states that this depends on the road freight industry having cut prices and improved service simultaneously. Many articles deal with the different conditions for competition given to the road and railway operators regarding variables, such as costs and taxes, see, for instance, Sandberg (1996; 1999; 2001); Tenfält (1999); or Dahlquist (2003). Sandberg (1999) says that the National Rail Administrations have to solve their cooperative problems for the railway to become a reasonable alternative to the road freight haulers on its own merits. Sandberg holds that intermodal competition is positive but it must be on equal terms. The railways in Europe have problems that they are not able to solve on their own, according to the Chairman of the Schenker Management Board, Håkan Larsson (På HuGGeT, 2002g). These problems regard cooperation among the nations' railways. The solution to this, which also might make the railway competitive as compared to the road freight sector on international jobs, is that one large actor, like Deutsche Bahn, buys all, or several, of the national railways. By such performance, Larsson holds that technical barriers could be reduced.

According to the person responsible for IKEA's freight flows in Scandinavia, Peter Olofsson, IKEA prefers to use the railway when the services offered by the road freight carriers are not perceived to be of higher quality (Ekström, 1997). In the same article, the CEO of Scandinavian Rail Cargo Malmö, Leif Persson, says that "*The railway is a wonderful transport system for large volumes*"²⁰⁹, but he also sees a competitive disadvantage in the time it takes to make a change. He further says that the road freight carriers are far more adaptable as compared to the railway.

Shipping/Rail

One of the interest groups of the shipping industry, Maritime forum, holds, in Sjöfartsforum (1998), that the road- and railway sectors do not compete to a great extent. The large surface of competition is, according to the article, to be found between the railway and the shipping industry. The Director-General of the Swedish Maritime Administration, Anders Lindström, stresses in Sjöfartsforum (1998) that the competitiveness of the shipping industry gets worse when the subsidiaries to the railway are increased. This view finds support in Tenfält (1999), who says that the CEO of Vänerlinjen, Rolf Hollmén, holds that the subsidiaries to the railway force Vänerlinjen to diminish their business. The

²⁰⁸ A statement that not necessarily contradicts Nelldal's findings.

²⁰⁹ In Swedish: "*Järnvägen är ett underbart transportsystem för stora volymer.*"

railway received contracts with Stora Enso and shippers of petroleum products that used to be moved by water carriers. The competitive surface between shipping and railway in the Vänern-case is also brought up by Tidningarnas Telegrambyrå (2000), reporting that the shipping alternative is closed.

Blomqvist (1999), who discusses intermodal competition from an infrastructural perspective, focuses on the infrastructural conditions for the railway and the inland waterways on Göta River and Lake Vänern.

Even though Nelldal (2000), as mentioned above, believes that the most important surface of competition is between the land based modes, all modes compete to some extent. However, the differences, especially between sea and road carriers, make it difficult to describe such competition, according to the author. Nelldal also says that underway haulage per se in rail freight transports most of the times is less expensive than the equivalent trucking. The case is, however, the other way around regarding the fixed costs and the feeder costs (Nelldal, 2000). In the description of the Infolog-project²¹⁰ TFK (2000), it is stated that it is more complicated to use intermodal transport solutions than road transports, since the flow of information and the documents to be handled “...vastly exceeds the one for road transport”²¹¹. Further, TFK holds that “*if intermodal transports are to be a true alternative to road transports they must be as accessible and easy to organise as road transport and also as cost efficient*”.

Shipping/Road

In Lindell (2000b), Per Jute, CEO of the Swedish division of Superfast Ferries, says that they will start to operate a ferry running at a speed of 29 knots that will be able to compete with the road freight carriers. According to Jute, haulers will win one day by travelling with them to Rostock, and, therefore, he is convinced of a successful future for the shipping route. The service turned out not to be long-lived since it, for different reasons, was shut down about four months after its introduction (Andersson, 2002e).

6.5. Cooperation

Cooperations in inter- as well as intramodal settings in freight transport channels or other forms are far less frequently discussed than competition. In secondary data reporting, mergers and acquisitions are given more space than other forms of

²¹⁰ From: <http://www.tfk-hamburg.com/infolog/descript.html> (accessed: 2003-09-09).

²¹¹ The full paragraph reads: “*Today, using intermodal transports is more complicated than using traditional road transport. The flow of information and the number of documents that has to be handled vastly exceeds the one for road transport. When a shipper decides to use intermodal transport, he either has to carry out more administrative work or outsource the forwarding. Outsourcing then leads to less control of strategic information and a higher dependency on outside actors.*”

cooperative measures. In Killander (1998), it is made clear that international movements raise the demands on cooperation between the different modes. Killander refers to the Swedish International Freight Association in stating that an increased use of intermodal transport solutions will not only benefit the environment, but also the flexibility and more efficiently using the existing resources.

In Andersson (2001) Christoffer Pålsson elucidates the discussion when carriers should cooperate and compete respectively. He says that two carriers might compete, running with low capacity utilization²¹², a solution characterised by low efficiency and poor economy, or they can cooperate giving the market a monopoly with the ensuring drawbacks.

Jörgen Ekberg, the then CEO of the ASG Group, held, in Svensk Logistik (2000), that the merging trend has just started in the transport industry. He predicted more mergers to take place, but at the same time, he stressed that there will always be room for small and middle-sized haulers in the market, since they can act faster in their niche markets. In Josephsson (2002), it is concluded that many road freight associations have been involved in merging and/or acquisitions over the last few years. The latest trend among the road freight associations is to work in alliances and networks, according to the article. This might be an alternative to or a step toward a merger. Typical for these forms of cooperations is, according to the article, that they take place among carriers in the same niche. The advantages from such cooperation are said to be that they cover a larger geographical area and that they create a superior competence in one area. Another advantage, reported on, is that it is possible to take on large, often international, jobs. Lastly, as an advantage, the author points out that both well-established names of both companies will remain in the market.

6.6. Relevant Market

Defining the relevant market is of importance for firms in the trade, politicians, decision-makers, as well as the Competition Authorities. In the secondary sources, as reported on here, few explicit discussions about the relevant market concepts are found.

A Norwegian authority called “Prisdirektoratet²¹³” discussed the concept of relevant market in a report referred by Statens Pris- och Konkurrensverk (1992) saying that the relevant market has a product- as well as a geographical dimension. For two products to belong to the same market, users have to view them as substitutes, but how close substitutes do they have to be? This tricky

²¹² According to Transport iDag/iTrafik (2004) the Swedish trucks ran empty on 25% of the total distance in the third quarter of 2003.

²¹³ After 1/1-94, Prisdirektoratet og Statens Pristilsyn is called Konkurransetilsynet.

question refers to prices and cross elasticities which can be difficult to estimate. The products' substitutability refers to buyers' valuations of the products. Exchangeability is a necessary but not sufficient condition for substitutability. Costs associated with changing suppliers (costs related to the contracting phase and adaptation process) narrow the market. The Commission of the European Communities define "a relevant market" in the Communities' law governing restrictive practices²¹⁴ as reported on in Hansing (1998).

In Karlsson (2000b), a case where SJ had violated the competition rules, since they had abused their dominant position, and the problems found when deciding whether a company in selling services below costs, are discussed by the former Head of the Legal Secretariat, Kenny Carlsson. The discussion is about finding the relevant market, deciding when a dominant position occurs, and when the position is abused, and finding out what was the intention of actions performed.

6.7. Infrastructure

In this study, infrastructure is in many respects considered to be an "exogenous" variable, and, therefore, it is not discussed in detail even though it, of course, often influences the competitive situation strongly. A few notions regarding infrastructure and infrastructural differences between the modes of transport are discussed below.

In a report dealing with the Swedish infrastructure (Sveriges Transportindustriförbund, 1998), some of the most important investments to be made in the infrastructure were described. The report is referred to in Transportnytt (1998b) and Svensk Logistik (2001) saying that the shippers and the industry are positive to the report.

According to Svensk Logistik (2000a), the only basis for the bill regarding the infrastructure was an investigation that most interest groups find insufficient written by SIKa and the national traffic administrations²¹⁵ called SAMPLAN²¹⁶. Political decisions and proposals are seldom regarded as fair and right by all interest groups. This was, for instance, the case when the Government bill 2001/02 (Proposition, 2001), dealing with the future development of the infrastructure, was presented. In Svensk Logistik (2001b), several different interest groups' opinions are reported on. The railway representatives were more positive than the representatives of the road freight industry. This is well in line with the bill's proposed investments in the sectors. Transportnytt (2001b) says

²¹⁴ EGT number Competition 372, 09.12.1997, p 5. (See

<http://europa.eu.int/scadplus/leg/en/lvb/l26073.htm> Accessed 2004-04-07).

²¹⁵ The Swedish Maritime Administration, The Civil Aviation Administration, The Swedish National Road Administration, and The Swedish National Rail Administration

²¹⁶ See, Swahn (2001).

that reactions from different types of road freight carriers and their organisations differ as well. For instance, some carriers find the investments in infrastructure in Stockholm too small, while others do not. According to Littke (2001), some railway representatives were critical to the bill as well.

Ports

The ports' situation is frequently discussed in industrial journals referring to the financial situation, e.g. financial support and subsidies (see Lindell, 1998), the optimum number of ports (see, for instance, Bengtsson, 1999; Dahllöf, 1991b, 1991c; Lindell, 1998; Littke, 1999), and issues related to competition and cooperation between ports (see, for instance, Lindell, 2000a; Littke, 1999; Paremo, 2000a; Statens Pris- och Konkurrensverk, 1991). Gunnar Nygren, CEO of the Port of Gothenburg, says in TFK (1999) that the competition between the Swedish municipalities' ports is skewed. This is due to the municipalities' employment policy, which results in unprofitable port businesses being subsidized, which affect the competitive situation between subsidized and non-subsidized businesses²¹⁷. The ports in Lake Vänern were, by the Swedish Competition Authority²¹⁸, allowed to coordinate their businesses in violation of the competition rules. The reason for the exception was that the waterways would then strengthen their competitiveness towards road and rail-based transports. Thus, reduced competition in one market was accepted, since it improves competition in another market. In a report written by the Transport Research Institute – TFK, the ports are exhorted to cooperate rather than compete, since competition leads to over-investments (Paremo, 2000a).

Roads and Tracks

The Öresund bridge has been frequently discussed before as well as after it was built (see, for instance, Dahlberg, 2000). In Littke (2000), both advantages and disadvantages from the bridge, as perceived by the road freight carriers, are discussed. It is concluded that the bridge is not perceived to be an alternative to the ferries for the long-distance heavy freight transports. The rates for using the bridge are too high, according to Karlsson (2000a), and, therefore, there is a risk that the bridge will be an infrastructural failure. On the 1st of January 2002, the rates were lowered, but after the first quarter of 2002, it could be noted that revenues from the heavy trucks were below budget, even though the traffic had increased by 22% (På HuGGeT, 2002h).

²¹⁷ The contracts in the industry differ significantly in duration. Toyota contracted, according to Dahllöf (2002a), Copenhagen Malmö Port for a 25-year period.

²¹⁸ From "Konkurrensverkets Ärenden juni 1994" The registration number of the case is 990/03.

6.8. Transport Policy

The advocates of the transport industry's trade associations criticize the presumptions given to the freight transport industry by the politicians from time to time as will be reported on below.

National

From a national perspective, willingness to increase the railways importance in the freight transport system from the politicians have been pronounced for many years, see, for instance Transport & Hantering (1976), Lundberg (1988), or Paremo (2000b).

When the Swedish Competition Authority commented on the report "Ny kurs i trafikpolitiken" (Kommunikationskommittén, 1997), they encouraged a further deregulation of the Swedish transport markets, in line with the traffic political decision of 1988²¹⁹. The political conditions that the freight transport sectors have to adapt to should be designed in an, for the industry, acceptable way if it should not be subjected to severe criticism. Many political proposals, decisions, and Governmental bills have been subject to such criticism. One of these was the above-mentioned Communications Committee (KomKom) that in Kommunikationskommittén (1997) suggested that the external effects should be internalised. The realisation of such a suggestion would imply heavily increased costs for the road transport sector. One reason for the suggestion was that the transports should be part of the sustainable development in society. The report was heavily criticised by most interest groups in the market for being unrealistic²²⁰. This was obvious in many articles like, for instance, Ivarsson (1997). He states that the transport industry representatives, except the railway, stand united in their criticism of KomKom's suggestions. The Swedish International Freight Association and the Federation of Swedish Industries join in the criticism of KomKom (Transport & Hantering, 1997b). They said that KomKom's description and analysis of the freight transport industry are incomplete and wrong in several aspects. The Swedish Competition Authority also criticised the report, since it did not appraise the pros of a well functioning transport market enough (Pontusson, 1997). The report was also criticised from academia. Lars O Rask, says, that KomKom are completely wrong about the freight transport market (Dahllöf, 1997a). Rask further holds, as stated above, that the primary surface of competition is between the railway and the water carriers not the road freight haulers. Therefore, an increased taxation of the road freight will not result in goods being transferred to the railway, as KomKom

²¹⁹ From "Konkurrensverkets Ärenden september 1996". The registration number of the case is 332/96.

²²⁰ Author's comment: The field of freight transports is politically complicated especially since measures taken regarding one mode typically will bear effect on the other modes as well when conditions for competition are changed.

believe. The reason for the mistake is that freight has been treated as passenger movements, according to the article. Rask continues by stating that there is a problem in viewing the situation as a strictly modal choice, since many shippers demand, and use, several different modes in their freight transport channels. Christer Beijbom, the head of SJ Gods, is more positive to the transfer of goods from the road freight sector to the railway, as suggested by KomKom. This is brought up in Ivarsson & Lindell (1997), and Beijbom further holds that the combined traffic can reach 1,5-2% market share with some help from KomKom.

If KomKom were heavily criticised, the opposite can be said about the freight transport delegation²²¹ and their report Godstransportdelegationen (2000). A conclusion drawn in the report is that the Swedish transportation industry must be allowed to work under at least as good conditions as their counterparts in the neighbouring countries (Karlsson, 2001b). According to the Swedish International Freight Association (Paremo, 2001), the report is objective, has a basis in reality, and it provides knowledge. The Swedish Road Haulage Association is also positive towards the report (Josephsson, 2001). The then Minister of Industry, Björn Rosengren, commented on the report saying that he was glad that the Government and the industry agree on these issues to such a high degree, according to Sandahl (2001). Other positive voices from the industry are heard in Svensk Logistik (2001b).

International

The idea that several countries should have a common transport policy has been dealt with prior to the EU-attempts. In *Transportnytt* (1970), for instance, a common transport policy for the Nordic countries was discussed.

In a study where 20 forwarding agents were participating, reported on in Dahllöf (1996), the vast majority thought that the EU's transport policy will favour the railway and the shipping industries more than the other modes of transportation.

The political willingness to increase the railways' importance in the freight transport system is a national, as well as an international explicit goal. It is frequently discussed on an EU-level, see, *Transport & Hantering* (1995b) or *Stenmarck* (2003). The Commission often stresses cooperation between national rail administrations as a condition for the railways' future competitiveness, success and survival (The Commission of the European Communities, 1998).

In commenting on the EU's white book "Time to Decide", the CEO of the Swedish Road freight organization, Jan Sandberg, holds that it is vague and

²²¹ The freight transport delegation does not consist of politicians but rather representatives from different industries and interest organisations. The report is treated in this section since the delegations establishment and composition was politically directed.

unrealistic. The reason is that it is not possible to move such an amount of goods from the road freight sector to the railway sector as suggested in the white book (Andersson, 2002a). Nine representatives of the transport industry's interest organisations²²² agree. They maintain that the white book focuses too much on transferring goods from the road to the rail industry (Andersson, 2002b). The representatives hold that the modes of transportation are not fully interchangeable. Other critical voices are heard in Sandahl (2002) and Svensk Logistik (2002).

²²² These interest organisations are: Branschföreningen Tågoperatörerna, Maskinentreprenörerna, Skogsindustrierna, Svensk Handel, Svenskt Näringsliv, Sveriges Hamnar, Sveriges Redareförening, Sveriges Transportindustriförbund, and TransportGruppen.

PART C

THE ANALYSIS

If you torture the data long enough, nature will confess.

Ronald Coase

Part C – the Analysis consists of two chapters. It is structured in accordance with the research model, described in chapter 4. The first chapter is titled Analysis of Empirical Material – Structural Dimensions. These structural dimensions strongly influence the way that the functional dimensions are described in the second chapter of Part C. This chapter is called Analysis of Empirical Material – Functional Dimensions.

INTRODUCING PART C

In chapter 7 the empirical material collected in the in-depth interviews is structured, compiled, and analysed in terms of the structural dimensions of competition. As mentioned in chapter 4, the structural dimensions partly overlap each other. The dimensions of competition have been of importance throughout the research project. Most important, however, the dimensions influenced how the empirical material was treated and analysed, as will be illustrated in this part of the thesis. In chapter 8, the functional dimensions are analysed based on the structural dimensions and some additional material from the contextual study and the main study dealing explicitly with the issues of competitive pressure and competitive surfaces.

As stressed before, the term actor is used synonymously with shipper, coordinator, and carrier. Actor, thus, refers to all groups of respondents, but, not necessarily every respondent in each group. This term is very important for interpreting the analysis correctly.

The Structure

Many topics analysed in the structural and analytical dimensions are, to facilitate the analysis, divided into subsections. The subsections are: horizontal and vertical analysis, as treated in chapter 4. All dimensions are, however, not suitable for division in this way, and, therefore, some dimensions are treated differently. The horizontal perspectives are far more extensively analysed than the vertical perspectives. They are, therefore, further divided into sections according to the shippers', coordinators', and carriers' perspective on the topic discussed. These sections are, however, not strictly pursued, and, therefore, is it possible, occasionally, to find comments regarding e.g. carriers in the section discussing coordinators. The respondents' answers were seldom clearly horizontal or vertical. Even though, these split-ups are subjective, they were naturally in the vast majority of the interviews. In many dimensions, important aspects and concluding comments are summarised in tables where the diverging views of the actors²²³ are illustrated. Sometimes, a common channel-perspective is described in the bottommost, merged, line.

The Roles

The analysis, to a large extent, separates the findings from the three groups of actors. This division is partly arbitrary, since the groupings overlap. This regards the findings from analysing the coordinators more than the other groups of actors, since the coordinators quite often have a dual role in demanding as well as supplying freight transport services. Since the dimensions partly overlap, some

²²³ When the shippers are discussed, in tables and otherwise, the analysis, comments, and conclusions regard their role as transport demanding parties and not their overall business.

aspects are discussed and analysed in more than one dimension, even though the perspectives might differ. Shippers and coordinators are sometimes discussed jointly in the analysis when their roles are the same and the analysis would not benefit from treating them separately. The shippers' and coordinators' roles are not always clear. Sometimes the shipper acts as coordinator and the coordinator as a shipper (from their own, and, definitely, from the carriers' perspective). The coordinators' role is further complicated, since the coordinators also might act as carriers.

The Codes

In the analysis of the empirical material, see chapters 7 and 8, I have used endnotes to mark out what respondents answered in a certain way. The endnote numbers are written as subscripts in the analysis not to be mixed with the footnotes. The company names are not given due to the fact that the respondents were told that their names and answers would remain anonymous. The endnotes are given in tabular form in Appendix V. However, to most readers it is of no or little interest to be able to compare and contrast what actors' where of certain opinions in the different topics. This is why the codes are described in an appendix.

Author's Comment

Before stating my personal comments in the last section of each dimension, I have, in most cases, included a section called Remarks and Conclusions. These sections discuss findings that are of importance for the interpretation of the dimension even though the subjects brought up do not directly fit under any of the subheadings used in the dimension. I have only in exceptional cases included the codings in these sections. At the end of the sections, I state my perspective on the topic studied. These sections are titled "Author's Comment" and are motivated by the importance of expressing the researcher's perspective of the phenomenon studied throughout the analysis, since such views may influence the analysis and the conclusions.

7. ANALYSIS OF EMPIRICAL MATERIAL – STRUCTURAL DIMENSIONS

Before analysing the structural and functional dimensions, it is helpful to analyse the concept of competition, and describe how it is perceived from the respondents' perspective. A description of the, in this thesis, fundamental term of competition is necessary before analysing the structural and analytical dimensions.

7.1. The Fundamental Concept of Competition

Every interviewee was asked to state his/her perception, or definition, about the term “competition” and what it implies to him/her. To ask this question at the beginning of each interview was important, since the respondents' perspective of the concept of competition could influence their answers to other topics discussed in the loosely structured interview.

7.1.1. Competition Defined

Competition is, as stated in section 1.4.1, a term that people often have an intuitive feeling for. Apprehensions about competition vary between individuals as well as over time. Therefore, the term can result in misinterpretations and misunderstandings.

To get a picture of how the term was viewed by the respondents, they were asked to define competition, or state what they meant by competition. The answers are interesting to compare with a theoretically “correct” definition. Comparatively few interviewees give a definition of the term that is in line with any of the theoretical definitions/descriptions, see chapter 2. However, the essence of the answers reveals that many respondents perceive the term similarly. Furthermore, their perceptions seem more often than not theoretically correct, even though many state that it is problematic to define/describe competition.

Shippers

Generally, shippers provide a, theoretically, more correct description than coordinators and carriers. They regard the number of active competitors in a market as significant for how intense they find the competitive situation to be. Shippers do not take the characteristics of the coordinators'/carriers' competitors into account, i.e. they do not rate them differently depending on how tough they

are regarded to be as competitors. Shippers, mainly in the manufacturing business, say that, for two parties to be regarded as competitors, they must be independent of each other.

Respondents with a university education, who frequently were found among the shippers, define the competitive term more theoretically correct than others. They focused on the effect of competition, rather than on the number of competitors.

Coordinators

Coordinators describe competition rather heterogeneously. This, most likely, is due to their role as “middle-men”, having shippers as “customers” and carriers as “suppliers”. As a group, they have the supply-view, as well as the demand-view, on competition. Some focus on the conditions for competition₂, while others focus on the outcomes of competition₃.

Carriers

The carriers’ view of the term varies. Some carriers₄ focus on the outcome variables, and the instruments used in the competitive process, such as price, qualitative variables, pressure on efficiency, and cost, while others₅ focus on the conditions that the carriers face, such as the possibility to compete, intramodal/intermodal competition. Still others₆ focus on the number of participants in the relevant market.

Water carriers focus on intramodal competition₇, even when intermodal competition is possible. Several road freight carriers focus on intramodal competition as well, and the price formation, in defining competition. Carriers in the railway sector₈ focus, almost exclusively, on intermodal competition.

Role-Independent Findings

Some findings are independent of the respondents’ role. Such findings are discussed in the following paragraphs.

The concept of competition is often perceived rigidly²²⁴. Many coordinators’ and carriers’ respondents focus on actual and historical competitors. They seldom view competition from the shippers’ perspective, i.e. the demand-side, the side where it is decided what firms actually compete. The demand-side and the supply-side affect the process, and the outcome of competition.

²²⁴ Competition might stem from other organisations working in the same field, serving the same customers as the focal firm. This is, then, direct competition. The focal firm often views competition as stemming from the coordinators/carriers working in their market segment at present. The competitive pressure that the focal firm is exposed to, often stems from companies active in other markets (product or geographic), but it might also stem from potential entrants (will enter the market if the conditions are right).

Many respondents, of all types, perceive competition as enjoyable and positive⁹. Competition puts pressure on them to improve their service¹⁰. Some respondents¹¹ state that this is positive, since it, as one of them said, “...it keeps you awake” and it makes their job more interesting. This view, that competition makes the trade more interesting, is obvious on the personal level. It would, naturally, have been more profitable for a company to be a monopolist. The personal feelings of competition are, thus, in opposition to the business economics, rational, goals.

Some interviewees¹² focus on the consequences of a well functioning competitive market situation, e.g. price-pressure; quality-improving; a driving force for the development, while others¹³ focus on the variables in which competition occurs, e.g. price, effective machinery of production, flexibility, volume, service, and quality. Still others focus, according the general academic definition of the term, more correctly on the surfaces of competition. None of the respondents directly includes potential competitors when describing the term “competition”.

7.1.2. Measuring Competition

None of the actors measures competition, but a few respondents¹⁴ try to measure competitive pressure. This “measure” was often the actors’ feeling for how the number of participants had changed in the recent years’. The actors do not measure competition for two reasons. Firstly, they do not know how competition could be measured. This problem is closely related to the fact that the actors, for different reasons, found it hard to describe the term “competition”, and to decide who their competitors are. Secondly, the actors do not believe that they would gain anything from measuring competition.

Summing Up

The views about the concept of competition differ. The classification foundations for finding the differences are (i) the roles they assume, (ii) among the carriers, the mode used, and (iii) the educational as well as professional background of the interviewee. There is no evidence that the participants working in the same channel have a common perception of the term. There are, thus, horizontal conformities as well as disconformities.

Even though differences can be found between the groups regarding their perception of the term “competition”, they are considered to be minor. For many actors it is difficult to find words to describe or define competition. The underlying perception of the concept is, however, rather stable among them. Table 10 below shows the focus that the groups have in their perception of competition.

	Shipper	Coordinator	Carrier
Focus	<p>Principally the number of participants, but also the instruments of competition to some extent.</p> <p>View competition as the activity that occurs among the coordinators and carriers that they use.</p>	<p>The coordinators give a more divided picture than the other groups.</p>	<p>The instruments (principally price, but also qualitative aspects).</p> <p>View competition as the activity that occurs among carriers.</p>

Table 10. *The actors' apprehensions of the term "competition"*

7.1.3. Author's Comment

Based on the theoretical and empirical studies that this thesis relies on, I would define competition as: *"the ongoing process between rivalling solutions, existing and potential, in a certain market where the companies struggle for the buyer's favour"*. This definition takes intermodal as well as intramodal competition in the relevant product/geographical market into account. Furthermore, it includes alternative solutions, such as a route redirection, a movement of the business, or even closing down the business. The process of competition puts pressure on the companies to improve their efficiency in some way.

I believe that the actors (of all types) could gain from measuring competitive pressure, at least roughly. This could help them to perform well in different markets. To comprehend how the competitive pressure changes could leave the actor with a major competitive advantage, since he can take actions accordingly.

7.2. Dimension I: Competitive Instruments

Shippers, as buyers of the freight transport service, are treated somewhat differently in comparison with the coordinators and carriers in this dimension. Shippers have a quite different role than the coordinators and carriers, since their main service is not transportation. Shippers having a separate transport division are, in this respect, special.

As described in section 4.3.1, analysing competitive instruments and competitive strategies is made easier by using the classical marketing mix approach, expanded by an additional power-variable. Broadly speaking, there are both "hard" and "soft" instruments. Hard instruments are the quantifiable instruments/variables, price, product, and, to some extent, power and place. The soft instruments deal with the promotional aspects of the service and its formation and, to some extent, power, and place.

Describing the P's

As discussed in section 4.3, the P-variables are viewed as described in the following paragraphs in the analysis: Product deals with the service's characteristics in terms of quality, value-adding services, and other variables. These characteristics regard specific, as well as, general aspects of the service. These aspects are discussed jointly in the analysis, since both make up characteristics of the product. The place-variable regards the geographical dimensions of the service. These issues regard e.g. where, and how the service is sold, the geographical coverage. Promotion deals with those measurements taken by service suppliers aiming at selling their product. Among those aspects, advertising, personal relations, sales promotion, and often most important personal selling are found. The selling of the service suppliers' services mainly occurs through personal selling and, therefore, promotion in this context is most often to be understood as a synonymous to personal selling. Personal selling might involve sales presentations, sales meetings, telemarketing, etc. The price-variable regards financial aspects and (reactions to) price/rate making. It covers all aspects that regard the price, and the rate, of the service. Among these aspects are the bases for the price/rate set, but also issues dealing with discounts given. Lastly, the power-variable regards actions taken aiming at affecting the service or other actors. Power is treated as a separate, additional, P-dimension, even though the topics dealt with under this heading, otherwise, could have been discussed in the other dimensions. To regard power as a separate variable facilitates the analysis, since these aspects otherwise would have been "forced" into the other dimensions. Power, correctly viewed and used, can be regarded as a separate competitive instrument for the participants of a freight transport channel.

7.2.1. Product

Horizontal Analysis

Shippers

Shippers working with end customer products are more concerned with the environmental aspects of the freight transports than other shippers¹⁵. However, none of the shippers emphasizes environmental issues as the most important variable for the choice of carrier/coordinator. Shippers working with end customer products stress, in concordance with other shippers, the price and qualitative aspects as being more important for the selection of channel participants. Most shippers stress the importance of a wide range of variables for their choice of channel participants. The shippers agree, to a large extent, that price is the most important, and often decisive, variable for the participant selection given that some minimum requirements on the other service characteristics are fulfilled¹⁶. Such requirements might, however, be tough and very important in the selection phase. The shippers specify some basic requirements that the coordinators and carriers have to comply with. If the

coordinators and carriers comply with these demands they are asked to state their price. Some shippers₁₇ say that the carriers may not necessarily gain from exceeding the requirements²²⁵.

IT-services are, often, developed and offered, for the shipper/customer to be able to track and trace the goods. If the transport service is reliable and works as it is supposed to, the use of many IT-services are limited, according to several shippers and coordinators₁₈. One of them₁₉ said that they use such services to some extent, but he stressed that, if something goes wrong, the coordinator or the carriers should find the goods and make the necessary changes. Therefore, their direct need and benefits from using IT are limited.

Shippers have diverging perceptions about the importance of the load space utilization. Some think that it is very important to improve the filling rate₂₀, while some₂₁ say that this problem must be solved by the carriers and not by them as shippers. Most shippers hold that the carriers could consolidate goods from shippers in the same movement₂₂, while some oppose letting the carrier gather goods from other shippers in the same load carrier as they are using, for efficiency reasons₂₃. It would make the focal shipper's movements slower and less reliable, according to the respondents. Some shippers₂₄ hold that revenue, if any, from backhauling is a "bonus for the carrier". As long as it does not affect their service, most shippers do not mind if the carrier backhauls goods₂₅. One shipper₂₆ said that he did not measure the capacity utilization, but he believed it would be a good idea to measure it. Many shippers₂₇ stated that efficiency, combined with lack of goods are the reasons for not striving to get a higher utilization degree on the backhauls. The former reason is most common among shippers that use the railway in the channel studied.

Large shippers are seldom engaged in gathering, nor do they let the coordinators and carriers gather goods from other shippers in the load carriers, to improve the capacity utilisation. The reason was that the shippers, more often than not, fill the load carriers themselves. One shipper₂₈ said that his company gathered goods if there was free space, but this seldom happens. Other reasons mentioned for not gathering goods was that it complicates the reloading activity and it increases the demand on labelling the goods. One shipper₂₉ in the manufacturing industry, working in an affiliated company with many sister companies, said that the carrier gathers goods from these companies. Still another company working in a group said₃₀ that goods are not gathered with the sister companies. The medium sized and small shippers₃₁ were, in general, more positive to goods gathering. They believed that they could benefit from such an activity. Common to all

²²⁵ For instance, if the shipper demands a time window of maximum 30 minutes, a carrier promising a time window of 10 minutes might not be considered to be better than those exactly meeting the demand of the 30 minute window.

shippers was the belief that the characteristics of the goods sometimes make it impossible to gather goods. One shipper³² said that, to reach the objectives of more frequent transports, without increasing the total cost, his company has to use a gathering-principle. Another obstacle stressed by one shipper³³ was preconceived ideas about the goods affecting the other ship-owners' cargo. That shipper was able to fill the load carrier in both directions. To some extent this possibility was, according to the shipper, to be perceived as fortunate circumstances.

Coordinators

One coordinator³⁴, and a few carriers³⁵ think that they run the risk of being left behind if they are not able to offer the latest technological services to the shippers. For small and medium-sized firms, the investments in IT can be regarded as a high barrier, according to a coordinator³⁶.

The coordinators disagree on the importance of having balanced freight flows regarding head- and backhauls. Some coordinators³⁷ say that this must be the carriers' concern, while others try to help the carriers to use their capacity in both directions. The utilization of the capacity in the backhaul varies extensively depending on factors like the product market, the geographical market, and the mode used. Some coordinators said that the shippers sometimes do not allow them to use free space in the load carriers for other shippers' goods. The reason, as perceived by the coordinators, is that the shippers think that it would affect the reliability of the service.

One coordinator³⁸ said that the carriers were completely happy driving back with no return loads. He said that wherever they need a movement, the carrier says that there is an unbalance in that region, and, therefore, they will run empty on the return trip, which increases the rate. He was once able to get a 35% discount on the price when approaching a carrier which he knew was having freight in the opposite direction. Therefore, he said that he gathered that this might be the case on many relations, and, therefore, he worked intensely with investigating all such relations²²⁶.

A Norwegian respondent³⁹ regarded the Norwegian carriers' situation as sheltered. He said, "*They [i.e. the carriers] feel that Norwegian industries do not focus on transportation, which gives the carriers an enormous possibility of affecting their own profitability*".²²⁷ This could be done, he continued to say, by

²²⁶ If this is common or not cannot be determined by this study, but if these inefficiencies are normal, there is an enormous potential in the market to lower prices and to reduce the total fleet of trucks.

²²⁷ "...de (också) upplever att näringslivet i Norge inte har fokus på transport - för det ger ju dig en enorm makt till att påverka egen förtjänst"

offering “... *poor solutions, using many trucks with low capacity utilization*”²²⁸. Furthermore, he said, “*They seem to be more interested in the conflict between themselves than they are in satisfying the customer*”²²⁹. The coordinator went on to say that the capacity utilization in Norway is about 50%, which he thought was “*insanely low*”. He gave an example of a carrier who was moving goods from A to B, running with no backhaul cargo, while another carrier was doing the same in the opposite direction. Both carriers were paid in full for the head- as well as the backhaul, and, therefore, they did not have any incentive to compete.

Regarding the observance of road freight carriers of laws and regulations, one coordinator₄₀ said, that it is a “...*strange business with strange operators. It is a business with plenty of fiddling – there are many cowboys living on the fringes of the laws and rules. This is a recurring theme in the whole organisation.*”²³⁰

Carriers

Many service suppliers₄₁ hold that capacity utilization in the road freight segment is lower than it would have been if the carriers had the incentive to utilize the capacity and their plan routes more efficiently. Many carriers₄₂ say that freight flows/capacity utilisation differ significantly between relations. Many of them also say that the capacity utilization in the head haul is often high, while the backhaul is significantly lower. Most carriers stress that it is hard to find return flows. The opinions differ between the carriers whether this phenomenon is regarded as a problem or not. Some say₄₃ that the freight flow situation would be far more complicated, and that the service for the existing customer would be changed, if they had more return flows. Others₄₄ say that finding return flows is almost necessary to make a profit. Most carriers in a region perceive the unbalances from the geographical perspective in the same way. Some areas are net producing areas, while other are areas of consumption. There can, according to some respondents₄₅, be considerable differences between the rates charged for a movement from A to B and from B to A. None of the carriers said that shippers actively help them to find return flows. One coordinator₄₆ said that the carriers’ incentive to use unutilised capacity is non-existent, since the shipper pays the full cost for the trucks anyway.

There is a difference between the railway representatives regarding their view of the railway. Those who made a career in the rail sector stress environmental

²²⁸“...*dåliga lösningar som utnyttjar många bilar med låg fyllnadsgrad*”.

²²⁹“*Jag känner att de är mer intresserade av kriget sinsemellan än att tillfredsställa kunden*”.

²³⁰“...*märklig bransch med märkliga aktörer. Det är en bransch med mycket fusk - många cowboys, många som lever på kanten av lagar och regler. Det genomspeglas i hela organisationen.*”

aspects as the mode's main advantage²³¹. Those recruited to the railway companies from other businesses stress capacity and the road sector's drawbacks as the main advantage of the railway, such as external costs²³² and low capacity.

One respondent⁴⁷ said, "*...shipping has got a certain air of glamour - that is unavoidable! In some strange way, the customers are interested in what our ships look like, a thing that has always been hard for me to understand!*"²³³

Several coordinators and carriers said that it is not possible to always "go by the book" in road freight movements. The carriers frequently stress two restrictions that they understand as problematic. The first is the loading restrictions, and the other is the restricted driving-time. The time schedule given by the shipper sometimes makes it "*...an impossible equation to drive one hundred percent legal*", according to a coordinator⁴⁸. He continued by saying "*...in order not to fall behind in today's competitive market, you have to overload them [i.e. the trucks]. Otherwise you will not make a profit – unfortunately. It is alarming*"²³⁴

7.2.2. Place

Horizontal Analysis

Shippers

According to some shippers⁴⁹, one important competitive advantage that the coordinators and carriers can have is to have knowledge of the points of delivery. Such knowledge can include: knowing the routines, having access to warehouse, and to be known by the people at the points of pick-up/delivery. Many shippers⁵⁰ stress the importance for them to have confidence in the operators.

Carriers

Some carriers interviewed said that they had "place"-related advantages making it possible to deliver the goods whenever it suits them⁵¹. This causes inertia in the shippers' choice of channel participants.

²³¹ Author's comment: The environmental aspects of the transport sector have not been in focus for many years. It could be expected that those respondents having a long history in the railway sector would stress "old" competitive advantages rather than such a "new" one.

²³² External costs are, thus, those costs (or sacrifices) that affect others. These external costs are the ones subject to infrastructure charges (i.e. to be internalized) (SIKA, 2003). External costs consist of: air pollution, climate change, infrastructural effects, noise, and accidents.

²³³ "*...shipping har viss glamour det går inte att komma ifrån! På något märkligt sätt är våra kunder intresserade av hur våra fartyg ser ut och det har jag alltid haft väldigt svårt att förstå!*"

²³⁴ "*...för att hänga med i konkurrensen idag så måste du överlasta dem. Annars får du ingen ekonomi i det – tyvärr. Det är skrämmande.*"

Vertical Analysis

As seen above, actors of all types stress the lack of balance in the freight flows. This regards regional, domestic, and international traffic. It is, however, unusual that this is used to get a good offering in the relation characterised by excess supply. If this is a problem of communication (to make the shipper comprehend that they are getting a really good service for their money) or a problem of negotiation is impossible to gather from the study.

7.2.3. Promotion

Horizontal Analysis

Shippers

Shippers are sceptical to using load carriers for advertising⁵². Some of the most frequently stated reasons for not using this possibility are that (i) the carriers and the load carriers become less useful²³⁵, and (ii) it has a negative commercial effect, since “... *it is not nice to drive behind a dirty truck and see that there is [company name] written on it*”²³⁶.

Coordinators

Some coordinators⁵³ state that they have to win the shipper’s trust over and over again, while one coordinator⁵⁴ held that he feels “safe” in the relation with the shipper. This depends, among other things, on the competitive situation, according to him. Others stress⁵⁵ that the length of the relation and the personal relations among the coordinators and the shippers are the most important things for their perception of the strength of the relation. The length of the relation does not determine the coordinators’ experience of security in the relation according to the empirical material.

Carriers

Many of the coordinators’ and carriers’ representatives hold that, for the professional salesman, it is of great importance to get as close a relation as possible with the (potential) transport buyer. The closer “friend” the seller, i.e. the coordinator/carrier, is with the buyer, i.e. the coordinator/shipper, they stress, the “safer” the relation and the higher the possible premium⁵⁶.

Carriers rarely use load carriers to offer the shipper marketing possibilities. The main reason is that the load carriers become less adaptable if they have the shippers’ name on them. Two exceptions to this are found. The first is when the shippers own the load carriers, and the second is when the alternative use of the load carrier is very limited.

²³⁵ They cannot be used to move the shipping company’s competitors’ goods if they are marked with the company name.

²³⁶ “...inte så roligt att köra bakom en skitig lastbil och se att det står [företagsnamn] på den”.

Vertical Analysis

Some coordinators₅₇ and carriers₅₈ say that one of the best ways to promote themselves and their services is through their customers. They are often interested in using shippers as references for this purpose. Some of the coordinators and carriers had received new customers using existing customers as references. Often, the shippers did not comprehend that they were attractive as reference customers.

7.2.4. Price

Even though focus has not, explicitly, been on issues related to pricing in the interviews, pricing behaviour or the price charged was discussed in most interviews. Many respondents brought up the subject when speaking freely. Sometimes questions related to pricing were asked to follow up discussions in the loosely structured interviews.

Horizontal Analysis

Shippers

One shipper₅₉, using water carriers, pointed out that, since the rates fluctuate extensively for instance depending on the market situation, it is important to “*keep one’s ear to the ground*”. This would make sure that the coordinator does not keep the profit when overcapacity puts pressure on the rates.

Shippers do not hold that they are able to gain, in terms of lower rates, from the unbalanced freight flows. The shippers perceive rate-differences, according to demand, only to be considerable in non-land based movements. If a shipper and a carrier have been partners for a long time, the carriers often regard the risk that the shipper will abandon the relation for another carrier as small. One large company group cooperates extensively among the sister companies₆₀ in other respects than freight transports.

Coordinators

Some coordinators₆₁ say that the most important competitive instrument is price. They hold that lower prices attract more shippers, thereby increasing volumes, making them attractive to carriers, which allows them to put pressure on the prices offered by the carriers. This is, thus, a “good circle”, which the coordinators strive to get into. Other coordinators₆₂ regard the service and its qualitative aspects as their main competitive instrument, saying that the prices they offer the shippers are, more or less, given by their subcontractors (i.e. the carriers).

One coordinator₆₃ said that the aviation industry is not characterized by price competition, to the same extent as the road industry, which is due to the fact, he said, that the aviation industry is able to adapt its offerings according to supply

and demand. He also said that the aviation industry gains from a history of minimizing the free space in the aircrafts to a larger extent than the other modal industries²³⁷.

One coordinator⁶⁴ and two shippers⁶⁵ said, that water carriers are considered to be more adaptable to the current market situation, than the railway and the road freight industry, in setting the price²³⁸.

Carriers

Even though many carriers⁶⁶ stress the importance of the qualitative aspects of the service, the vast majority⁶⁷ say that the price is, by far, the most important instrument for winning a tendering process. Some carriers⁶⁸ in the road freight market say that it is extremely hard to raise prices from an unprofitable, low level to a profitable level, because close substitutes often exist to the service offered. According to the carriers, it is, therefore, dangerous to offer a too low price to win a shipper's tendering process. One road freight carrier⁶⁹ said that the road freight industry is known to set low prices, which they unsuccessfully try to raise. Prices depend on several factors. The most frequent ones, as mentioned by road freight- and water carriers, are costs of the movement (partly depending on the characteristics of the goods), the movement's attractiveness (depending on e.g. the characteristics of the goods, the possibility to get return flow, and who the shipper is), the competitive situation, and the profitability requirements.

Carriers of all kinds, as well as coordinators, often offer discounts to "good" customers. Such discounts can, for instance, be based on negotiations or on volume. A customer can be "good" in several different ways, such as, being loyal, having large flows, having double directed flows, etc.

Vertical Analysis

Actors of all types say that coordinators and carriers often suffer from offering a service at too low a price. Two reasons were pointed out in the interviews. Firstly, some shippers⁷⁰ hold that they do not dare to take the risk when the price is "too" low. They, then, doubt that the coordinator or carrier will be able to fulfil the service requirements at the price offered. The shippers⁷¹, then, think that the service supplier will approach them after a short period of time saying that they have to raise the price. Secondly, coordinators and carriers⁷² hold that it is tough

²³⁷ Carriers in the aviation industry (and to some extent the water industry) combine passenger flights with freight flights. This influences their pricing policies. Optimally, they should sell space in these fields until the marginal revenue is the same in them. However, according to one coordinator, many companies in the aviation market now have separated these businesses so that the freight division in the company buys space from the parent company.

²³⁸ One respondent said "*if there is a lack of space, it is possible to charge a higher price*" (In Swedish "*Är det ont om plats på båten, då kan man ta ut ett högre pris.*")

to reach an acceptable level of profitability if you start out with a very low price. Some carriers⁷³, however, stress that it might be profitable on the whole to offer an unprofitable price to a shipper, taking all relations into account. Furthermore, it is stressed that shippers can be valuable as a reference customer making it profitable to offer them a low price.

The interviews show, to some extent, that shippers are gullible. In one interview, the shipper⁷⁴ said that the company received a very attractive price from a carrier⁷⁵. When talking with the carrier the shipper had in mind, the carrier said that he understood, from the shipper's behaviour, that the price was in parity with that of their competitors. The carrier found an incentive for him not to be really honest in his relation with the shipper.

7.2.5. Power

The issues dealt with in this section regard loyalty, dependency, and power. These issues are important for the actors' perceptions of the forms, and levels, of competition in the freight transport industry. Furthermore, the issues can be used as competitive instruments.

The most striking drawback of power, as a term, in interviewing actors, is the unpleasant ring of the word, which reduces the respondents' willingness to say, and/or experience, that power is used. However, many aspects regarding power as a competitive instrument can be found in the interviews. Some representatives clearly say that they have, or would like to have, and exert power.

Horizontal Analysis

Shippers

Many shippers⁷⁶ say that they think that they have some kind of power as buyers. The shippers that order and pay for the service, find this to be important to be able to make demands on the coordinators and carriers. However, shippers that do not pay the service also believe that they have a significant influence on the carrier selection process due to their expertise in the field. The vast majority of the shippers prefer⁷⁷ not to use power (at least the term) in governing the relation. They prefer to view the relation as a partnership. Many of the shippers mentioned above hold that the degree of power is closely related to the number of competitors that the powered company has. Even though many shippers prefer to say that their power is moderate, they stress that they make demands on the coordinators and carriers and their services. From the interviews, it is clear that prior to a cooperative agreement it is possible to use power in telling the bidders what criteria their service have to comply with. Once the coordinator/carriers are selected, many shippers⁷⁸ try to avoid using power, since they feel that power can harm the relation more than helping it. Shippers' power is often to be regarded as coercive power. Shippers can threat service suppliers not to contract them, or to terminate the relationship, if they do not comply with the demands.

As stated above, it is possible to win power by paying for the service. Shippers selling their products ex works, for instance, then, have less power than shippers that have chosen to be the ones paying for the movement. In the sample of cases investigated, some shippers pay for the movement, while others do not. Still other shippers pay for parts of the transports. Two shippers⁷⁹ said that it is becoming more common among shippers to pay for the freight movement, since this lets them tender the service.

Shippers use power in one way in a search, or tendering, process and in another way in an on-going relation. In the former, power is used more aggressively and, in the latter, the shippers often stress the partnership, and say that power seldom is used. There are no significant differences between new and old relations in their use of power. Nor are any significant differences found between how power is perceived and used by different types of shippers (i.e. shippers working in the manufacturing industry, food industry, petroleum industry, clothing industry, etc.) or different forms of coordinators and carriers.

Coordinators

The coordinators seldom, or never, use power, according to some of them⁸⁰. One coordinator clearly states that he wants power and that he uses it⁸¹. Instead, the coordinators stress that their relations are based on trust, commitment, and cooperation. However, they say that the shippers have some power as their customers⁸². The shippers can state the conditions, since they can choose to work with another coordinator or arranging their movements in another way, if the current relation does not work satisfactorily.

Some of the multinational coordinators, with a foreign ownership⁸³, say that they, more often than the shippers, use power²³⁹. The coordinators' power is founded on their network and their contacts. The coordinators have different foundations for powering a relation depending on whom they are powering. Coordinators, like shippers, often base their power, when powering the carriers, on the, more or less clearly stated, threat to withdraw from the collaboration if they are not satisfied with the carriers. Expert power and legitimate power are typical foundations that the coordinators benefit from.

The coordinators seldom state that they have power over the shippers, the reason being that the coordinators monopoly power is limited, since they, often, have good substitutes in other coordinators.

²³⁹ One possible reason might be that they, as coordinators, often are in a position between the buying party, i.e. the shippers, and the performing parties, i.e. the carriers.

Carriers

The vast majority of the carriers⁸⁴, irrespectively of mode, say that they have no or little power. Most of the carriers say that the relation can be described as cooperation, or even a partnership, between the involved parties. Others⁸⁵ state that they find themselves to be in the position of having power, but they, too, point out that the relation has a cooperative base where trust and commitment are important. The power stems from the carrier having some type of monopoly power, based on positive or negative attributes of the carrier and/or the market²⁴⁰. Some of the carriers⁸⁶ say that they have some power, since their service is unique and indispensable to the shipper.

Water freight carriers⁸⁷ often state that the buyer has the power and further, that their possibility to exercise power in the long-term relations is very limited. The road- and rail carriers show a rather united picture of power. They say that their customers, i.e. shippers and coordinators, formally have power, even though they seldom make use of it. Two road carriers, working in the clothing industry⁸⁸, said that they have power, based on their expertise and their experience in the field. The fact that both of them are working in the clothing industry is most likely nothing but a coincidence. Nothing indicates that this foundation of power would be distinctive for the clothing industry's carriers.

Vertical Analysis

The cases show some similarities, but also some differences, regarding the foundations for power, its existence, and use.

First of all, it should be stressed that the similarities between the shippers, coordinators, and carriers viewed as groups are far more obvious than the corresponding intra-channel similarities (including the shippers). Some case studies⁸⁹ show a united picture regarding the concept of power, while others⁹⁰ show the opposite. Furthermore, power manifests itself more clearly when rail and water carriers are involved in the service, than it does when road carriers are involved. Power relations between coordinator – carrier, and carrier – carrier, differ somewhat as compared with relations involving shippers. This depends on the shippers' possibilities to, directly or indirectly, decide what coordinators and carriers should be involved in the freight transport channel.

As described above, few shippers say that they use power to govern a relation. This perception is not fully consistent with the coordinators' and carriers' views. To a large extent, it is a question of how power is defined. Power for the coordinators and carriers is based on the network they work with. One important,

²⁴⁰ The positive attributes of the carriers might be that they simply are the best choice for the shipper for some reason; a negative attribute might be connected to the limited choices that the shipper faces for some reason.

and sometimes the conclusive reason, for a coordinator or carrier to be selected as a partner in a freight transport channel is the relations, contacts, and the network they have. It can be concluded that this network with its contacts is among the most important foundations for power, and it is also one of the most frequently used explanations for the coordinators' and carriers' selection process.

Carriers can use several illegal ways to gain a competitive advantage²⁴¹, especially if they are working in the road freight transport sector. Some of the most commonly used illegal ways to gain a competitive advantage in this sector, according to some actors₉₁, are:

- Driving too many hours and resting too little (doctoring the journals)
- Exceeding speed limits
- Exceeding load limits
- Using low taxed, coloured, diesel

7.2.6. Remarks and Conclusions

To actively use several instruments simultaneously can be difficult and resource demanding. The interviews show that carriers tend to concentrate on one or a few instruments. The market situation and different relations require different uses of these instruments at different spatio-temporal markets²⁴². Many carriers₉₂ stress the importance of listening to the customers' wishes to focus on the most advantageous instrument(s). Generalizing somewhat, some carriers are more likely to use a certain instrument than other carriers. The foundation for these generalizations is to segment according to the mode used. This is a blunt base for segmenting, and, therefore, the generalization is a relatively tough one. The most important competitive instruments for the modal groups are, according to the case studies, the ones described in Table 11 below.

²⁴¹ In the trade journals (mainly for the road segment), these illegal (and disloyal) forms of competition are often discussed (see for instance Svensk Åkeritidning, På Hugget, Transport & Hantering).

²⁴² It is, for instance, easier to raise the price of the service in times of prosperity, while lower quality/service is more accepted by the shippers in times of recession, and, therefore, the price as a competitive instrument tends to be more important at some points in time than at others. It is also important to understand that the customer's preferences change over time depending on the business cycle, his own customers' demands, etc.

Competitive instrument	Road	Rail	Water
Product	X (accessibility)	X (environmental aspects and capacity)	X (capacity and value-adding services)
Place	X		X
Promotion		X	
Price ²⁴³	X	X	X
Power			

Table 11. *The importance of the competitive instruments and the carriers*

Naturally, there are large differences between the carriers' perceptions within these segments. For instance, carriers moving high-value goods often use service and qualitative variables as their most important competitive instruments. Those moving medium-value goods tend to use price and qualitative variables as competitive instruments and, lastly, those moving low-value goods tend to use price as the most important competitive instrument.

Shippers often say that having an effective flow, e.g. with a high degree of utilisation and backhaul cargo, is the coordinators' and carriers' concern. This reveals that the shippers disregard, or do not fully comprehend, their possible gains from a more efficient freight transport system.

As described above, many coordinators and carriers stress that price is the most important and decisive variable for the shippers' selection of service supplier. Therefore, this is regarded to be the most important competitive instrument. The shippers on the other hand, affirm that price, even though it is a very important variable, it is not as important as the service suppliers think. Many shippers stress the importance of qualitative aspects of the service, but they also say that price is decisive given an acceptable level on the other variables. Nobody said that price is unimportant, but, on the other hand, no one said that price is the only important variable. Table 12 below shows the groupings' perceptions about what variable is regarded as the most important one for winning a tendering process.

Focus	Shipper	Coordinator	Carrier
Focal variable	Quality (or, price given that a certain qualitative level is reached), a minority state price.	A combination of quality and price.	Price.

Table 12. *Perceptions of the most important variable in a tendering situation*

Keeping the shippers' opinions about the importance of price in mind, it can be concluded that the carriers and the coordinators often overestimate the

²⁴³ Price/Quantity refers to situations where a high quantity is strived for to be able to use the economies of scale in offering better prices.

importance of price as a competitive instrument to win a contract²⁴⁴. Actors of all kinds say that carriers in the industry use illegal methods to gain a competitive advantage. Some shippers and coordinators⁹³ say that they know that their tough demands make it very hard for the carriers to operate strictly according to the law.

The interviews show that the actors compete using one or many competitive instruments to gain and develop a competitive advantage. They do not, as the neoclassical theory of competition assumes, compete by “sharing” the quantity in the market. Competition is, thus, normally for the market, where firms try to gain a competitive advantage through finding a profitable niche.

The coordinators’ position is special. Coordinators are some kind of middlemen, and for that reason they sometimes are considered to be service suppliers and sometimes demanders. This affects their use of competitive instruments. From the shippers’ perspective, one of the coordinators’ most important instruments is the network of carriers that they work with, in the shipper’s relevant market area. Generally, the larger, more sophisticated, and more far-reaching this network is, *ceteris paribus*, the more beneficial it is for the shipper. When looking at the coordinators from the carriers’ point of view, the opposite, but parallel, situation prevails. The carriers need the coordinator to have far-reaching and extensive contacts with the shippers. The coordinators, thus, depend very much on their network of contacts. The size of the coordinator is related to his network of contacts. Further, a large coordinator is able to offer the shippers better rates and conditions due to economies of scale.

No cases studied work together using the instruments of competition consistently. When the freight transport channel consists of organizationally dependent carriers, or when one carrier’s power over another is considerable, the channel focuses, to a certain degree on the same competitive instruments in trying to win new jobs and/or to expand on the existing jobs. Even though this is rare, it shows that some channels are more “channel aware” than others²⁴⁵.

The Carriers/Coordinators and the Instruments

There are four more or less distinctive groups of competitive instruments that the carriers, and coordinators, frequently mention that they can use in the competitive arena (given the place-variable) viz. (i) price (rate), (ii) qualitative aspects, (iii) service aspects, and (iv) promotion. The second and third groups are, in theoretical discussions, often treated jointly as “quality factors”. The carriers and coordinators, though, quite often separate them. There is a difference in how

²⁴⁴ For further discussion about the coordinator and carrier selection variables and process, see Dimension IV.

²⁴⁵ The concept of channel awareness will be further discussed in Dimension VI.

“personal” and how “general” the respondents apprehend the types to be. The qualitative aspects deal with characteristics of a specific service and are often less personal. Among these, one finds reliability, transport time, risk of damage, freight comfort, frequency, information (normally one-way information), and expansion possibilities. The service aspects involve some personal relation and are seldom specific to the selected movement. The group involves customer service, flexibility, and system of communication (normally two-way information). The service group can be regarded as a subset of the quality group. The actors use these instruments to reach their objectives. The competitive instruments that the firm possesses are used in different ways in different cases. These instruments are, therefore, to be looked upon as the means that the service suppliers can use to reach the objectives set up in their competitive strategies.

The groups of actors make different use of the instruments. This mainly regards the carriers and coordinators, even though shippers also use the instruments. It can be concluded that different types of coordinators and carriers tend to use the instruments in different ways. There are differences between the modal groups, as well as within them. The groups working with price sensitive customers, i.e. customers that have high price elasticity, adjust prices downward easily, while they state that they are more careful with raising prices. Those working with customers having low price sensitivity gain more from using other competitive instruments than the price to attract the customer.

The modes of transportation have mode-specific, characteristics that can give them a competitive advantage over with other modes. For instance, Alfred Marshall described the water carriers main competitive advantage long ago “*A ship's carrying power varies as the cube of her dimensions, while the resistance offered by the water increases only a little faster than the square of her dimensions; so that a large ship requires less coal in proportion to its tonnage than a small one. It also requires less labour, especially that of navigation while to passengers it offers greater safety and comfort, more choice of company and better professional attendance. In short, the small ship has no chance of competing with the large ship between ports which large ships can easily enter, and between which the traffic is sufficient to enable them to fill up quickly*” (Marshall, 1920). The other modes, naturally, have their mode-specific advantages. For aviation, speed is most important. For the road sector, the most striking competitive advantage is flexibility and accessibility. The rail sector, on the other hand, has historically had the capacity as its main competitive advantage, but, at present, environmental friendliness is often mentioned. Besides the modal competitive advantages, the carriers distinguish themselves within their modal group using other competitive instruments.

Power has many faces. It is often considered to be something bad, and, therefore, the actors say that they do not, at least not as a rule, use power in their relations. Many state that they do not have any power. In the same breath, they might say that they feel that their customers have power²⁴⁶ in the relation. Power, thus, is a concept that the actors understand asymmetrically. On the one hand, actors in a position to be able to exert some power, seldom feel that power is used. Rather, they talk about the relations in the channel, and with the shipper, in terms of cooperation, partnership, etc. On the other hand, actors depending on the firm with potential power often apprehend that power is used.

Power can be used in a “hard way” as a direct threat: *“You have to adapt to these conditions or we will not continue working with you as a partner”*. However, it can also be used in a “softer way” not letting the powered party perceive that they are powered. From the case studies, it appears that the power exerting firm often believes that it uses the “soft way”, while the powered part perceived power to be used in the “hard way”. However, both ways often have similar aim and effect on the cooperation and the characteristics of the service. Therefore, it is important for any powering party to make the powered party understand that the use of power is advantageous to both.

The coordinators’ and carriers’ perceptions of the channels’ competitive advantages and disadvantages differ from the shippers’ perceptions of the phenomenon, which can have important effects. Coordinators and carriers sometimes focus on improving what the shipper regards as “wrong” characteristics of the service. These different apprehensions of what to focus on depend mainly on two things, i.e. (i) lack of communication, and (ii) the fact that the coordinators and carriers often have several shippers/customers that seldom agree in their view on which aspects of the service are the most important ones.

7.2.7. Author’s Comment

From the case studies, it can be observed that not even actors’ having some kind of monopoly power think that they have power. The reason for this perception is due to several sources. Firstly, power is, as stated before, a word with an unpleasant ring to it. This is, to my mind, wrong. Power used, but not abused, can benefit all parties. Secondly, if the actors’ find themselves to work in a contestable market, power is of limited use, since potential competitors’ constitute a real threat.

The carriers’ and coordinators’ use of the competitive instruments has to be dynamic. Intermodal competition is, for instance, quite different from intramodal competition. The competitive instruments’ characteristics are, in some cases, fixed and the same for the carriers (i.e. infrastructural conditions in intramodal

²⁴⁶ Even though buyer power is likely to be more frequent, seller power also occurs.

competition), but in other cases flexible. Focusing on the railway industry, for instance, two competitors can, theoretically, be able to compete with variables such as reliability, service, price, and to some degree capacity, but they will most likely benefit less from using arguments like environmental aspects and capacity. In intermodal competition, on the other hand, all of these variables could be used. Competitive instruments that are of limited use in intramodal competition can be very effective in intermodal competition.

Mega-carriers, and others, may work simultaneously with several modes. This complicates the competitive situation. My impression, after talking with the carriers, is that they use different instruments for different customers, and in promoting different modes. Therefore, mega-carriers seem more professional in their use of the competitive instruments than other carriers.

Shippers and coordinators, having alternatives for the movements (not necessarily other transport solutions), often think that they have some power that they can use. This does not necessarily imply that they actually use it. A relation can develop and deepen if power is used, and not misused, which can benefit the actors in the long run. Power can be necessary as a lubricant for a relation and benefit all parties. But, on the other hand, power, carelessly used, can harm the relation. If the shippers hesitate to use power to improve the channel's characteristics, inefficiencies can become permanent.

The positive effects from the carriers using illegal methods to win competitive advantages are few, but they can increase the shippers' competitiveness. This can have positive as well as negative effects, not only for the shipper, but for the region and the country as well, if it makes the shippers' products more attractive. Each and every aspect from illegal competition, and illegal ways to gain competitive advantages, are not easily identified, but there are factors like:

- Higher external costs from, for instance, increased emissions²⁴⁷, increased number of accidents and more serious accidents
- It lowers the moral among the firms in the market
- It distorts the intermodal as well as the intramodal competitive situation
- Governmental financial reasons (reduced revenue from taxation)

As mentioned above, many shippers and coordinators say that it is the carriers' business to find backhauls. This might, to a large extent, be true. However, the shippers would benefit from being more active in this process in several ways. First of all, the prices could be reduced when the backhaul contributes to the fixed costs. Secondly, the shippers would be stronger in their negotiations with

²⁴⁷ Increased speed and/or heavy loads might cause more emissions, but, in some cases, this might reduce the number of trucks used and, therefore, reduce emissions.

coordinators and carriers if they knew whether it is hard to find a backhaul or not. Thirdly, the shippers would become more attractive as shippers if they helped the coordinators and carriers to use the capacity of the load carriers in both directions of the haul.

7.3. Dimension II: Competitive Strategies

In this section, competitive strategies are discussed, following the outline described in Dimension I. A competitive strategy is here viewed as actions taken by the firm to gain competitiveness, attract customers, or to withstand competitive pressure from other firms. Those actions refer to the P-instruments as analysed in the former dimension. As will be made clear in this section, many actors mix the basic P-strategies in formulating their strategy. Therefore, the former should be regarded as building bricks in the firms' strategies.

To talk about the strategies in terms of the P-variables is not always clear. Many subjects could be dealt with under several headings. Mergers and acquisitions (MAs), for instance, can affect the market through any of the five basic strategies. I have chosen to treat the MAs under the product- and place-strategies, but it can be argued that it also belongs under the other headings. Most mergers and acquisitions in the last few years have aimed at broadening the product and/or the geographical market, according to shippers⁹⁴, coordinators⁹⁵, and road freight carriers⁹⁶. Such MAs have been occurring on most levels and in most niches of the freight transport industry. Some carriers and coordinators⁹⁷ indicate that they adopt substrategies to reach their objectives on different markets²⁴⁸. These substrategies complement the overall strategy.

Since focus in the interviews has not been on strategic issues, this dimension will be rather short.

7.3.1. Product

Horizontal Analysis

Shippers and Coordinators

The shippers' and coordinators' opinions about the continuation of MAs in the freight transport sector diverge considerably. Opinions regarding MAs neither cluster according to role (shipper/coordinator), size, nor to the industry in which they are active. However, when using geographical markets as a base, some differences are found. Shippers and coordinators depending on over-seas export market are not as interested in MAs among the service suppliers as those mainly using domestic freight transport markets. Few shippers⁹⁸ are entirely positive or negative to the MAs. Typically, they stress advantages as well as disadvantages. One shipper⁹⁹, positive towards MAs, said "...*the fact that the transport business*

²⁴⁸ Different markets in terms of products and spatial differentiated markets.

*is a fragmented business with many carriers makes it very inefficient*²⁴⁹. Some₁₀₀ say that it reduces competition, while others₁₀₁ are of the opposite opinion. The latter say that MAs increase the competitive pressure on another level, product, or geographical area. Some shippers₁₀₂ and one coordinator₁₀₃ stress that, during the merging process and for a period of time following it, the merging parties are too focused on their internal problems, forgetting about their customers' needs, wishes, and requirements.

One shipper₁₀₄ said that the tradition of conferences in the deep-sea shipping industry makes such close forms of cooperation more acceptable there than in other industries. Therefore, he said, he supports companies breaking free from these conferences in "independent actions". Another shipper₁₀₅ said that the shipping market officially is deregulated, but he viewed this as a product of the drawing board. The respondent was of the opinion that companies in the deep-sea transport market discuss their supply with each other, which hampers the rates to be set in a more favourable way for the shippers. A third shipper₁₀₆ said that deep-sea conferences affect them negatively, since he, as a small shipper, has little customer-based power. He also said that he, on the other hand, benefits from the conferences, since the service might have been withdrawn otherwise. It is, thus, a problem of balancing, he continued to say. Without any cooperation, the service could be withdrawn, but the cooperation will raise the rates.

One coordinator₁₀₇ said that the conferences in the deep-sea sector are official, and everybody knows that they exist, but people seldom know what the conferences do. Coordinators₁₀₈ and one shipper₁₀₉ think that there are both advantages and disadvantages to the conferences in the shipping industry. They say that this structure puts an upwards pressure on prices and rates, but at the same time, it might assure a supply-level that could not be offered if the firms did not cooperate. One coordinator₁₁₀ draws a parallel to the aviation market, saying that no such marked conference exists, but the carriers tend to behave similarly regarding e.g. rate-changes. Another coordinator₁₁₁ points out that the conferences typically stay effective until one of the members' breaks free, lowering the rates to increase volumes. Conferences exist in the shipping sector, according to the coordinators and the water carriers, for capacity utilization, and for the possibility of higher profits. One coordinator₁₁₂ says that the aviation sector differs, since the aircrafts are filled anyway, and, therefore, the carriers do not have to cooperate for capacity utilization reasons.

Two shippers₁₁₃ held that harbours work in some kind of conference, since the price differences between nearby harbours are minor. Other shippers₁₁₄ were of a different opinion, stating that there are significant price differences.

²⁴⁹ "...att det är en fragmenterad transportbransch med många aktörer gör att den blir väldigt ineffektiv".

One shipper¹¹⁵ suspects that the road freight market, to some extent, is split up between the large (mega)-carriers. Carriers that he thought it would be natural to be approached by had not contacted his company. He also said that deep-sea carriers approached him far more frequently than domestic road freight carriers.

Many coordinators¹¹⁶ say that they try to increase their volumes by trying to attract new customers and expanding on their cooperation with old customers. Increased volumes help them to put pressure on the carriers to lower their prices. One coordinator¹¹⁷ said that there is a risk that when the carriers merge, they can take on the role as coordinators themselves. Two coordinators¹¹⁸ said that their strategy was to grow organically, but many of their competitors¹¹⁹ grow through MAs. One respondent¹²⁰ said that if the small firms are not willing to join the larger ones, the financial strength of the large ones makes it possible to cross-subsidise the route, setting very low prices, until the small carriers have become weak or went bankrupt²⁵⁰.

Carriers

Carriers' strategies often focus on the product- and/or geographical space. Such a strategy is used together with striving to be more cost efficient than the competitors. This is supposed to improve profits and/or to lead to gaining market shares.

A Danish carrier¹²¹ said that many carriers spend much time and effort informing themselves about competitors and their actions. Instead, he said, they ought to focus on what they are doing themselves!

The opinions among the carriers about the MAs in the last 10-15 years differ significantly. One water freight carrier¹²² said that mergers in the shipping sector are expected to become more frequent in the future. Furthermore, he said, the shipping sector, in this respect, lags a few years behind the road sector. This depends, according to him, on more money being involved in the mergers in the shipping industry. Some carriers¹²³, not involved in the MAs, think that the MAs benefit them, since the merging companies then have internal problems to struggle with. One road freight carrier¹²⁴ said that when the companies merge, they deliver a poor service and, therefore, they do not make any profit. Some carriers said that acquisitions where large (group of) firms buy, or reach an agreement with, small niche-firms are hard to counteract. Small firms are attracted by the security offered by the large group.

²⁵⁰ Author's comment: This might, however, violate the law governing competition and restrictive practices.

One water freight carrier₁₂₅ said that he had not been able to get a relevant answer to the question whether a conference is a cartel or not. None of the road freight carriers say that there are cartels in the road freight industry. However, others think that the market outcome, in road freight as well as in the shipping segment) is rather close to what it would have been if there was a cartel₁₂₆. They state that large carriers dictate the terms for the market, and carriers tend to follow each other closely regarding prices and conditions.

Many road freight carriers₁₂₇ and one shipper₁₂₈ fear that MAs among their competitors affect them negatively in the long run. This is well in line with the shippers' apprehension discussed above. As stated above, in the short run, though, many carriers and coordinators say that they benefit from the competitors being involved in such processes. The reason is that the companies involved face many problems in such MAs. They say that when the companies have merged, uncertainty, schisms, and departmentalisation of responsibilities arise. Two carriers₁₂₉ say, like the shippers and the coordinator mentioned above, that this period is characterized by a fear of making important decisions, since a bad decision influences the possibility of keeping the position/title in the "new" company. During this time of internal focus (regarding personnel politics, merging the data systems, etc.), the competitors have an opportunity to gain customers at the expense of the merging companies. Several respondents stress that merging companies have such a strong internal focus that they forget about the customers and their needs. This period, when the merging process is going on, is, thus, characterised by unwillingness to make decisions.

Vertical Analysis

Few coordinators and carriers see a possibility in taking on a more responsible/extensive role in the freight transport channel. None of the freight transport channels has a strategy for deepening channel cooperation, expanding its role from a product perspective. The participants in the channels seem to focus on aspects of their service and develop the attributes that they already are good at, i.e. the attributes in which they have their competitive advantage, rather than looking for the channel's flaws and focus on improving them. The channel participants' channel awareness in this sense is, thus, typically low.

7.3.2. Place

MAs leave room for niche-carriers. Will there be more MAs? The opinions differ. Many actors think that a continuation can be expected₁₃₀, while others₁₃₁ say that there are no more large mergers to be expected, since all the important ones have already been carried through. The latter group focuses on the large carriers on the road freight market.

Horizontal Analysis

Shippers

Some shippers¹³² say that when focusing on a small part of a freight transport system, as a freight transport channel often constitute, the consequences of MAs are often bad for the shippers, while there are benefits from MAs if you are taking on a more holistic perspective.

Coordinators

Most coordinators' services are adaptable regarding the place-variable. Some coordinators¹³³ say that they should “*work on each and every market where their service is demanded*”. The carriers that they work with give the geographical limits. Some coordinators¹³⁴ stress that they have to be careful working with new customers and areas, since the “80-20-rule” is valid in their businesses i.e. 80 per cent of their turnover comes from 20 per cent of the customers. This, they pointed out, makes their business vulnerable, and, therefore, they try to spread the risk. This is achieved by working on several product- as well as geographical markets. Other coordinators¹³⁵ stressed a different opinion regarding the relative importance of different customers. They held that large customers are not perceived as more important than small ones, but they provide a stable base for the coordinator. One representative of the former opinion¹³⁶ held that “*large customers are always more important than small ones – this is so even though this could never be admitted to the customer!*”²⁵¹

To enter the Swedish market, many global forwarding agents bought an existing business, according to one coordinator¹³⁷. He continued by stating that using this approach to enter a market is perceived to have advantages as well as disadvantages for the coordinator. According to one coordinator and one carrier¹³⁸, it is, as discussed above, less common to grow organically than through mergers or acquisitions, because (i) few people enter the market and (ii) it is more efficient to recruit staff from competing companies, since they often bring along some of their customers. One respondent¹³⁹ said that MAs is a risky form of expansion in the long run, since the “new” company must cover the cost for the take-over.

Carriers

The majority of the carriers¹⁴⁰ do not actively strive to get customers that are affected differently by the business cycles²⁵² and other sources affecting demand.

²⁵¹ “...större kunder är alltid viktigare än små - visst är det så även om man aldrig erkänner det inför kunden!”.

²⁵² Theoretically, it would be wise to have such a customer portfolio. This would even out demand fluctuations. However, there are also drawbacks of such a portfolio – many carriers are

One carrier and one coordinator₁₄₁ said that they tried to get customers with low-density goods, to complement the customers having high-density goods. Thereby, they would be able to use the load space better in the carrier.

Railway and water carriers are, for natural reasons, less flexible in the geographical perspective than the road freight carriers. Respondents from every mode say that they are loyal toward the geographical market in which they are offering their services. For them to change, or expand their business, to another geographical market, they need strong indications regarding the market, the conditions, and the profitability in the market. It can, thus, be concluded that the competitive situation, in the freight transport market, is characterised by low flexibility from a geographical and product perspective. This is due to the carriers' hesitation to start up "new" services.

One road freight carrier₁₄₂ said that the best way to expand and take on more jobs is to "*dig where you are!*"²⁵³ He, thus, agrees to a marketing strategy discussed by, among others, I. H. Ansoff, in holding that the carrier needs to focus on the existing customers. This can be an overall strategy and it could be developed and put into practice focusing on developing a refined price-, place-, product-, promotion, and/or power strategy.

7.3.3. Promotion

Horizontal Analysis

Coordinators

Many coordinators₁₄₃ promote themselves by the network of carriers that they work with, since this, as one coordinator puts it, "*constitutes their product*". The network of carriers that the coordinator has is important to the shippers when selecting a coordinator. The customer base that the coordinator works with is, on the other hand, one of the main reasons for the carriers to work with the coordinator. Thus, in the coordinators' promotional activities facing the carriers, they focus on the shippers they have as customers, and in their promotional activities facing the shippers, they focus on the carriers they have as partners.

One coordinator₁₄₄, with a foreign owner, considered the foreign ownership to be a drawback regarding promotional activities.

Carriers

The carriers taking part in the study do not have any specific division, or person, responsible for competitor control. Some carriers₁₄₅ said that it would be a good

specialised on one type of product, or on a specific geographical region, which, in most cases, can hardly be combined with the wish to have a stable demand.

²⁵³ "...gräv där du står!"

idea to have such a division/person that they could report to, and receive information from, regarding competitors. One carrier¹⁴⁶ stated that, since his company lacks such a function, much information is lost, and other is exaggerated. He went on to say that large carriers would benefit most from having such a function, since the information processing most likely is complicated in these organisations. He said that information in such organisations, intentionally or not, is filtered and/or amplified.

SJ's marketing of their main freight service under the concept "Green Cargo©" was, according to one carrier¹⁴⁷, a good example of an intensified marketing of an "old" product. The service offered was not significantly different from what they had already been offering for a considerable time, but now the environmental issue was, according to the carrier, the "in-thing". SJ took advantage of the interest in environmental issues, altered their strategy, and pointed out these aspects in their service.

7.3.4. Price

Horizontal Analysis

Pricing strategies have not, explicitly, been discussed in the interviews and, therefore, this section is short. Furthermore, some aspects relating to pricing and costing are discussed in the other sections on strategy.

Coordinators and Carriers

Few carriers¹⁴⁸ say that when they, for some reason, face better conditions, they let their customers benefit from this through lower prices or better conditions. Those¹⁴⁹ supporting the view of passing the "good conditions" say that they benefit from such behaviour in the long run, since it creates confidence. Those not letting the customers benefit from the changed conditions emphasize that this is their chance to make a profit. There are no clear differences between the modes in this respect.

The carriers, directly or indirectly, report low average profits in the industry. Therefore, it is not possible to make too large price cuts, according to some road freight carriers¹⁵⁰.

Well functioning large carriers are a threat to the minor, often more specialised, carriers, since they are able to subsidise a relation, which they believe will be profitable to the company in the long run, for a period of time. This causes problems for small companies with less financial strength. As discussed above, some respondents reported on the financially stronger carriers being able to use cross-subsidising of relations to affect the competitive situation, and the MAs, in the market.

7.3.5. Power

Service suppliers can, at least partially, use power as a strategy to become successful. A competitive advantage gives the carrier/coordinator some power. Its strength, and usefulness depend, among other things, on the actors' perceptions' of the market structure and the competitive pressure on the market. Creating a situation that gives the actor some power is what most strategies are all about.

Power is closely related to the other P-variables discussed in this chapter. The discussion of MAs in the place-variable above, results in, and from, considerations of power.

Horizontal Analysis

A few actors state that they see themselves as having power. Those having power say that it is futile, or very difficult to use power as a step in their strategy. Very few say that they have a strategy aiming at creating a powering situation.

The empirical material shows that the perception of powers differs among the actors. It is far more common for the powered actor to say that power is used than for the powering actor. Power, it is stressed by some actors, is not connected with the role of the actor, i.e. if he is a shipper, coordinator, or a carrier, but rather with how attractive the firm and its products/services are on the market. It is often hard, for the actor as well as an observer, to tell when power is used and when not. This is one probable reason for so few actors speaking about using power as a competitive instrument or using power in their strategy.

Coordinators and Carriers

One carrier said that it is hard to tell, for the powering party, if an action taken by another channel participant is due to power or their own willingness to change the situation. When, for example, a large coordinator tells the carrier in the freight transport channel what to do, the coordinator regards the situation as exercise of power. On the other hand, if the coordinator asks the carrier to do the same thing, motivating it, the coordinator finds the situation to be one where power is not exercised (the carrier is often of a different opinion). The powering and the powered part, thus, view a situation differently when power is used indirectly as compared with a situation where it is used directly. It is, thus, likely that the powering party seldom finds power to be a strategy used, while the powered party takes the opposite view.

7.3.6. Remarks and Conclusions

Freight transport supply has a low degree of adaptability regarding the geographical and the product market perspectives. Many actors, with representatives from the supply as well as the demand-side¹⁵¹, bear witness to

this. The carriers¹⁵² stressed the risk associated with expanding, or shifting, their market focus, since it is resource demanding to take such measures.

The channel participants rarely adapt a common competitive strategy for the channel. It was only mentioned in one interview¹⁵³ that the company was working according to a common channel specific strategy. The channel awareness is further developed in section 7.7.4.

The P-variables are of diverging importance for the actors' strategy formulation. Generalizing somewhat, it happens that shippers, coordinators, and carriers are likely to focus on different Ps in their practical strategic work, see Table 13 below.

Competitive Strategy	Shipper	Coordinator	Carriers
Product	X (accessibility)	X	X
Place	X	X	X
Promotion			(X)
Price²⁵⁴		X	X
Power	X		
	It is very rare for the channel to have a channel-strategy that the parties follow jointly.		

Table 13. The P-variables' importance for strategy formulation

Based on the case studies, it can be concluded that, even though the differences within the broadly defined modal groups are large, the carriers, in general, follow strategies more or less consciously, see Table 14 below.

Competitive strategy	Road	Rail	Water
Product	X (regarding service, not quality)	X (regarding service and quality)	X (regarding quality, not service)
Place	X		
Promotion		X	
Price	X		X
Power		X	

Table 14. The P-variables' importance for carriers' strategy formulation

As can be seen from the table, the railway industry differs from the other modes in two respects. It uses promotion and power to some extent in its practical competitive strategy. Promotion is used to stress the environmental aspects²⁵⁵. The railway is able to use power in subcontracting road freight carriers.

²⁵⁴ Price/Quantity refers to situations where a high quantity is strived for to be able to use the economies of scale in offering better prices.

²⁵⁵ Many road freight carriers also use promotion in their strategic work. However, in general, they cannot be said to do so.

The road freight carriers are, in general, vague in describing their view of the role of the management. However, the general opinion is that they should make sure that the business “is successful”. Many carriers¹⁵⁴ say that they think that it is the management’s role to develop and implement a strategy. The strategy should be used as a guideline for the firm to become successful. However, other carriers describe the management’s role differently. Shippers, coordinators, as well as carriers pointed out the expansion of the market and motivation of the employees (an internal strategy) as the most important aspect. One carrier¹⁵⁵ said that the management’s role is “*not to assume more jobs than they can handle*”. Some respondents¹⁵⁶ that are not part of the top management are not sure about the strategy of the firm and the management’s role. One carrier¹⁵⁷ said “*The management for [company name] is often a mystery to me*”²⁵⁶ The rail segments’ respondents say that the most important role of their managements is to develop the service, and to make correct investments aiming at improving profitability.

The coordinators’ perspective on the role of the management differs somewhat from the carriers’. The most striking difference is that they regard the economic success of their firm as more important. The carriers’ respondents have a more genuine interest in the modes of transport, while the coordinators’ respondents are more interested in businesses in general. One carrier¹⁵⁸ mentioned that the coordinators’ employees seem less loyal to their firms. The coordinators can, thus, be said to have more strategic demands on management than the carriers do. The coordinators believe that the management should lead them into the future, and put up strategies that the firm and the employees can follow.

7.3.7. Author’s Comment

Many carriers say that they rely, almost exclusively, on costs when setting prices. Other factor groups important in price setting²⁵⁷ do not get the necessary attention. According to basic economic theory, costs, normally, constitute the lowest possible prices for a firm to be able to stay in business, but when the other groups permit, higher prices could be set. The other factor groups might, however, occasionally make it possible to set a price below the “floor” e.g. to win a contract, or to keep an important customer.

Several actors say that the railways suffer from a competitive disadvantage in not handling break bulk. I believe that this can have a detrimental effect on the railway. Shippers having both break bulk and ordinary bulk goods might not

²⁵⁶ "*Ledningen för [företagsnamn] är för min del en gåta många gånger!*"

²⁵⁷ According to theoretical findings about pricing in freight transport, see, for instance, Coyle, Bardi, and Novack (1999), the price-decision and the price strategy should be based on three areas, viz. customers, competition, and costs. Even though these areas separately as well as in combination influence the pricing strategy, they are often treated separately.

contract the railway for bulk goods due to the fact that they cannot move the break bulk. This does not imply that railways need to handle break bulk, but it is necessary to take such indirect effects into account when making the decision not to handle it.

Coordinators and carriers often focus on developing their strengths, instead of improving on their weaknesses. This can be risky for the individual firm, and, therefore, they must keep a “high lowest level” for every important characteristic of the service.

7.4. Dimension III: Efficiency Improvements

Improvements in competitive behaviour and operational effectiveness, graphically, move the firms’ productivity frontier from the origin of the coordinates. Such improvements originate in many sources, such as the actor’s competitive instruments, competitive strategy, technological developments, and/or altered laws and regulations.

7.4.1. Indirect and Direct Improvements

Direct improvements are improvements that are service specific. Most actors have several services, and, therefore, their answers seldom regard service specific improvements. Improvements are often of a general character. Indirect improvements affect several services. Direct improvements are, thus, partly a subset of indirect improvements.

Horizontal Analysis

One of the most frequently mentioned indirect improvement areas, for all types of actors, deals with infrastructural issues. Most comments regarding infrastructure were not answers to a direct research question. Actors depending, in one way or the other, on the shipping and the railway are the most active ones in commenting on the infrastructural conditions¹⁵⁹. The respondents’ perceptions regarding the harbours’ role and how they behave in competitive aspects diverge significantly.

Shippers

Two shippers using water carriers¹⁶⁰ say that harbours, situated geographically close to each other, cooperate in setting the rates and terms, and the differences between regions in Sweden are perceived to be large. Another shipper¹⁶¹ held that “neighbouring” harbours compete. He believes that this is the reason why the rates and terms are similar. The shipper further held that the harbours differ extensively regarding their focus and the type of ships they can accommodate²⁵⁸, and, therefore, the harbours seldom compete actively to attract the shippers and the water freight carriers.

²⁵⁸ Some harbours cannot handle water carriers exceeding a certain size. Some harbours are specialised in a certain type of cargo, etc.

Some shippers¹⁶² thought that discarding parts that add little value would directly improve the channels' performance. Such parts were, according to the respondents, often kept for traditional/sentimental reasons. These parts could, for instance, be reloading points, warehouses, or collecting processes.

Several shippers held that the incentive to improve the freight transport solutions is often weak. Among the reasons for this were that (i) the freight transport costs represent a small share of the products end cost, (ii) the costs can easily be passed on the buyers, (iii) the fear to receive a less good service, if another party is involved (iv) the fear to cooperate with other (competing) companies. Further, the focus on freight transports varies among industries, according to one shipper¹⁶³. He stated, "...the food industry lags a few years behind the automobile and the manufacturing industries for instance, regarding logistics and such things"²⁵⁹.

Carriers

Carriers seldom stress any direct measures that could improve the channel's performance. The most common efficiency improving measure mentioned by the carriers is to further develop their strengths¹⁶⁴. Few carriers¹⁶⁵ thought that they could improve their efficiency by improving on their weaknesses.

Vertical Analysis

One shipper¹⁶⁶ said that he was not sure whether he was working with the right/best coordinators and carriers or not. Two shippers¹⁶⁷ pointed out the importance of not only trying to optimise the basic freight transport channel, but also thinking carefully about the conditions for the channel. One shipper¹⁶⁸ said that it is of little interest to try hard to optimise the channel if the production occurs in the wrong area. Another shipper¹⁶⁹ held that focus too often is only on the origin of the channel. He said that it would often be more efficient to concentrate on the destination, and the characteristics of that area regarding, for instance, goods gathering.

7.4.2. Efficiency Improvements

Horizontal Analysis

Shippers

Three shippers¹⁷⁰ are, or plan to be, involved in the freight transport market as carriers to a significant extent. Few shippers have opinions regarding entry barriers to the carriers' market. IKEA was a pioneer in using the deregulated railway sector when starting to operate the market as a carrier called IKEA

²⁵⁹ "...livsmedelsindustrin ligger ett antal år efter t ex bilindustrin och verkstadsindustrin när det gäller logistik och de bitarna".

Rail²⁶⁰. One shipper₁₇₁ reported on IKEA Rail running into major economic, as well as administrative barriers and problems in starting the railway business. Another shipper₁₇₂ held that the language barrier was more difficult than they had expected when starting to deliver goods to the Finnish market.

Shippers that are not using the railway in the channel investigated often think that the rail movements work poorly₁₇₃. If the quality was better, some of them stress that they would, as put by a shipper, “*be more than happy*” to use the railway. Reliability is the railway’s largest problem, according to many of them. Regarding water carriers, one shipper₁₇₄ said that “*shipping companies have increased their efficiency on water, but they have not improved their efficiency on land [i.e. harbours]*”²⁶¹ over the last few years.

Some shippers₁₇₅ call for intensified goods gathering, as a way to improve the freight transports. This could, according to some of them, be achieved if the service suppliers tried harder to get loads in both directions. However, as reported above, the shippers’ willingness to help them to find backhauls is limited.

Some of the most frequently mentioned areas of improvement pointed out by the shippers are to:

- Improve consolidation and capacity utilisation
- Use a more efficient route-schedule
- Use communications and IT-services in a better way
- Alter the freight transport channel (e.g. regarding administrative matters and warehousing)

Some shippers₁₇₆ hold that they must gain from an efficiency improvement and not only the coordinators and carriers. As one shipper₁₇₇ in the food industry puts it, “[*company name*] is mostly interested in money that goes into our pockets and not in what goes into our customers’ pockets”²⁶².

Coordinators

Some coordinators₁₇₈ stress that they find possible improvements in moving larger volumes. Larger volumes, they stress, would improve their negotiating power. Further, they stress that they could expand their role in the freight transport channel. Such an expanded role would incorporate more responsibility, like being responsible for functions such as selecting modes and carriers to be used, warehousing, or administrative issues. One coordinator₁₇₉ stresses the

²⁶⁰ At the time of the interview, the service had not started yet.

²⁶¹ The original statement was: “...rederierna har blivit mer effektiva på vattnet men de har fan inte blivit mer effektiva på land”.

²⁶² “...[företagsnamn] är ju mest intresserade av de pengar som kommer i vår ficka och inte de som kommer i kundens ficka”.

importance of educating the employees in relevant fields (such as languages, and business administration) as a necessary step to improve the coordinator's service.

Three coordinators¹⁸⁰ find their segment to be characterised by low economic barriers. The reason is that they do not need to own any expensive resources themselves. Rather, they point out, it is important to have the "right" contacts in the business to be able to start a successfully competing business to the existing coordinators. Therefore, the entry barriers²⁶³ to the market are "soft", such as experience, and contacts with shippers and carriers.

Carriers

Carriers, as a group, differ from shippers and coordinators regarding the possible improvement areas. They are less visionary and more secretive about their potential and their ideas of how to improve services. They typically stress possible improvements to be made in the conditions of the service. These could render their service more efficient and they refer to, for instance, infrastructure and political conditions.

The entry barriers to the market are perceived to be high in the railway and shipping sectors, while the road freight sector is characterised by low barriers, according to the carriers. The barriers discussed are mainly of an economic nature.

Rail Freight Industry

Railway advocates¹⁸¹ point out the economic barriers, but they¹⁸² also mention barriers in the form of knowledge, education, and security demands made by the authorities. The railway suffers more than other modes from its history, according to one rail freight carrier¹⁸³. Shippers, as well as coordinators and carriers, bring up the past to a larger extent when talking about the railway than any other mode. Two respondents from the rail freight industry¹⁸⁴ perceived this as a barrier.

Carriers in the railway market are less open-hearted when talking about their potential improvements, general as well as case specific, than the other modal representatives. The railway respondents¹⁸⁵, however, stress that they need to improve on quality and punctuality. One respondent¹⁸⁶ brought up a visionary thought of a geographical expansion. All railway representatives¹⁸⁷, however, were convinced that they would continue to be loyal to their product- and geographical market.

²⁶³ Bain (1956), identified four "natural" entry barriers to a market, viz. absolute cost advantages of incumbent firms, economies of scale, product differentiation advantages, and capital requirements to set up a firm of a competitive size.

Road Freight Industry

Carriers in the road sector are, as compared with the other types of carriers, more open when talking about their view of future development. Road freight carriers face lower economic barriers than the other modes, according to the carriers¹⁸⁸. Others, however, stress that the barriers can be quite high in this sector as well¹⁸⁹. Further, it is pointed out that it depends on the potential entrants' ambitions. Entry barriers to the mixed cargo market are, according to three carriers¹⁹⁰, much higher than the barriers to other road freight markets, since that market makes great demands on having a large network of carriers. The carriers stress that the barriers are regarded as lower for an incumbent person, and especially if he possesses a unique key competence. An incumbent person can break free and start a competing business as specialist. He can take parts of the customer base with him to his new company, according to several carriers and coordinators.

The road freight carriers are more heterogeneous regarding their view on the potential to improve on their success than the railway representatives. The carriers focus on expanding their geographical markets, to move other types of goods, or to make technical improvements to attract customers. Widening the customer base in any of these ways mainly benefits the carrier, but there are also benefits for the customers from such an expansion. Some carriers¹⁹¹ say that using existing techniques to a higher degree is one way to improve the service. Another way to improve the service's efficiency is through offering a more developed service like the use of key account management, which is mentioned by one carrier and one shipper¹⁹². Other ways mentioned are to offer warehouse services, improve the information, etc. Some carriers¹⁹³ also discuss reducing the environmental influence as an area where they can improve their service. This could, according to the carriers, be reached through e.g. more efficiently planned routes, increased utilization of load space, or technological improvements made by truck manufacturers. Some carriers¹⁹⁴ are uncertain whether they do the right thing at the right time. Such uncertainty is more frequent among small carriers, working with few customers, than among large carriers.

Water Freight Industry

Respondents¹⁹⁵ from the water freight industry point out high investments as the most important barrier. They stressed four, partly overlapping, areas where efficiency measures could improve their services. First of all, they stress technological improvements¹⁹⁶. Secondly, they stress that their administration could be rendered more efficient¹⁹⁷. Thirdly, the capital, i.e. vessels, etc., could be used more efficiently by e.g. minimising the period that the ships lie idle and taking other measures to increase the ports' efficiency¹⁹⁸. Lastly, they state that new ships could help them to offer a more efficient service¹⁹⁹.

Vertical Analysis

Some shippers, coordinators, and carriers²⁰⁰ point out possible improvement areas in the intrachannel information (including the shipper), like e.g. an increased use of EDI among the participants. This, a respondent in the water carrying industry²⁰¹ stressed, could decrease administrative costs. Some of the large carriers²⁰² and coordinators interviewed say that an efficient EDI-system is advantageous to all parties. The advantages could be derived from cheaper and higher quality of the information. One carrier²⁰³ said that a large quantity of information might be a disadvantage to his company. Many actors already use EDI to increase competitiveness by connecting the customers to the company. One respondent²⁰⁴ said that his company's use of EDI was very limited at the point of the interview, but the trend was towards using it more frequently. Shippers stress the positive aspects of the EDI system less frequently than coordinators and carriers.

Neither shippers nor coordinators or carriers give any deeper thought to the question of whether they work with the right partners or not. From the shippers' perspective, one of the reasons might be that many respondents have been working in their position for a number of years and they have made the decision to use the current channel participants.

Most channels are "slimmed" in the sense that every part of the channel and its surrounding functions are optimised to provide an acceptable service/cost-ratio. However, some case studies²⁰⁵ show irrationalities in the channels. The shippers and service suppliers were often well aware of these irrationalities. Among such inefficiencies, one finds that shippers contract service suppliers and warehouses for historical, traditional, or sentimental reasons. The actors that find such irrationalities in "their" channels represent the food industry²⁶⁴. These irrational parts are perceived to be unnecessary functions in the channel adding no or little value.

7.4.3. Information

Horizontal Analysis

All types of actors²⁰⁶ stress the importance of interpreting information with caution, since it often is exaggerated²⁶⁵. Some stress that some information, deliberately or not, is false. Furthermore, actors of all types bear witness to extensive "gossip" in the freight transport industry. The gossip contains information that, even though it is regarded as very important and one of the main

²⁶⁴ The material is too limited for me to be able to draw any general conclusions from it, but it calls for an intense study to see if the food industry is less efficient than other industries.

²⁶⁵ One respondent said that competitors were surprised to find him alive, since rumours said he was not.

ways to receive important information about the industry has to be treated with scepticism and caution, according to the interviewees. This information could be divided into two groups. The first group is what one respondent²⁰⁷ called “the buzz in the market”, and the second group is the direct, often personal, information. Many say that the latter form of information is more valuable than the former. Other sources of information mentioned by the respondents are annual reports, trade journals, old directories, registers for business-to-business information, newsletters/e-mails, etc. Those receiving e-mail newsletters²⁰⁸ regard this as high quality information. The respondents do not view those newsletters as advertisements in the same way as they do with brochures, etc. The opinions differ widely among the respondents regarding their view of the Internet as a source of information. Some actors²⁰⁹ hold that it is a very good way to receive high-quality information, while others²¹⁰ doubt that there is useful information on the Internet for them. The former opinion is more common among “young” respondents, while many “senior” respondents are of the latter opinion.

Shippers

Many shippers²¹¹ say that they are uncertain about whether the quality and the quantity of the information they give to the coordinators and carriers are in accordance with the needs. Shippers working in the same company group seldom share information²¹². However, divisions in the same company help each other by sharing information²¹³.

Coordinators and Carriers

Small coordinators and carriers report that they find themselves more well-informed than the larger ones. Carriers or coordinators of all sizes point out the personal network of contacts as their largest and most important source of information. Many say that there are many rumours in the industry. One coordinator²¹⁴ said, “... *it is kind of a duck-pond*”²⁶⁶. Some said that the quality of such information often is low. The reasons for the many rumours are, according to the coordinators and carriers, the limited scope of the industry and that many actors in the market know each other. Some say that they lack information about the competitors’ view of the focal firm’s strengths. Information about prices, etc. is also received indirectly through shippers, carriers, etc. The coordinators²¹⁵ say that they give much information to their customers, information, which they say is not distorted in any way.

Few carriers regard information as expensive²¹⁶. Some feel that it is time consuming to stay informed, while others are of a different opinion. Furthermore, few carriers²¹⁷ perceive the information as hard to get, even though, some of them²¹⁸ have persons employed who mainly work with information (!).

²⁶⁶ “...*det är lite av en ankdamn*”.

Some carriers²¹⁹ stress that they would benefit greatly from more, and better, “forecasts” regarding the shippers’ and coordinators’ needs. The interviews show that small coordinators and carriers demand less general as well as specific information than the larger ones.

Road Freight Industry

Many road freight carriers consider themselves to be well-informed. Others hold that the information could be better, mainly regarding quality, but to some extent quantity as well²²⁰. The most frequently mentioned source of information is, however, the respondents’ personal contacts²²¹. Such contacts are colleagues/competitors working in road carrying companies, but carriers in other modes and to some extent shippers and coordinators as well serve as informants from time to time. Furthermore, persons involved in operations can provide the carriers with important information. Some carriers²²² state that they receive information by observing competitors in places where they should not be.

One carrier²²³ pointed out that his company receives different types of information from diverging sources. The information from the truck drivers is on a “low” level, while information on a “high” level can be received from different trade journals.

One problem mentioned by two carriers²²⁴ is that information containing “bad” news often is given too late. Such information might regard delays in shipments, etc. Information at an early stage would make it possible to be pro-active, i.e. to plan their business and to take measures at an early stage to minimise the problems of the “bad” news. Two informants²²⁵ pointed out that it is necessary to have an instinctive feeling for what information to hand out to actual and potential customers, interest groups, competitors, personal contacts, etc.

Rail Freight Industry

Railway carriers seem less interested in having better information than carriers in other segments. The information that the railway carriers’ receive is internal to a large extent²²⁶. Since the railway companies are few, and the intramodal competition is limited, the railway carriers feel that they do not need to inform the market about their existence²²⁷.

Water Freight Industry

Respondents from²²⁸ the water carrier segment point out the personal relations and contacts as the most important ways to receive trustworthy information that still has some news value. Information in papers and trade journals is considered to be old. One water carrier²²⁹ states that information about competitors is received in a roundabout way. He said that when the shipper has completed a tendering process he often leaves some information about the other bidding

parties. The respondent did neither consider the trustworthiness of this information, nor had he reflected on the possibility that the shipper might have motives giving biased information.

Vertical Analysis

Information is seldom explicitly discussed in the cases. Some respondents’ held that the reason is that they are afraid to leave too much information to the channels members, since these members might be competitors in other relations. This results from the channels’ limitations in time as well as in space. Another reason for not sharing information in a vertical manner to a larger extent is that few channel participants demand such information.

In Table 15 below, some important aspects regarding the actors’ perception of the sources and quantity/quality of information are highlighted. The analysis shows diverging perceptions among large and small carriers, and, therefore, these are separated.

Information	Shipper	Coordinator	Small Carrier	Large Carrier
Main sources of information	Personal contacts, printed information	Personal contacts, printed information	Personal contacts, observation	Personal contacts
Quality/Quantity	Mostly satisfactory	Varying	Satisfactory	Not satisfactory quality
Vertical	The most essential information for making the channel work satisfactorily is shared. Little information is shared aiming at developing cooperation. Information regarding channel activities is good most of the time, but sometimes the information is late.			

Table 15. The actors’ view on information

7.4.4. Political Conditions

Shippers

None of the shippers expects any major changes in the rules of the game and politically controlled conditions for the freight transport industry in the near future. Some²³⁰ hold that it, for many years, has been “politically correct” to express a wish to improve the competitiveness of the railway, but nothing has really happened.

One shipper²³¹ called for an increased political/state intervention in form of a stricter control of the shipping industry. He was of the opinion that the inspections carried out by the insurance companies and, principally, the inspection carried out by the National Maritime Administration is inadequate. This, he said, implies that shippers must carry out the controls, since they suffer if something goes wrong.

Coordinators and Carriers

The conditions the actors work and live under given by the politicians are intensely discussed among the carriers. The most frequently discussed demand on the politicians, among carriers in general and road freight carriers in particular, is their wish for conditions that are neutral from a competitive point of view²³². These demands regard intermodal competition, but also intramodal competition from an international point of view. The carriers emphasized several areas that should be considered in order for the conditions to be neutral. Among these are the infrastructure (regarding the quality and financing thereof), the laws and rules that the carriers must follow, taxation, etc.

One shipping representative²³³ felt that the Government favoured the railroad and he said that there is “... a governmental inequality where the state competes with private shipping companies”²⁶⁷. He also said that “...we would not have to consider the freight if we were able to receive subsidies covering [losses]...”²⁶⁸.

7.4.5. Remarks and Conclusions

Shippers tend to be more concerned about the basic characteristics of the freight transport channels. Service suppliers often focus on additional services and technical aspects. From this it can be concluded that service suppliers push the industry’s development by being visionary and looking for a competitive advantage and that shippers seldom inform coordinators and carriers about their needs and visions. When communication between participants is insufficient, there is a risk that shippers’ demand is different from what is offered by the coordinators and carriers. Therefore, it is quite likely that channels, where the members focus on fulfilling the basic requirements and the shippers’ needs before trying to gain more comprehensive competitive advantages, benefit at the expense of other channels.

Table 16 below describes the group of actors’ diverging focus regarding the possible improvements that can be made as far as the freight transport channel is concerned.

Actors’ focus	Shipper	Coordinator	Carrier
Horizontal focus	Discarding unnecessary parts of the channel (e.g. warehouses); high quality; low price.	Improvements through increased customer base and enlarged network of carriers.	Assuming a larger role. Expanding the business. Improving the qualitative aspects of the service.
Vertical focus	Focus is seldom on the channel. Each actor rather focuses on his own part of the channel.		

Table 16. The group of actors’ improvement focus

²⁶⁷ “...en statlig ojämnhet där staten konkurrerar med privata rederier”.

²⁶⁸ “Vi behöver ju inte tänka på frakten om vi kan få bidrag som täcker”.

Regarding the different types of carriers, the following focal areas are found in each mode, see Table 17 below:

Carriers' focus	Road	Rail	Water Carrier
Horizontal Focus	Diversified picture. Product/market expansion, technological improvements, etc.	Improve quality – mainly regarding punctuality.	Technology for handling of goods at ports.

Table 17. The carriers' improvement focus

Some actors say that they do not know if they are good information providers or not. They also stress insecurity about whether the information provided is the one that the receiver needs. This insecurity reveals insufficient communication among the actors.

7.4.6. Author's comment

In the interviews, it was found that many actors regard information as free. I, however, stress that this is seldom so. Even though there might not be any high direct, out-of-pocket costs to obtain the information, collecting, processing, estimating and interpreting it is time-consuming, and, therefore, is it often far from "free".

The fact that small service suppliers perceive themselves to be more well-informed than the larger ones might be due to them having a more limited market to be informed about. Alternatively, they underestimate their need for information or overestimate the quality their information.

The railway representatives are less communicative when it comes to potential improvements than water and road freight carriers. The road freight companies have a history of continuous attempts to improve the service offered. They are, therefore, used to talk about their possibilities and to market themselves to customers and others. The railway industry, on the other hand, is restrained in this respect by having been working in a somewhat "protected" environment against direct and open competition until a few years ago. One carrier said that "the railway" is still protected, since it gets subsidised if its proceeds do not cover the costs. I believe that this can be part of the explanation for the different behaviours.

When steps have been taken that have improved a coordinator's or carrier's service, he has, as far as I can see, some alternative strategies to choose from. In Figure 13 below, describing the strategic options, there are two basic strategies (A and B), which could be combined into a number of mixed strategies.

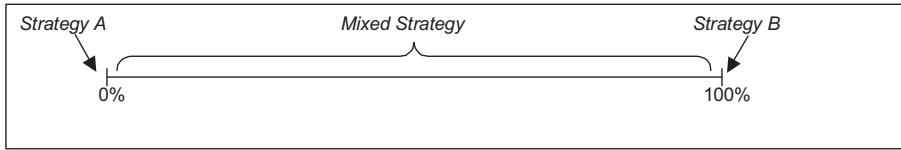


Figure 13. *Strategic choice*

In strategy A, nothing is passed on to the customers in terms of improved price/quality-offer. The service supplier benefits fully from the efficiency improvement himself. Such behaviour can be motivated by the financial situation or a strong position in the market. If strategy B is applied, on the other hand, the benefit is fully passed on to the customer i.e. the shipper and/or the coordinator, while the service supplier does not, directly, benefit from the improvement. This behaviour can be motivated by a belief that the indirect effect will, by a multiplier effect, become larger than the direct effect would be. The multiplier effect can, for instance, be derived from increased sales. The third alternative is to use a mixed strategy. In this, the efficiency improvements partly benefit the supplier directly, and partly indirectly.

7.5. Dimension IV: Shipper Behaviour

This dimension deals with buyers' behaviour. Buyers are, mainly, constituted by shippers, but, to some extent, coordinators are also discussed due to their dual role. Carriers seldom see any difference as regards whom they are contracted by.

The shippers' behaviour regarding the coordinator and carrier selection process is most important for the competitive situation, and how channel participants and others view it. To understand the shippers' behaviour, it is necessary to be aware of some of the background variables, and, therefore, this dimension is rather broad.

7.5.1. The Shippers' Conditions and Demands

Horizontal Analysis

The most important driving forces (see also dimension V) discussed by the shippers are that (i) the industry is exciting to work in²³⁴, (ii) the challenge to become more efficient²³⁵, (iii) the pleasure felt when reaching the objectives²³⁶, (iv) they want to satisfy the customers²³⁷, and (v) they want to secure a profitable result for the company²³⁸. One shipper²³⁹ stressed that his company must have a holistic perspective on the business, and, therefore, the freight movements cannot be optimised in themselves. Two shippers²⁴⁰ said that they are not measured, according to the cost of the transports, a thing that they considered frustrating.

In order to be invited to a tendering process, service suppliers have to comply with the shippers' basic demands and requirements. Such demands regard the characteristics of the service, but "soft" aspects are also involved. According to

most actors²⁴¹, contacts in the trade and historical/traditional relations affect tendering processes and selections. If such contacts and relations are strong, the tendering process, according to some shippers and coordinators, can be a formal occurrence of no or limited practical importance. Some service suppliers said that such behaviour was common, and as a result they did not always tender, or at least they did not strain themselves to make a “good” tendering offer, since it was not considered to pay off. The shippers’ social contacts, how satisfied they are with existing channels, etc. will, thus, highly impact the competitive and the collaborative situation in the market. The same line of reasoning can often be applied to the coordinators’ and many carriers’ choice of cooperative partners.

Shippers’ opinions differ regarding what characteristics they perceive to be most important in the carrier selection process. The type of goods, laws and regulations, and other characteristics put demands on the services. Some shippers need temperature control movements²⁴², others have requirements due to the measurements and the weight of the commodities²⁴³. Other demands have to do with security, environmental care, or time²⁴⁴. Many shippers²⁴⁵ stress that small, as well as large carriers approach them, hoping for a contract. Also some large shippers²⁴⁶, as mentioned above, are surprised not to be approached by certain carriers.

Differences between the shippers regarding their demands on the freight transport services also result from their possibility to plan the freight transports. For instance, some work with a more predictable demand market, and others have the possibility to store the goods. Such shippers can, according to one shipper²⁴⁷, benefit from the slack in the market, and, therefore, they can get better prices. Several actors²⁴⁸, depending on or working as water carriers, say that in times of excess freight transport supply, prices can be lowered dramatically. The drawbacks from using market fluctuations are visible when there is supply shortage. Some shippers²⁴⁹, however, solve this by contracting carriers for parts of their movements. One shipper²⁵⁰ did not have a written contract for a certain link in the freight transport channel, but did have one for another link in the same channel. Instead, the company bought the service on the spot market, believing this to be more economical. These movements were expensive at times, but, on the other hand, they were cheap at others.

Doing market surveys, to improve on the market knowledge rarely occurs among some actors, while they are more frequent among others. Members of the first group²⁵¹ state that they do not have the time/resources to perform such surveys. Respondents from the latter group²⁵² say that the costs for such surveys are low, but they are time-consuming (!). The carriers inform themselves about the market less often than the coordinators. Some shippers²⁵³ tell the channel participants that they search for alternative solutions to make them feel the necessity of continuously developing and improving their service. On the other hand, one

shipper²⁵⁴ says that he does not inform about such behaviour not to make the coordinators and carriers feel that they are not trusted. One interviewee in the food industry²⁵⁵ said that the carrier with the lowest price “*has an eternal contract as long as the quality is good*”. Therefore, he said, coordinators and carriers only fear such a process if they are not the best.

Forms of Competition

Roughly, competition within and among freight transport channels can either occur continuously, i.e. competition in the market, or at specific periods of time (normally, competition for the market). The latter type leaves the selected carrier with some monopoly power in-between. The power is limited if the shipper has, and is conscious about having, other alternative solutions. Competition for the market is, by far, the most common form of competition among the channels investigated. Short-term contracts, which often are three-month contracts, are fairly common in freight transports. This might force a theoretical discussion regarding when competition for the market converges to a situation that could be described as competition in the market²⁶⁹. Some shippers²⁵⁶ point out that the channels’ parts do not necessarily have to be tendered simultaneously and in the same way. Therefore, it is possible that one party of the channel is characterised by competition in the market, while another party is characterised by competition for the market. Competition in the market is, according to two shippers²⁵⁷, useful for less frequent movements, and when several stable and reliable carriers are working in a market.

7.5.2. Contracting Procedure

The shippers’ objectives affect the choice of coordinators and carriers to contract for the freight transport channel. Generally, their objective is, if not to maximise profit, so at least to show stable finances, and to have a superior long-run economic performance, as compared with competitors and companies working in the trade.

Horizontal Analysis

Shippers and Coordinators

In this section, shippers and coordinators are discussed simultaneously, since the role of the contractor is, more or less, equivalent independently of whether he is a shipper or a coordinator. The coordinators treated here have responded from a tendering perspective as opposed to the case when they are the tendered party.

The vast majority of the shippers pay for the transports, but some shippers²⁵⁸ sell their products, partially or exclusively, ex works or FOB. One shipper’s

²⁶⁹ If the terms should be understood strictly, competition in the market only occurs when two (or more) players work and compete in parallel. This situation is fairly uncommon in freight transport channels.

customer²⁵⁹ demands to be the payer. Most shippers²⁶⁰ say that they prefer to be the payers, since they then can control what carriers to be used and they can negotiate with the operator and benefit from better prices.

The shippers stand united in the opinion that the freight movements are extremely important for the success of the firm. However, the relation between the channel participants is, often, vague in its formal structure and the contracts are rather generally formulated. Many shippers²⁶¹ say that formal contracts more often than not make up the base for the undertakings, but such contracts are often written in general terms. To complement the formal contract, the actors often have other, more personal, agreements between themselves. Often, such agreements are held to be more important than the formal contracts. They treat issues such as volumes, responsibility, and contract length. Principally, shippers²⁶², but coordinators²⁶³ and carriers²⁶⁴ as well, point out that a “*gentleman’s agreement*” is often used in the freight transport industry, and, therefore, formal contracts are not always used.

Many freight transport channels are well planned, and the tendering process is extensive and correctly performed. However, quite often, according to some shippers²⁶⁵ and coordinators²⁶⁶, they are pressed for time and have to move fast and call some of the well-known carriers or coordinators and just ask them to give their price.

Shippers and coordinators that usually perform tendering processes, mentioned the following steps (some steps are, by some respondents, performed simultaneously) (i) identify the potential coordinators/carriers fulfilling the basic requirements (sometimes includes a modal choice) (ii) carry through a tendering process (many stress that the tendering base should be as clearly and strictly defined as possible, ideally, the price is the only important variable left) (iii) sort the offerings by the most interesting variables (iv) select a few carriers and, if necessary, perform a second tendering process.

The contractors often approach the task of having a reliable and cost-efficient freight transport service by tendering the service. Mainly the shippers hold that they make demands on as many variables as possible in the tendering process to have comparable services. The shipper can either contract all involved parties in the freight transport channel directly, or make one party in the channel responsible for this (sub-)contracting procedure. Many “small” shippers²⁶⁷ say that they do not always carry out a formal tendering process for different reasons, and, therefore, they by and large follow their intuition when selecting coordinators and carriers.

Most shippers²⁶⁸ state that price is not the most important variable in the carrier/coordinator selection process. They rather point out qualitative variables to be the most important ones. However, they also say that, given that a certain qualitative minimum level is reached, the price can be decisive. Some²⁶⁹ stress the importance of soft variables in the selection process like the feeling of working with the right partner, the personal contacts, and the history of the relation. Many shippers²⁷⁰ say that they are experiencing inertia in the tendering process when they are satisfied with the currently used coordinators and carriers. They, then, perform a less intense tendering process than they do if they are not satisfied with the current solution. Coordinators follow the selection criteria that the shippers use if/when they are to select the carriers to take part in the channel. The coordinators and carriers used often get the chance to alter their offering/service if the shipper receives a more attractive one from another operator, according to shippers²⁷¹, coordinators²⁷², as well as carriers²⁷³.

One shipper²⁷⁴ said that a channel, or a participant, sometimes is selected, since it offers services on other relations. Even though it is not the shippers' first choice on the specific route, it can be so from a holistic perspective. The individual route or the individual link is, therefore, not always optimised.

Shippers having an "in-house" carrying organisation²⁷⁵ say that these organisations cannot be accepted to be more expensive than their competitors. One "in-house" carrier²⁷⁶ held, however, that it is an advantage to be part of the organisation. One shipper²⁷⁷ said that it is hard to estimate the economic consequences for the firm as a whole if it chooses not to use the "in-house" carrier. Fairly few shippers have a carrying transport division. The most common reasons mentioned for not having an operating division is that (i) it would not be able to get an acceptable capacity utilization rate, and (ii) its core business is not to move goods, but to manufacture and sell it. It is more common that the shippers assume the coordinating role for the channel. The shippers manage the freight transport channel when the flow is not too complicated and they believe that the advantages from using a separate coordinator do not outweigh the disadvantages.

The tendering process, if there is one, does not differ significantly between shippers and coordinators. Neither does different clusters of shippers handle the process differently. However, some²⁷⁸ perform formal and sometimes frequent tendering processes, while others²⁷⁹ do not. Those that do not, explain their behaviour using arguments such as they "feel" when they are paying the right price for a service, they lack resources to perform a tendering process, or that they have a long history working with their partners. Many of the respondents that have tendering processes say that they do this exhaustively once, and, thereafter, they use a simplified tendering process. The most frequently used

argument for this behaviour is that it is time-consuming and expensive to perform such a process²⁸⁰. Tendering processes typically involve three to ten participants, depending on the scope of the service(s)²⁷⁰ tendered²⁸¹. Some actors re-tender the service yearly even though they do not intend to switch service providers. Other shippers have not had a tendering process for a long time on many of their relations. One shipper²⁸² said, regarding the subject of loyalty and service providers, that those that do not meet their standards “...*get two yellow cards and a red one*”²⁷¹. Some shippers²⁸³ and coordinators²⁸⁴, stress that the difference is considerable between tendering a new relation and re-tendering a service. It is, according to them, far easier to re-tender, since the shipper knows what demands to make on the service supplier. They have an object to compare the offerings with and the shipper immediately knows the critical points.

The shippers’ views on the segments’ market structure affect the transport buyers’ demand, and, how they choose to approach the service suppliers. When the market is perceived as competitive, the selection process is less interesting, since the supplier offerings are assumed to be very similar²⁸⁵. On the other hand, if there are only a few coordinators and carriers working in the segment, the shippers say that they evaluate them more carefully²⁸⁶.

In most cases, the shipper decides the length of the contract period. Some shippers work with short formal contracts lasting from one to three months. Typically, those shippers hold that the informal contractual length is longer or even “eternal” as stated above, and the carriers, therefore, behave as if they had a longer contract. Some coordinators²⁸⁷ stress that they would prefer longer contracts with the shippers. This, they think, would make their situation more predictable, which in turn would benefit the carriers.

The more specific a service, and its design, the longer the contracted period is likely to be, according to interviewees of all types, and, therefore, it can be concluded that they could benefit from working with product differentiation. On the other hand, when the shippers’ demands are simpler, the contracts, if there are any formal contracts at all, are very short. One drawback of a short contractual period mentioned by some actors²⁸⁸ is that it creates a stressful situation, in which the freight transport channel participants find it hard to develop and improve the service. The differences in the length of the contract periods are more closely related to the nature of the movement than to the industry that the shipper is working in. The term of notice before a removal of the carrier/coordinator also

²⁷⁰ It is important to keep in mind that shippers in most cases perform a large tendering process where all, or many, of their freight transports are included. It is unusual, even though there are such cases as well among the cases studied here, with a tendering process for the specific freight transport channel studied.

²⁷¹ “...*det där med två gula kort och ett rött*”.

varies considerably among the cases studied. The variations range from no term of notice at all to six months or even more, if the service specific investments were high. Many shippers pointed out that it is extremely rare to withdraw the service totally from a carrier. Instead, the shippers and the coordinators/carriers try to work out a solution that all parties find acceptable²⁸⁹. One coordinator²⁹⁰ said that he believed that the time has gone by when contracts with a deadline were written.

The volumes, and other conditions, are, according to several shippers²⁹¹, generally vaguely described in the contracts, since it is hard to predict future flows. This must make the coordinators' and carriers' situation somewhat uncertain, but only one respondent describes this as problematic²⁹². One shipper²⁹³, working with several carriers simultaneously in parallel freight transport channels, had a special solution to get away from a carrier if he did not want to use him anymore. He simply specified very low volumes in the formal contract in order to be able to ship these volumes easily. Then, he could finish the contract when necessary, without any costs. However, informally, the volumes agreed on to be shipped where much larger. The contractual time was thereby not important, only the volumes shipped²⁷². Some shippers²⁹⁴ held that it is possible to get out of a contract before it formally has ended. However, sometimes this implies that they have to pay, according to the written contract, until it ends formally. One shipper²⁹⁵ said that carriers and coordinators seldom demand to get paid for such unperformed services.

Coordinators and Carriers

This section treats, the service suppliers, i.e. the coordinators and carriers, jointly even though some comments on both were made above. Here, they are treated as contracted parties.

One carrier²⁹⁶ stated that it is common among large shippers to include them in the tendering process, more or less by routine. Another carrier held that when he feels that the shipper is tendering a service just as a formality, he did not bother to offer a competitive service, or even provide an offering at all. Such behaviour could, of course, harm the shipper in the long run, since he, then, compares his current service provider's offering with the suboptimal offerings of the provider's competitors.

The service suppliers as a group are more heterogeneous than the shippers are regarding what variables they perceive to be most important for a shipper to select them. There are no clear differences among the modes regarding what variables are perceived to be the most important ones in the selection process.

²⁷² This was, according to the carriers, no problem for them, since they were convinced, for historical reasons, and, since their offering was competitive.

One opinion that most coordinators and carriers share, even though it is obvious among the carriers in the shipping industry, is the importance of the price as a competitive variable. The importance of soft factors, such as personal relations, traditions, and the feeling of a partnership is, however, also often stressed²⁹⁷, but finally the decision depends on the price²⁹⁸. Other coordinators and carriers²⁹⁹ point out the service and the personal relations as the most important (sometimes more important than the price) variables when they are being selected by the shipper. All types of carriers³⁰⁰ stress that buyers often make great demands on all types of characteristics of the service, but in the end, price is decisive. One carrier in the rail sector³⁰¹ said “...we have never managed to get paid for being environmentally friendly”²⁷³. Several carriers³⁰² say that once they are contracted, the price become less important and quality and personal relations are increasing in importance.

Few carriers touched upon the length of the contract periods. The reason for not finding such short contracts to be a problem is, according to the carriers, that they “feel” that the “mental” contracts are longer³⁰³. As discussed above, some shippers also stress this phenomenon.

Vertical Analysis

Freight transports can be characterised as an “all-or-noting”-industry regarding specific service suppliers and channels used. Some shippers³⁰⁴, however, display a different behaviour in working with parallel channels. Such channels can consist, partly or completely, of different coordinators and carriers.

As reported above, only a few case study participants give a deeper thought to whether they are working with the “best” partners in the freight transport channel. Carriers are typically, selected by either the shipper or the coordinator and, therefore, they have little to say about the choice of other partners in the channel. The carriers working in the channel seldom view the channel from the shipper’s perspective. Rather, they focus on their role and try to work in the best possible way.

One of the most important things, stressed by shippers³⁰⁵, coordinators³⁰⁶, and carriers³⁰⁷, is to have an ongoing dialogue to prevent and solve problems. If such a dialogue is efficient, and the parties “feel comfortable” with each other, many shippers and channel participants say that the partnership is likely to last for a long period of time.

Some service suppliers are unaware of the long-term ideas that the shippers have regarding possible improvements of the freight movement systems. Such improvements can regard other modal solutions³⁰⁸, relocating or closing down

²⁷³“...vi har aldrig lyckats få något betalt för att vi är miljövänliga”.

businesses and warehouses, etc.³⁰⁹. If those hypothetical (contemplated) modal shifts became real, this would benefit the railway (since many shippers talk about using the railway to a larger extent), while it would harm the road freight industry. Furthermore, the carriers are unaware of the coordinators' doings. However, this unawareness is less striking than the former.

Regarding length of the contract period, many actors assume something about the other parties in the cases studied, such as that they would prefer longer contract periods. However, these ideas about the other parties' opinions and intentions often prove to be false. This problem has to do with lack of information. Most coordinators and carriers have the same length of the contract period, but there are also some examples of different lengths. Shippers find the contract period to be less important than coordinators and carriers. Many shippers³¹⁰ strive to use short contracts, while coordinators and carriers strive in the opposite direction. Coordinators and carriers look for security in the relation, while the shipper looks for the best P/Q-ratio, which he often believes he will get by using short, frequently re-tendered contracts. In a multimodal channel³¹¹, one carrier³¹² found the price to be the one determining factor, while another carrier³¹³ found price to be clearly subordinated to the demands on environmental and safety issues. The shipper shared the latter view.

As has been discussed above, shippers often point out the qualitative and environmental aspects of the freight transport channel's service as the most important aspect for selecting the participants. However, it is quite clear that history, traditions, and personal relations are important obstacles for an exchange of channel members to occur in already existing channels. Freight transport service suppliers, as reported above, find price to be the decisive variable. One variable, which is asymmetrically viewed among the actors, is the environmental issue. Buyers more often than operators state the importance of environmental issues. Service suppliers often find the buyers' interest, and their willingness to pay for such variables to be low.

7.5.3. Post-Selection Experiences

To a large extent, this section deals with loyalty aspects.

Horizontal Analysis

Shippers/Coordinators

Many shippers³¹⁴ say that loyalty is essential in their use of service suppliers. Once the shippers have selected a service provider, they tend to stay loyal to this provider for a long period, unless he neglects his duties. One shipper³¹⁵ said that a problem occurs when the service providers are aware of the fact that the "soft" factors are important, since it gives them room for price increases. However, the shipper pointed out that as long as the relation is "open and fair", his company does not regard the risk of raised prices as impending.

Formal power is often based on contracts where the customer has the power, but the power of the relation also depends on the size of the involved parties. One shipper³¹⁶ said that he believed he had some power in relations where he contracted small providers, while he did not possess power in his relation with mega-carriers.

Shippers are often loyal to their service providers for many different reasons. From the interviews, the following reasons were revealed: (i) The heavy work effort associated with the tendering processes and the high switching costs are, by many shippers³¹⁷, said to be the most important reasons. (ii) Several actors³¹⁸ say that there is no point in changing coordinators or carriers just for the sake of changing. (iii) Many stress that the social interchange decreases the willingness to change operators³¹⁹. (iv) One shipper said that even though his company is not too happy about the service provided, the alternatives are worse³²⁰. (v) Some hold that it feels “safe” to have stable partners. (vi) One shipper³²¹ said that he, due to his geographical localisation felt a need to be loyal in order not to destroy future relationships.

Exceptions from the loyal behaviour in the industry are transport buyers with an academic education, who seem less loyal than others do. They³²² value traditions and freight transport history less highly than those buyers that does not have any academic education. One reason for this behaviour, according to one carrier³²³, is that academically trained shippers tend to stay for only a few years as freight transport managers at a specific company, and, therefore, they will have to show good results fast.

Carriers

Road and rail freight representatives often regard the buyers as less loyal than the shipping industry’s representatives do. However, many carriers in the road and rail freight segments³²⁴ find their customers to be loyal. One road freight representative³²⁵ held that shippers in large cities, and export customers, are less loyal as compared to other shippers. However, at the same time, he pointed out that loyalty is of quite frequent occurrence among all shippers. From the carriers’ perspective, one of the reasons for the well-developed customer loyalty in the freight transport sectors is perceived to be that the carriers become the shippers’ representative in the relation with the receivers.

Vertical Analysis

Some transport buyers³²⁶ hold that they would be happy to see more attention paid to the transports’ basic characteristics. The service suppliers are, according to those shippers, often more focused on the value-adding services.

Most shippers and channels have a similar perception of the demand for freight transport services as fluctuating, and varying in magnitude, over time. Demand varies in terms of relations as well as volumes. The reasons mentioned for those variations are several, but demand and technological changes, as well as currency fluctuations, and different states of the markets in the business cycle for industries and countries are stressed by the case study respondents.

7.5.4. Supply and Demand for Freight Transport Services

Shippers

Many shippers³²⁷ say that their demand for freight transport services varies considerably over time. Such variations often follow the general business cycle and the seasons. One³²⁸ shipper pointed out the differences over the weekdays. Another shipper³²⁹ thought that the fact that the water carriers “always” find a solution must be interpreted as there being excess capacity at most times. These times of excess demand might cause some extra costs for the shippers. Some shippers³³⁰ stress that special requirements on the carriers and their equipment (i.e. temperature controlled movements), imply that it might be hard to find service suppliers when demand peaks.

Small shippers, and shippers that are less important as customers for the carriers, stress that the fact that other shippers are given priority is a problem. Some of them³³¹ say that they can get around this problem by using a coordinator that is an important customer to the carrier. Some shippers³³² use stocks to limit their dependency on carriers.

Coordinators and Carriers

Competition, as perceived by the carriers and coordinators, seldom occurs in intervals, since they, more often than not, have several shippers as employers tendering their services at different moments in time. The carriers stand united in the opinion that extensive seasonal changes affect their activities. Some carriers³³³ say that they had to hire more personnel and equipment during these periods of excess demand. In order not to risk being inactive when demand reaches its bottom-level, one road freight carrier³³⁴ said that his company had to have a capacity of drivers corresponding to 60-70% of the top-demand. Since the carriers often are specialised in moving a certain type of product, their customers tend to have their peaks and dips at the same time.

7.5.5. Remarks and Conclusions

Shippers from different branches of business stress the importance of “soft variables” like history, tradition, and personal relations with coordinators and carriers in the selection process and during the contract period. Contracted coordinators and carriers, thus, have an advantage over other firms in a tendering process. Many shippers say that it is expensive and time consuming to switch to

another carrier or coordinator, which provides the contracted parties with a second advantage. This gives the “incumbent” firms a possibility to charge extra for these competitive advantages. Two shippers held that such behaviour had been observed in their relations, and, therefore, they had paid too much and/or received a poor service. This was discussed by two shippers³³⁵ who were relatively “new” in the business position. This shows the importance of personal relations and history/traditions as selection criteria. The freight transport industry is, thus, to a large extent, characterised by inertia. Inertia comes from traditions, social contacts, and switching costs. Inertia benefits the currently used coordinators and carriers. Several shippers held that social contacts must not be decisive for the choice of channel participants. However, more often than not, they stress that such soft factors are of importance for the selection process. Quite naturally, inertia thus has negative as well as positive consequences for all types of actors.

The shippers’ opinions of the importance of freight transports vary somewhat²⁷⁴. Some shippers³³⁶ view the freight transport system as an area of extreme importance for their business, while it is less important to others³³⁷. The diverging views depend on aspects like commodity characteristics, history/traditions, and the transport costs’ share of the total budget. Shippers with low-value commodities, view the freight transport solution to be of lower strategic value than shippers with high-value commodities regarding product value and news value. On the other hand, all shippers can be said to, have the same list of desiderata for their freight movements. The ranking of the characteristics of the transports on this list differs from one shipper to another. However, basically, it can be said that each shipper needs his movements to be of as high quality and as reliable and as cheap as possible. Shippers make, for instance, demands on the service to be “environmentally friendly”, others on modal choice, and still others make demands on additional services the carriers offer. Such demands, of course, limit the number of carriers sharing the competitive surface.

Few shippers move their goods by an operating transport division of their own. The main reason for this is that they do not think that they would perform such a service more efficiently than carriers working in the market, and that it would be too expensive.

The shipper’s modal choice can often be explained in an economic, rational way. However, this is not always so. Sometimes not only economic reasons make up the foundation for the decision. The railway is often selected partly for the “warm glove feeling” that shippers experience when using an environmentally “friendly”

²⁷⁴ These opinions are more often stressed from a price perspective than a qualitative perspective. Regarding quality, the vast majority of the shippers hold that it is necessary to have the highest possible quality.

mode. Such behaviour can also be found when comparing road and water freight. No such “warm glove feeling” exists for the intramodal carrier selection. For instance, once shippers have decided to use road carriers, they do not spend too much effort on choosing an environmentally “friendly” carrier. However, shippers caring about these aspects limit these variables in the requirements of the tendering process. As reported above, carriers seldom benefit from surpassing these requirements.

The buyers’ behaviour, when selecting what service suppliers to be involved in the channel, is important for how the service supplier views the competitive situation. The selection process strongly affects the competitive situation. Therefore, the service suppliers develop and take care of the relation that they have with the old shippers and they try to develop new relations to potential customers for business reasons.

7.5.6. Author’s Comments

As reported above, many shippers call for increased focus on the transports’ basic characteristics, while service suppliers are concerned with service and technical issues. From this finding, two important conclusions can be drawn. Firstly, service suppliers are the ones promoting the development in the freight transport industry. It is, thus, supply-driven, as noted in dimension III. The coordinators’ and carriers’ perspective on the industry’s future is often more visionary than the shippers’ perspective. Secondly, some shippers have visions, demands, and needs for the freight transport solution as expressed in the interviews. It is obvious that they fail to, or do not try to, inform the channel participants thereof. However, many shippers do not ask for non-existing services and developments, and, therefore, is it important for coordinators and carriers to be visionary and develop their and the channel’s service. However, they must not forget the basic characteristics of the transport channel in developing the service.

Actors do, for competitive reasons, not reveal everything about their service and business to competing firms, even if these are working in the same transport channel. Shippers and their service suppliers all depend on each other. These firms must share some information. The actors balance the information given to the other actors in the channel (including the shipper). This situation is often quite challenging, since the firms cooperating in one channel often compete on other relations.

None of the shippers competes for attracting carriers to perform his movements. In times of excess demand, such a situation would, at least for a short period of time, be quite possible. The shippers are often passive in their selection process, only letting the carriers offer to the tendering process. Instead, they could benefit from looking actively for carriers that they would prefer to move their products.

Furthermore, the case studies indicated that it could be detrimental to the shippers, in the long run, to routinely invite coordinators and carriers to the tendering process, if they do not seriously consider switching participants. It is detrimental for two reasons. Firstly, they are likely to compare their existing service providers' offerings and the suboptimal offerings of the competitors. Secondly, the offering parties do not try to give their best offering, if they do not consider the tendering, or the question, to be serious.

The shipper often regards the transport function broadly, not only the operating part but also the administrative part, as external to the normal business. This approach can harm the development of the company and its long-run economic performance. If the freight movements were perceived as a value-adding step among others in finalizing the product, it would be natural for shippers to strive to optimise the functions jointly. If each part is optimised individually, it is not likely to find the over all optimum.

For shippers to use parallel, competing, freight transport channels calls for large freight flows. The advantages from using such parallel channels, in terms of price pressure and improved quality/service, can outweigh the drawbacks in terms of lost economies of scale. Parallel channels constitute a possibility for the shipper to evaluate the channels continuously. I think that many shippers would benefit from using directly competing, or easily comparable, freight transport channels. It is far more common to have continuous competition for roles in the channels than to have full freight transport channels competing.

7.6. Dimension V: Motives and Objectives

This dimension discusses how the actors' objectives and motives influence firms and channels' competitive behaviour. The objectives are divided into the firms' service specific objectives and their general business objectives. Within each subject, the firms' and their respondents' objectives are discussed. Motives and objectives are treated jointly in the analysis²⁷⁵, even though the concepts differ slightly. Objective is the intended result of the action, while the motive is the underlying reason for the action. Focus in the dimension is on coordinators and carriers, but, to some extent, shippers are treated as well. Their motives and objectives were partly discussed in the former dimension.

7.6.1. Personal Motives and Objectives

The reason for discussing personal motives and objectives is that many actors have made me understand that competition within and among freight transport channels, as they perceive to a large extent, is influenced by their actions and doings. Since the respondents' personal perceptions of competition are likely to

²⁷⁵ The difference between what is a motive and what is an objective is not of decisive importance for the analysis, and, therefore, motive and objective are treated simultaneously.

influence their behaviour, the personal motives and objectives are highlighted in the following section. However, personal motives have been discussed, to some extent, above in the dimensions III and IV. The discussion is highlighted below.

Horizontal Analysis

The personal motives for the respondents to work in the trade vary with their professions, as well as the type of firm that they represent. If they are in an ownership position, they have other motives than if they are wage earners. Representatives from the latter group state simple motives like “*having a job and earning money*” and simply to “*make money*”. Many respondents discuss several personal motives for having the job that they have.

Shippers and Coordinators

The dominating personal motive for the shippers is the satisfaction they feel from working with efficiency improvements. This is, sometimes, followed by stating that they have a wish to make the movements less expensive. Shippers that work closely with the transport industry, often stress the joy they feel from working in the trade. One manufacturing shipper³³⁸ said that “*...even though it is a conservative industry, it is an exciting industry to work in*”²⁷⁶.

Coordinators, to a large extent, stress the same motives as the shippers. The joy experienced from improving the service in some way is one of the main motives. Coordinators focus more on the monetary issues than the shippers and carriers do. This finding regards the individuals’, as well as the companies’ motives and objectives. One coordinator³³⁹ pointed out that the employees received a bonus when the firm showed a profit, which the employees found stimulating.

Carriers

Respondents from all types of freight carriers separate the individual motives from the company objectives to a larger extent than respondents from the shippers and coordinators. When respondents are in, or have insight into, the top management, they, irrespectively of what mode they represent, stress the importance of entrepreneurship and the joy they feel in working in the transport industry. Below, some mode specific characteristics are discussed.

Rail Freight Industry

The vast majority of the respondents mention the joy they feel when working with the mode as a very important motive for being active in, and staying in the business. Their faith in the mode is far more important to them than it is for respondents working with other modes. One interviewee, with a background in the road carrying business, stresses that he finds it challenging to work in the rail sector, since it is fundamentally different from the road sector when it comes to

²⁷⁶ “*...trots att det är en konservativ bransch, så är det en spännande bransch att jobba i*”.

e.g. planning horizons. Some say that it is stimulating to work innovatively with new solutions and to try to take advantage of opportunities given. One respondent says that the driving force for the people in the railway segment is “*the thing about railway is that you either are interested in doing business or you are crazy about trains!*”²⁷⁷

Road Freight Industry

The respondents of the road freight industry, more often than other carriers, point out “hard” motives for staying in the business, such as earning money, or having a job. However, some also stress “soft” variables like enjoying the work, personal contacts with customers, varying assignments, the feeling of being a trouble-shooter, to help customers to save money, and to offer a better service. Generally, the opinion of what motivates the drivers, held by the respondents, is that it is considered to be a lifestyle to be a truck-driver.

Water Freight Industry

The respondents of the water freight industry often stress “soft”, personal, motives as most important for staying in the business. The joy from working in the business and the many foreign contacts and work possibilities are pointed out as important motivating factors by some carriers³⁴⁰. Other reasons mentioned were the joy when improving a service, that the job is varying (e.g. different types of customers, and varying assignments), the possibility to work with different modes, and to make money for your-self and for the company.

Vertical Analysis

Few shippers and channel-participants³⁴¹ stressed any common channel motives or objectives, neither as overall nor as complementary ones to the firm specific motives and objectives. This finding regards the channel that they are working in, or depending on, as well as potential channels. Possible objectives for the channels could, for instance, have been to expand on the channel’s services. The few mentioning common channel motives stress efficiency improvements as the dominating one.

7.6.2. Firms’ Motives and Objectives

Horizontal Analysis

Shippers

The coordinators and carriers owners’ motives and objectives for the firms’ existence and businesses (referred to as the firms’ motives and objectives) are affected by the shippers’ demand and views on the importance of the freight transports for their business. Those demands and views were to a large extent described in Dimension IV. How important the shippers find the freight

²⁷⁷ “*Det är så med järnväg att antingen så vill man göra affärer eller så är man tågtokig!*”.

transports to be varies considerably, depending on, among other things, the products' value.

The shippers often have a “general” objective regarding their business in which the freight movements are included³⁴². Specific freight transport objectives are rare, even though they may have a separate budget. One shipper³⁴³ said that optimizing the freight transport channel to get the lowest possible price is not so important. From his perspective, it was more important to bring down the price of raw materials.

Coordinators

Market expansion is an objective that is frequently mentioned by the coordinators³⁴⁴. They generally believe that such a market expansion, directly or indirectly, makes them reach the profitability objectives. One coordinator³⁴⁵ said that there was a difference between the Nordic and the American perspective on profit. He found Americans to think of short-run profit maximisation, while the average Nordic perspective has more of a long-run objective to have a high profitability.

The objective for non-carrying coordinators is to be profitable and to offer the shippers well functioning channels³⁴⁶. This can, according to them, primarily be reached through a large network of carriers and shippers. This implies that they regard the network effects, i.e. the economies of scale and scope, as considerable. Carrying coordinators³⁴⁷ are often to be regarded as carriers with a coordinating responsibility. They typically, have a less developed “network outlook” regarding motives and objectives. Shippers, when acting as coordinators³⁴⁸, seldom compete with the coordinators for other freight flows²⁷⁸ than their own.

Carriers

Carriers are a heterogeneous group. This is obvious when looking at their objectives. However, one general business objective they have in common is long-run utility maximization. Utility come from many types of sources. Many carriers regard profit as the main utility source, but, mainly small carriers consider other sources such as market expansion, and personnel satisfaction to be important sources of utility²⁷⁹. Some carriers state their objective in terms of loss

²⁷⁸ One example is SKF's European transport system. SKF has set up its own network and thereby works as some kind of coordinator for its own services. This service has a good reputation in the industry, and, therefore, other shippers have been interested in taking advantage of SKF's role as a coordinator. Another company working partly as a coordinator is the white goods producer Electrolux. It is common among the largest shippers to, at least to some extent, work as coordinators for their own movements.

²⁷⁹ Thus, not only money brings utility to the firm, but also variables that are hard to measure bring utility like satisfaction with the relation (which might depend on traditions, etc.), how well the job fits with the firms' other undertakings, if the relation is usable as a reference, etc.

minimization, while others understand it as being able to offer their employees a job, etc.

Some respondents say³⁴⁹ that they do not know the firms' true objective to stay in the business. However, others³⁵⁰ say that it is rather to make a "descent" profit than to maximize profit. In many cases, the objective short-term profit maximization can be excluded³⁵¹, since many companies in the transportation industry have low profits as compared with other industries and with the risk-free rate. However, two carriers said that their objective was profit maximization³⁵². Profitability is, thus, an objective shared by many carriers. One carrier³⁵³ said that the driving force is the entrepreneurship, since no money can be made in the business.

Carriers³⁵⁴ from all modes said that the freight transport market, from time to time, and from segment to segment, is characterised by intense competition. This perception affects objectives and motives. One carrier held that it is impossible to work with fixed motives and objectives in a dynamic market. In order to stay in the market in the good times, carriers have to offer their services at a loss some times. Some carriers have diverging short- and long-term motives and objectives. To offer an unprofitable service can, according to one carrier³⁵⁵, be motivated from a holistic profit perspective.

The carriers' objectives sometimes come into conflict with laws and regulations. As a result, some carriers³⁵⁶ say that they (or other carriers) deliberately break the law occasionally or regularly. Laws and regulations broken by road freight carriers, mentioned by the shippers, concern speed limits, weight regulations, and driving hours, see also Dimension I.

Actors in the railway sector stress diverging driving forces depending on the ownership structure. One respondent³⁵⁷ says that his company does not regard profit maximisation as a relevant objective, due to the company's role in the market and the stretched economy of the company. Even though profit maximization is not an objective in itself, some carriers³⁵⁸ stress that profitability must increase in the near future. A respondent for another company³⁵⁹ held that making a profit was a necessary objective.

Vertical Analysis

The channels seldom work with cooperative objectives. The participants often have clearly manifested objectives for their business, but rather few have specific channel objectives.

Utility also depends on the alternatives. If several shippers offer equal opportunities, this decreases the utility for the specific shipper's offer. For the firm to maximize its utility, the marginal utility of all different undertakings should be equal.

The channel participants often have diverging, and partly conflicting, objectives for their participation. Therefore, they have different perspectives on cooperation and competition within the channel and between channels. Channel participants benefit from own as well as channel partners' activities in the channel. Since the profit made from participating in a channel differs between the participants, and they have diverging financial possibilities, one carrier₃₆₀ said that problems could arise regarding common activities such as investments. Different objectives, thus, affect the formation of the channel and how far-reaching the cooperation is among the participants. The objectives set up by the individual participants in the channels are, however, seldom in direct conflict with what could be regarded as the best solution for the channel as an entity in its present form.

7.6.3. Remarks and Conclusions

Few service- or channel-specific motives are found in the interviews²⁸⁰. The reason is that, since the carriers and the coordinators work on several relations simultaneously, they, more often than not, have one common objective for the firm as an entity. When the actors mention service specific objectives, these are very similar to the general business objectives, but the service can, sometimes, be exempted from the profitability objectives if there are other advantages from offering the service. Such advantages can be that the service is useful as a reference service, or that the customer is profitable on other relations.

Coordinators focus to a larger extent on profit "maximization" than shippers and carriers. Many shippers point out efficiency improvements as their most important motive. Further, shippers focus on the importance of having a holistic perspective on the business and not suboptimise the transports. To some shippers, the freight transport channel and its characteristics are of limited interest, since their requirements are basic and uncomplicated, which almost any carrier can fulfil. Carriers have several different personal objectives. These objectives are often "soft". In Table 18 below, the actors' views on their personal and business objectives are presented. The table should be interpreted with caution, since the differences between firms within each group are significant.

²⁸⁰ A service-specific motive is a motive for operating on a certain route.

Actors' objective	Shipper	Coordinator	Carrier
Personal Objective	Hard objectives. Efficiency improvement.	Hard objectives. Economic motives. Efficiency improvement.	Soft objectives. Enjoying working in the business.
Business Objective	-	Professional: Expansion and profitability. In house ²⁸¹ : Shipper satisfaction.	Profitability objectives (loss minimization). Market share.
	Vertical objectives are very unusual. Some say that the channel's objective is to satisfy the shipper's needs.		

Table 18. *Actors' views on personal and business objectives*

Table 19 describes the differences between the motives/objectives adopted by coordinators and carriers from three modes.

Motive and Objective	Coordinator	Road	Rail	Water
Personal Objective	Developing the service, monetary objectives.	Enjoying working in the business.	Enjoying working in the business, faith in the mode.	Enjoying working in the business, career opportunities.
Business Objective	Profitability goals.	From loss minimization to profit maximization. Offering an attractive service.	Offering a reliable service at an acceptable price.	Survival, market expansion, profitability goals.

Table 19. *Motives and objectives for coordinators and carriers*

The motives that the carriers' representatives reported differ between the modes. Respondents from the road sector stress hard motives in combination with softer ones. Respondents from the railway sector, principally those that have made a career in the railway sector, almost exclusively point out soft motives. They stress the joy they feel from working with railway- and environmental issues. The representatives of the water freight industry are positioned in the middle regarding the importance of hard and soft variables as motives.

The actors' personal objectives often seem strongly influenced by the firms' objectives. The firms' objectives concern e.g. profitability and relevant market issues, while the personal objectives concern personal aspects such as a "good" salary and job satisfaction.

²⁸¹ An in-house coordinator is a coordinator that is not external to the shipper, i.e. when the shipper performs the coordinating role himself.

Many actors have, more or less well-founded opinions regarding the modes of transport, which they are happy to discuss. This is very clear among the shippers and the road freight carriers stating their opinions about the railway. Often, when carriers talk about other modes, they do so in negative terms.

7.6.4. Author's Comments

As noted above, the representatives of the rail- and road segments differ regarding their willingness to speak openly about their businesses and the channels studied. I think this is due to the road transport sector having a history characterised by continuous improvements driven by, among other things, the competitive environment. The road freight carriers are used to talk about, and promote, themselves. The railway, on the other hand, can be restrained by the railways' history of being a more protected market when it comes to discussing the mode and the business. Even though the railway industry has been adjusted toward the market conditions, it, most likely, will be a long time before all employees adapt to the "new" market situation.

The freight transport buyers need to view the markets in a correct way, otherwise it is quite likely that they end up with a high P/Q-level. The benefits from improved knowledge are, however, offset by the costs from becoming, and staying, well informed. There is, thus, a problem in balancing the benefits from good knowledge and the drawbacks, for instance, in terms of monetary costs. Another problem is, of course, to estimate the expected benefits and costs.

7.7. Dimension VI: Forms of Competition

This section examines the types, and levels, of competition in freight transport channel services. The types discussed are not mutually exclusive.

7.7.1. Intra- and Intermodal Competition

Horizontal Analysis

The vast majority of the actors say that intramodal competition is by far more intense than intermodal competition.

Shippers

When investigating freight transport markets, one comes across intra- as well as intermodal competition²⁸². Shippers and coordinators often have several alternatives for performing a service. If a coordinator is contracted by a shipper in order to take care of the service, he can often choose between several carriers that he works with.

²⁸² One can draw a parallel to inter- and intrabrand competition.

Many shippers³⁶¹ say that they care about having the goods delivered at a certain destination, in a certain condition, and, at a certain point of time, but, how these criteria are satisfied is of secondary interest. Shippers³⁶² sometimes refer to topological reasons as obstacles for some modes to perform the service asked for (sometimes these reasons are, quite obviously, not relevant). As mentioned earlier in this thesis, some shippers say that they prefer to use the railway for environmental reasons. Often, however, they state that they are only willing to do so if the difference in price between the road and the railway freight service is not too large. One shipper³⁶³ stressed that this difference has to be zero or negative.

Intramodal competition is, to a large extent, concerned with the price of the service. One shipper³⁶⁴ held that this depends on the fact that most carriers in other respects are similar. Others said³⁶⁵ that the quality of services supplied, by different service providers, differs regarding e.g. goods comfort, value-adding services, speed, reliability, and environmental inflective variables. In spite of this, it can be noted that price in combination with the soft variables is decisive for the intramodal choice, since other parameters like reliability, environmental demands, and demands on equipment normally are conditioned in the tendering process.

Carriers

According to one water carrier³⁶⁶, the Swedish market is too small for the shippers to expect several alternative water carriers. He said that two shipping companies can offer two moderate services. However, he stressed, such a market is of no use to the shippers. Instead, they gain more from having one high-quality service, according to the respondent.

It can be noted from the respondents' (of all types) answers that intramodal competition in the railway sector is limited. The railway representatives perceive their natural market as threatened to a lesser extent by other carriers in the same mode than other modes perceive their natural market to be. Many carriers³⁶⁷ stress that the intermodal competition in many respects is weak. The competitive action, from the road freight carriers' perspective, is rather on the intramodal arena³⁶⁸. However, it can be noted that several carriers³⁶⁹ also stress that they, due to their competitive advantages, are to a large extent spared the most intense competition.

The railway is, according to its own representatives as well as others³⁷⁰, focusing on intermodal competition, while most other carriers mainly focus on intramodal competition.

One³⁷¹ shipper, using air-freight for freight forwarding, said that a large part of the air-freight is trucked a significant part of the distance. This was not perceived as a problem unless the characteristics of the service were not affected. This is,

thus, a special case of inter-/intramodal competition. The aviation industry, thus, competes with the road freight industry using the road freight industry's own weapon – the truck!

7.7.2. Domestic versus International Carriers

Horizontal Analysis

Actors of all types³⁷² hold that cabotage is not inflexible in their district, and in their product market. Many believe that cabotage is far more intense in the southwestern parts of Sweden (south of Gothenburg) than in the rest of the country³⁷³.

The national conditions that the carriers have to comply with differ among countries. Many actors³⁷⁴, however, doubt that the quality of the services is comparable between national and international carriers.

Shippers

Two shippers³⁷⁵ say that they, to some extent, use cabotage carriers. Some respondents did not know what cabotage is, and others had misunderstood the concept's purport. The most frequently stated reason for not using cabotage carriers is that shippers fear that the quality is low³⁷⁶. Furthermore, some say that the cabotage carriers' services do not fit the shippers' complicated and frequent demands³⁷⁷.

Coordinators

One coordinator³⁷⁸ said that he uses cabotage carriers to some extent, the motive being that his company was paid too little from the shipper, and, therefore, the coordinator's offerings were only accepted by the cabotage carriers. The main drawback of the cabotage is, according to him as well as another coordinator³⁷⁹, that the truck-drivers often lack language skills (Swedish and English), and that they often have problems finding the destinations. One coordinator³⁸⁰ said that his company did not have any objections against cabotage carriers, as long as they are given the same conditions as the Swedish carriers.

Carriers

The carriers' experiences of cabotage carriers differ widely. Many³⁸¹ regard these carriers' effect on the market as marginal. Some stress³⁸² that cabotage carriers are not tough competitors, since shippers prefer to have stable relations for most freight flows. One³⁸³ road carrier said that he has been affected by cabotage carriers who have taken market shares. However, none of the carriers interviewed regarded the cabotage carriers as seriously threatening their business. Carriers³⁸⁴ regard shippers using the cabotage carriers' services as needing less planned freight transports. The importance of cabotage to the carriers taking part in this study is reflected by the fact that none of them mentioned it before it was brought up in a specific question. Some state³⁸⁵ that the effects of the cabotage have not

turned out to be as serious as expected a few years ago. They believed that this, to a large extent, is due to the shippers' scepticism regarding the quality of the service offered by the cabotage carriers.

Some carriers³⁸⁶ state that competition among road freight carriers is more intense in Denmark than in Sweden. Some actors³⁸⁷ discussing the competitive situation in road freight transports in Norway, perceived the situation to be the opposite of the Danish situation. The competitive situation is, thus, regarded as less intense in Norway than in Sweden. According to the Norwegian coordinators/carriers, tougher demands on food hygiene when moving provisions on Norwegian domestic carriers give Swedish carriers a small competitive advantage²⁸³. One respondent³⁸⁸ held that one reason for competition to be less intense in Norway than in Sweden could be that it is less common to buy transports ex works in Norway.

Vertical Analysis

Cabotage carriers are of little importance as competitors in, and to, the freight transport channels. Shippers rarely use cabotage carriers, and the carriers do not view them as competitors to the channels investigated. Thus, the cabotage business does, not compete with well functioning and established freight transport channels. One reason for this is, according to two shippers³⁸⁹, that such services generally are now-or-never offerings. Another drawback, according to one shipper³⁹⁰, is that contracts cannot be written for several movements. Rather, he said, they contact the shipper, at the best, a day or two in advance asking for services suiting their relations, time schedule, and capacity.

7.7.3. Mega-Carrier Competition

Mega-carrier competition, i.e. competition where at least one of the competitors is a mega-carrier, is a special form of competition. Mega-carriers either compete for a role in a channel, or for the full service. The mega-carriers, thus, compete with individual carriers/coordinators as well as with the combination of carriers and coordinators. Mega-carriers often offer value-adding services, which some shippers³⁹¹ regard as a competitive advantage. Another competitive advantage of the mega-carriers is, according to one shipper³⁹², that they usually are able to perform all of the shippers' movements. However, to use mega-carriers for this reason is, according to the shipper, probably most common among small shippers.

Many carriers' attitudes to mega-carriers, and how these mega-carriers affect the market, are described by one road freight carrier³⁹³ who said: *"I am more worried about the one-truck firms that believe that the transport business promises the*

²⁸³ The Norwegian authorities do, according to a Norwegian shipper/coordinator, demand that food supplies should be moved in hard cover vehicles.

moon and the stars... They are more often a threat than the large 'dragons', since ridiculous things might turn every principle we have agreed upon with the customer upside-down"²⁸⁴. Such view is likely to be common, since few actors mentioned any specific negative aspects regarding the mega-carriers.

National as well as international politicians and decision-makers face a challenge in trying to decrease emissions, and other external effects from the transport industry. This could be done through, for instance, legislation, more environmentally friendly engines, and fuels²⁸⁵. Two carriers in the road freight industry³⁹⁴ and one coordinator³⁹⁵ said that they fear that such measures would be expensive for the carriers, and, therefore, large carriers and mega-carriers will have a competitive advantage, since they can adapt to these rules more easily than small carriers. This would, then, reduce the number of competitors. This could, according to one of them³⁹⁶, result in one direct and one indirect price-increasing effect on the carriers' offerings. The direct effect comes from increased costs and the indirect effect comes from the decreased competitive pressure in the business when some firms are driven away²⁸⁶.

Carriers of all modes see advantages as well as disadvantages from having large customers. The most frequently mentioned advantages are that large customers (i) provide "a stable base" for the business³⁹⁷ (ii) they can be references³⁹⁸ and, (iii) it is perceived as easier to work with large customers, since they require comparatively little work³⁹⁹. In all segments (road freight, railroad, and water carriers), some carriers report customer concentration as high. Among the carriers, some⁴⁰⁰ say that the 80-20 rule is valid in their business, i.e. 80% of the total turnover coming from 20% of their customers. Some carriers and coordinators⁴⁰¹ say that they consciously try to spread the risk by having a broad customer base with customers that are affected differently by the general business cycle. One of the respondents⁴⁰² held that his company was extremely dependent on a few large customers. He said, "*everything depends on them*".

Several shippers equate Green Cargo with trains, forgetting that Green Cargo is a large carrier on the road market as well. However, they are aware of Green Cargo having trucks to complement the railway business. Such a misconception affects several parties. For Green Cargo as a company, this can, among other things,

²⁸⁴ "Där har jag mer ett orosmoment på alla de här enbilsåkarna som får för sig att transportbranschen är guld och gröna skogar... De är oftast ett större hot än de här stora drakarna för där kan det bli löjeväckande saker som omkullvärler alla principer vi har kommit överens med kunden om."

²⁸⁵ Inner city environmental zones can be viewed as an example of such steps. In these zones, only trucks fulfilling some specific environmental demands are allowed.

²⁸⁶ However, in my opinion, if the freight transport markets show some contestable characteristics, which I assert that they do, fewer participants in the market is not necessarily synonymous with a less intense competitive pressure.

imply (i) missed contracts, since the company is not regarded as a road freight carrier; (ii) a better reputation environmentally wise than they would have otherwise. In part, Green Cargo's power is based on having a separate in-house road freight organisation called Green Cargo Road & Logistics²⁸⁷.

7.7.4. Channel Awareness

Coordinators and carriers are, here, said to be channel aware if they know that their service is part of a series of services, and behave accordingly. They should, to be channel aware, behave not only in the interest of their own business, but also in the long-run interest of the channel as a whole. Therefore, coordinators and carriers do not need to have direct contact with each other, but they must adapt to the fact that they are not the full service provider of the freight channel service. Channel aware coordinators and carriers know that they are being mutually dependent on the other channel participants' actions.

The reason for discussing channel awareness here is the heavy impact that the channel participants' view and collaborative activities have on the channel's and the service suppliers' competitive activities.

Horizontal Analysis

Shippers

Many shippers⁴⁰³ regard the channel as an entity that provides the freight movement service. Shippers that, to some extent coordinate the channel themselves differ from shippers using an external coordinator. The former group often consists of "small" shippers, and they, often, see the freight transport channel as consisting of separate building blocks (even though there are some exceptions). The latter group more often than not view the channel as an entity.

Coordinators

Coordinators make a living and justify their existence with their dual role, having contacts on both the demand-side and the supply-side. One coordinator⁴⁰⁴ said that the more stable and large shippers and network of carriers they can offer the more successful is their business likely to be. Such relations are what the coordinators' business is all about. For this reason, the coordinators perceive the freight transport channel as a channel, and their channel awareness is often high.

Carriers

Some carriers⁴⁰⁵ say that they do not look upon themselves as a link in a channel. More often, they perceive their role as a separate freight movement service. The fact that this service is preceded and/or followed by another carrier's service is

²⁸⁷ It did, however, not turn out that way, according to Karlsson (2004), since Green Cargo decided to keep most trucks and personnel.

seldom very interesting to them. They, thus, regard the channel as several successive parts.

Some carriers⁴⁰⁶ stated, answering a direct question that they would like to take on more responsibility in the freight transport channel taking over other carriers' roles in the channel. This refers an expansion of their responsibility, or performing some additional service that another participant does at present, but it could also be taking total control of the channel. The carriers that would like such an expanded role did, however, seldom say that they actively tried to carry out such ideas⁴⁰⁷.

7.7.5. Potential Competition

Horizontal Analysis

Representatives from all types of actors⁴⁰⁸ say that potential competition is intense in the freight transport industry. However, the effect that potential competition has on the actors differs between, as well as within, the broad groups of actors (i.e. shippers, coordinators, and carriers).

Shippers

The shippers' opinions regarding potential competition's effect on the freight transport market differ. Some⁴⁰⁹ think that potential competition is effective in forcing coordinators and carriers to "behave well" and provide competitive offerings. Others⁴¹⁰ believe that no efficient competitive pressure comes from potential service suppliers. Some shippers⁴¹¹ say that they suspect that the market for freight transports is split up, deliberately or not, between the largest carriers in some geographical/product markets. This, then, reduces, but does not eliminate, the competitive pressure. A few shippers⁴¹² say that they seldom directly point out, to the coordinators and carriers, that they have alternatives. It can be, but does not have to be, obvious to the operators that such alternatives exist.

Coordinators

Coordinators are often well aware of the threat that their business is exposed to from other coordinators. The coordinators' business is typically less capital intensive than the carriers'. Furthermore, their role does not make great demands on local presence, a thing that some coordinators⁴¹³ perceive as one of the reasons for the intense pressure felt from competitors in their business. Some coordinators⁴¹⁴ perceive their relation with the shipper as stable, with a long-term commitment. One of them⁴¹⁵ said that he feels so secure in his position that his company welcomes potential competitors to enter the market, since this company is are convinced that it will keep the contract with the shippers. The entrants will, therefore, lose.

Some coordinators⁴¹⁶ said that they perceive as a risk the fact that the shippers contract the carrier directly. One coordinator⁴¹⁷ said that some shippers might benefit from skipping the coordinator for some relations, but many of them would lose on the whole if they stopped using the coordinators' services.

Carriers

In finding potential customers, carriers display similar behaviour. Among the most important ways are to (i) use the internet to view potential customers' home pages to find out more about them and their needs⁴¹⁸ (ii) use personal contacts and references⁴¹⁹, (iii) use a customer data base, which they either have bought or built up themselves⁴²⁰ or, (iv) be approached by the shippers/coordinators⁴²¹. Some carriers reporting on unsuccessful approaches blame the failure on the shippers' fear of "new" transport solutions. This fear is so strong, according to two carriers, that even if the shipper is dissatisfied with the present carrier, he does not dare to try a new carrier, since he perceives the risk, and the costs, to be too large.

Most carriers⁴²² stress that they mainly face the risk of intramodal potential competitors affecting their business. However, there are also instances of carriers⁴²³ pointing out potential intermodal competitors that could enter the market successfully.

None of the respondents viewed a process where the carriers' role is incorporated in the shippers' business as a likely scenario, because such in-house carriers are perceived to lack adaptability and they will experience large capacity utilisation problems. The shippers generally share their opinion.

Road Freight Industry

Road carriers regard the threat of competition mainly in intramodal terms, even though some also stress intermodal potential competition where the infrastructural conditions make this possible. The carriers⁴²⁴, when discussing potential competitors, focus on competitors that have an organizational size close to their own. An internal form of potential competition, stressed by road freight carriers as well as coordinators⁴²⁵, is that key persons break free and start a separate, competing, business. This is, according to the interviewees, possible, since the customers often are attached to a person more than to a firm. Such personal relationships between the freight transport buyer and individual persons at the carrying or coordinating firm are common, according to several carriers, coordinators, and shippers. Cabotage carriers are not considered to be a major threat by the road freight carriers. One reason for this is the language barrier.

Many carriers say that there is potential competition, but they often doubt its efficiency for the market offerings. The reason is, as stated above, that they have

a close relation with the shipper, and, therefore, they think that they will receive information in advance of any shift of carrier. Since the potential competitors know this, their effect will be moderate. The incumbent firm is, therefore, capable of responding to respond to the potential competition²⁸⁸.

Rail Freight Industry

Potential intramodal competition result mainly from foreign operators entering the Swedish domestic rail market, according to the railway carriers. However, the carriers regard such a scenario as unlikely due to Sweden being situated on the outskirts of Europe offering a relatively small market in a geographically large country. How intense they regard potential intermodal competition varies considerably depending on geographical/infrastructural conditions and the type of goods moved. Many say⁴²⁶ that the larger the quantity and the longer the distance the lower the perceived risk of intermodal road freight competition. The potential threat from water carriers is, of course, only valid for certain relations and certain types of goods. But even in a case where a shipper⁴²⁷ views water carriers as substitutes to the rail service, the rail operator⁴²⁸ did not perceive it to be a realistic threat.

Water Freight Industry

None of the interviewed water carriers regarded their position to be threatened by transport solutions involving other modes. Rather, they focus on intramodal competition. Intramodal competition is, however, viewed as intense, mainly in the price-variable. Two carriers⁴²⁹ stressed that the focus on price is a result from the business being capital intense, and that water carriers often have to accept long running-in periods before a route can be expected to be profitable.

Some water carriers⁴³⁰ view themselves as having a weak monopolistic position. However, the barriers, for existing water carriers, are perceived to be low, and, therefore, they can easily start a competing route⁴³¹. This intramodal threat from challengers is, according to the respondents, effective, since it forces the incumbent firms to behave competitively. The shipping market, thus, in this respect, shows contestable market characteristics. One shipping representative⁴³² that regarded his company as having a monopolistic market position believed that competitors would enter the market in the near future. A road freight carrier⁴³³ in the same channel stressed that the prices asked by the water carrier were low enough to intimidate potential entrants.

²⁸⁸ Author's comment: This reasoning does, however, limp, since the potential competition, then, will force them to alter their offering even though they might keep the shipper as a customer.

Vertical Analysis

Two shippers^{S434} revealed plans regarding their future freight transports. In no such case, the carriers involved in the channel mentioned that very solution as one of the threats to their participation. This shows that the carriers need to think in broader terms to fully be aware of which their potential competitors are.

7.7.6. Remarks and Conclusions

Few carriers or coordinators say that they alter their offerings according to the competitive pressure or who they are competing with (actual as well as potential competitors). Several shippers stress the importance of freight transport channels to function as channels and not just participants working in a sequence. Some carriers work closely with other carriers to offer the shippers complete channels. This occurs in “simple”⁴²⁸⁹ as well as more “advanced” channels. Carriers that do not work in this way often say that the advantages from working close together with other carriers do not exceed the drawbacks.

In the analysis above, it was clear that the actors perceive the intensity of potential inter- and intramodal competition differently, see Table 20 and Table 21 below. The first table shows the shippers’ and coordinators’ view, while the second table shows the modal situation.

Focus on intermodal/intramodal competition	Shipper	Coordinator	Carrier
Horizontal focus	Mainly intramodal, but intermodal competition occurs when the conditions are reasonable.	Intramodal competition is more common and important than intermodal competition.	See Table 21 below.
Vertical focus	Inter- and intrachannel competition is unusual. Coordinators and carriers compete but not in channel settings. Channel awareness is limited. The actors seldom discuss cabotage.		

Table 20. *The shippers’ and coordinators’ view on the intensity of inter- and intramodal competition*

²⁸⁹ This regards the number of participants, the demands on the characteristics of the channel, etc.

View on	Road	Rail	Water
Intermodal/intramodal competition	Intramodal competition is most important.	Intermodal competition is most important.	Intramodal competition is most important.
International competition	Accepted if the conditions are equal.	Unlikely in the short run, but accepted if the conditions are equal.	Accepted if the conditions are equal.

Table 21. The carriers' view on the intensity of intermodal, intramodal, and international competition

Vertical competition occurs when coordinators and carriers strive to become more influential in the channel, and win a larger share of the channels total service undertaking, at the expense of the other coordinators and carriers in the channel. This form of competition can occur within as well as among carrying companies. From the respondents' answers it is, however, clear that internal competition within freight transport channels normally is limited. Further, interchannel competition is very limited. This does, however, not imply that carriers, taking part in a channel, do not face competition. They certainly do. Often, this is, then, external, intra- and/or intermodal competition.

Horizontal intra-channel competition is present in some channels⁴³⁵ studied. Then, at least two carriers perform the service on the same relation in the channel. Such a form of competition can occur if the volume of goods is too large for one carrier to handle or if the shipper/coordinator experiences advantages from such a form of competition.

The efficiency of the potential competition depends, according to the actors, on expected profitability, type of goods, distances, the geographical conditions (where the origin and the destination are, and the infrastructure between them), laws and regulations, etc.

Even though the mega-carriers constitute a special group in the competitive arena from a theoretical point of view, few respondents⁴³⁶ have called such competitors as special. Many carriers are used to compete with coordinators that represent several carriers, and are, thereby, able to offer a full freight transport channel. Their function does, therefore, not differ much from the mega-carriers' function. Carriers, thus, regard competing with mega-carriers in, more or less, the same way as they regard competing with other carriers.

Few shippers⁴³⁷ buy freight movements on the spot market, where the cabotage companies mainly are active. This is the most important reason for the cabotage getting very little attention in the interviews.

Many reasons are discussed explaining why shippers seldom change service suppliers. The most important reasons are history, social relations, fear of new solutions - “*you know what you have, but not what you will get*”, and risk avert behaviour. This can be rational behaviour, even though it does not always result in the most price/quality-efficient solution.

7.7.7. Author’s Comments

From the cases investigated, it is obvious that the carriers seldom work closely together to present a channel that will solve the shippers’ problems. The carriers’ perspective, as mentioned above, that the freight transport channel seldom is regarded as a competing entity, can be detrimental to the channel’s characteristics. Carriers are not pro-active, forming a freight transport channel offering a complete solution to the market. The shipper, or the coordinator, almost exclusively forms the freight transport channels. The shipper, or the coordinator, puts the separate parts together into a freight transport channel. If the carriers were more pro-active, this would most likely benefit shippers as well as carriers. However, on the other hand, it could be an obstacle to competition in the market, and, thereby affect the shippers. To some extent, this is how mega-carriers work.

I think that many service suppliers working in a freight transport channel could benefit from increasing their channel awareness, but, of course, it would imply drawbacks as well. The channels, and its participants, could become more efficient and more competitive. Shippers and their customers would benefit from a better service. When the shipper finds the channel to work unsatisfactorily, he is likely to overhaul every link in the chain. Therefore, the participants are strongly dependent on each other’s services and a “bad” behaviour by one participant jeopardizes the future for all participants.

Service suppliers often focus on “details” when improving their, or the channel’s, service. They focus on aspects where they already have a competitive advantage. The freight transport channel seen as an entity is, however, not stronger than its weakest link. The weakest part might, for instance, be the driver’s treatment of the customer/receiver of the goods, according to one shipper⁴³⁸. If the company, then, works hard to improve other characteristics, little will be gained, since it is judged by the driver’s treatment of the customers.

It is important for shippers and carriers to know who their actual and potential competitors are. To know who the potential competitors are is not easy. It is quite possible that potential competitors can be found in another geographical market. Shippers can relocate their businesses or choose other suppliers of raw material, if they are not satisfied with the existing transport alternatives. Distant alternatives can constitute an efficient competitive pressure on carriers forcing

them to offer attractive services to shippers, even if their market position seems strong.

Perceptions about the competitive situation are important for the service suppliers' offerings. Not only the suppliers' perceptions are of importance, the customers' perceptions of competition are also very important for the market outcome. For a deeper discussion of the importance of perceptions, see Appendix II.

Some of the railway representatives say that they compete with the road freight carriers. Few road freight carriers say that they compete with the railway. Some carriers, however, compete with the railway, but this is, then, more of a company problem than an industry problem. The railway competes for the shippers' contracts as an industry, while the road and water carriers compete more as individual companies.

Whether carriers are national or international is not of great importance for the actors' perception, and treatment, of the competitive situation. They take into consideration if they believe that the international competitors provide the same price/quality-combination or not. If these carriers belong to the shipper's choice set, they are serious competitors to the "national" carriers. If they, for instance, offer a cheaper service with lower quality, the national competitors may have to alter their offering accordingly in order to be competitive.

As reported above, road freight competition is more intense in Denmark than in Sweden. I believe that two important reasons for this are the following. First of all, Denmark has been a member of the European Union for many years, one effect being that the domestic operators have felt an intense international pressure for a long time, which has put pressure on them to offer competitive services. The second reason is the geography and the demography of Denmark. Denmark is a small country with relatively high population density, located closer to the centre of Europe than Sweden. Therefore, Danish coordinators and carriers are more likely to work on a national or even international basis. In Sweden, many carriers work on a regional level. Further, Denmark's geographical conditions favour the road freight industry. These are likely reasons why Swedish shippers seem to be more patriotic when choosing carrier than their Danish counterparts.

7.8. Dimension VII: Market Structure

In chapter 4, this dimension was presented to discuss, among other things, different issues regarding market structures and relevant markets. When applying the theoretical market structures on real companies, one of the many difficulties is that each company often belongs to several market structures. The market structure perspective in the interviews has been to focus on the selected freight

transport channels and its parts. This limits the problem of market structure belonging. However, it should be noted that the respondents, to some extent, quite likely have been “coloured” by the fact that the firm’s “overall” market structure can differ from the market structure on the relation studied.

7.8.1. Relevant Market

Horizontal Analysis

In freight transport markets, all traditional market structures can be found. The market structure “found” when analysing a market segment depends to a large extent on the definition of the relevant market. The relevant market can be quite differently viewed by different actors, depending on what assumptions are made regarding the characteristics of the carriers, the shippers’ demands, and other variables. The actors’ interest in what theoretical market structure they belong to is very limited. This is more of an academic/theoretic and regulative interest.

Shippers

The shippers regard the relevant market as limited in several dimensions, such as product market and geographical market. This, of course, affects their outlook of the market structures. Furthermore, it has as a consequence that many coordinators and carriers are not invited to the tendering process if the shipper does not think that they belong to the relevant market. From the interviews⁴³⁹, it can be concluded that the geographical dimension is the most important one in limiting the relevant market, but, the relevant market can also be limited in modal, national, qualitative, and other aspects.

It is difficult to, ex post, find out the shippers’ thoughts regarding the relevant market. When discussing these issues, regarding already existing channels, with the shippers, they often have a very limited perspective on the relevant market. Regarding potential channels/markets, their perspective on the relevant market is, in most cases, much broader. Thus, when they are to set up “new” channels, many shippers⁴⁴⁰ are open to different solutions in terms of e.g. different modes, carriers, and routes. Ex post, after having established and used a certain freight transport channel for a while, the shippers are far less open-minded⁴⁴¹.

Coordinators

Coordinators perceive the relevant market from the demand perspective when approaching carriers, since the coordinators are potential buyers of the carriers’ services, but from the supply perspective when interacting with shippers (since the coordinators are offering their services to the shippers). Independently of the perspective, most coordinators⁴⁴² describe their relevant market broadly. This is in accordance with their role as the “spider in the web” matching shippers’ demand with carriers’ supply. Coordinators often work with many modes, carriers, and

shippers. To have a broad perspective on the relevant market and competition is, as one coordinator⁴⁴³ said, necessary for him to be successful.

Carriers

The carriers view the relevant market from the supply-perspective, since they are selling their services to coordinators or shippers. Most carriers, with representatives from the rail-, road- and the shipping industries, perceive the relevant market for their service to be limited in a geographical, as well as, a product dimension. Some carriers⁴⁴⁴ also regard the size of a service as limiting the relevant market. Many carriers⁴⁴⁵ describe their niche using geographic and product dimensions. The mega-carriers⁴⁴⁶, naturally, view their relevant market as very extensive.

Vertical Analysis

The service suppliers seldom describe the channels' relevant market. Some describe the relevant product market for the channel, but very few give a more balanced perspective on the relevant geographical market. In the interviews, few respondents discussed the channel's market, neither from a product nor from a geographic perspective.

7.8.2. Market Structure and Modal Advantages

The respondents' opinions about how the market structure affects the transport solutions, demand, and supply vary significantly. The differences depend on what is perceived to be the relevant market (see also the dimension called "Shipper Behaviour").

Horizontal Analysis

Most actors⁴⁴⁷ state that they appreciate a highly competitive market structure, even in their own segment (on equal terms). Some respondents say⁴⁴⁸ that unfair competition is present in the freight transport market from time to time and from segment to segment. As described in Dimension V, the actors appreciate competition, since (i) competition is considered to stimulate and be a driving force for the firms' development, (ii) the respondents, who seldom own the firm, are more interested in having a stimulating job than a maximised profit (iii) the respondents think that the firm has a competitive advantage over the competitors (iv) as one carrier⁴⁴⁹ said, it does not have a nice ring to it to say that you prefer to be a monopolist.

Based on interviews with shippers and all types of carriers, it can be concluded that the railway industry competes with the trucking industry for "small" volumes and/or short distances. For "large" volumes and long distances²⁹⁰, it mainly

²⁹⁰ The length of them has not been important here. It all depends to a very high degree on external factors like regularity, infrastructure, etc. and, therefore, a certain distance is

competes with the maritime industry, where the infrastructure conditions make this possible. Some shippers said that the railways are most efficient on a national level, and that their competitiveness regarding international traffic is limited⁴⁵⁰.

The vast majority of the actors⁴⁵¹ state that the freight transport market is characterised by significant forms of inertia. Inertia affects the market structure dynamics. Reasons mentioned for this inertia are, among others, personal contacts, geographical knowledge, and where employees live.

In section 7.1.1, it was made clear that many actors, when discussing competition, refer either to the number of companies in the relevant market or to the market outcome.

Shippers

The shippers' opinions about the market structure among the carriers²⁹¹ vary considerably, among other things, depending on mode(s) used, OD-relation studied, and the respondents' view of what constitutes the relevant market. The large company groups seldom work closely within the group to optimise freight movements. This affects how they perceive freight transport market structures. The company groups seldom use the aggregated volumes in their tendering processes, since, (i) they do not believe that the freight transport costs are important enough⁴⁵², (ii) it would limit their freedom of action to select the operators that suit their business best⁴⁵³, (iii) there is inertia in the relations with the coordinators and carriers presently used⁴⁵⁴.

One shipper⁴⁵⁵ said that he “*prefers four or five equally good [operators] than hundreds that cannot offer anything*”²⁹². By this statement, the shipper puts the finger on a very important aspect of competition dealt with by several different theories of competition (e.g. the IO-perspective/contestable market theory, and the R-A theory), viz. that the market behaviour is more interesting than the number of participants in the market for the market outcome. Another shipper⁴⁵⁶ was reasoning in similar terms. Many other shippers⁴⁵⁷ spoke about the intensity of competition as closely related to the number of participants in the market.

The shippers' opinions about the market structure depend, among other things, on the time and effort spent when selecting freight transport solutions. The effort

impossible to state. In some special circumstances, naturally, the train might also compete with the shipping sector over short distances and with trucks over long distances.

²⁹¹ The material as regards the shippers' opinions about the market structure that the coordinators are working in is very limited. The few sources available do not give a uniform picture and, therefore, conclusions cannot be drawn in that segment.

²⁹² “...vill ju hellre att det finns fyra fem likvärdiga än att det finns hundra som inte kan erbjuda något”.

spent on this depends on aspects such as how important the freight transport solution is to the company, the financial strength of the company, and the transport costs/goods value ratio.

The shippers⁴⁵⁸ using the railway describe their freight transport policy in positive manners in stating that: *we care about the environment, or, we do not want to contribute to environmental pollution more than necessarily*, but they also stress that the movement has to comply with other demands regarding service and price. Shippers use the railway mainly for domestic freight movements. It can, thus, be concluded that the railway sector has a major competitive advantage, in the eyes of some shippers, over its competitors in the road-carrying sector in being more environmentally friendly²⁹³. The conclusion to be made from the interviews with shippers using the railway as a mode of transport is that they often feel a considerable “warm glove effect”. The strong position of the railway, in these cases, clearly affects the shippers’ perception of the intensity of competition on the market.

Coordinators

Some coordinators⁴⁵⁹ say that even though they regard the competitive situation as tough in their market, they expect it to become further intensified in the near future. This depends on (i) an increase in the number of competitors in the market, and (ii) the existing coordinators becoming more competitive.

The coordinators’ role is quite different from the carriers’ in several aspects. The differences in the types of service they perform affect how they, as well as the carriers and shippers, view their market. Furthermore, these views are affected by the fact that the coordinators do not have to be physically present close to the goods. The coordinators can, basically, have their office anywhere, and, using information technologies they can monitor and manage the freight flows from a distance. Some coordinators⁴⁶⁰, though, stress that in reality, the advantages of being physically present, or at least represented at several locations, often outweigh the costs. Coordinators working on an increasingly internationalised market, characterised by low barriers, often have a hard time to decide who their competitors are and what the market structure looks like.

Some coordinators⁴⁶¹, almost straightforwardly, said that the markets for coordinators have been, and to a greater or lesser extent still are, of an oligopolistic, or even monopolistic, type. Even though they have been working in such a market structure, they say that the profits in the industry are far from the ones one would expect in market with such a low degree of concentration. The

²⁹³ If this is correct, it is something completely different. It might be, but it is not necessarily so. The important thing is, however, that the shippers (and most likely also the end customers) understand it in this way.

reasons for this are many, but the most important one is likely to be the low entry barriers to the market, either through starting a new business, expanding an existing business, or by moving from one segment to another. The market structure is, therefore, to be considered workable contestable.

Carriers

Carriers (and coordinators) could be expected to rather easily switch from working in one geographical market to another. However, such switches (or expansions of the business) among the carriers, as reported by several respondents⁴⁶² seldom occur. Some carriers state that, to switch, or expand, their focus of their business, they require reliable indications of high profits⁴⁶³ in the new market. The respondents mention several reasons for this behaviour. Among the most frequent ones are:

- The risk involved in entering a new market and, if necessary, abandoning the old market⁴⁶⁴
- Moral contracts⁴⁶⁵
- Lack of knowledge of the market and the customers⁴⁶⁶
- Personnel considerations⁴⁶⁷

Barriers prevent firms from entering new markets. This results in fewer competitors working in the markets characterised by high barriers, than in those with lower ones. Some carriers⁴⁶⁸ suggested that one reason for not entering into a market was that the “incumbent” firms would use a price-cutting strategy, or another form of strategy, to drive the new carrier out of the market again. This would make the investment unprofitable. Therefore, some carriers say that a market is not entered before one knows that the customer base is sound.

Road Freight Industry

One road freight carrier⁴⁶⁹ points out that his company strives to find the balance, where it makes as much money as possible without attracting other carriers to enter the market. The idea, he said, is that the competitors should find it not worthwhile to enter the market considering the effort and the risk.

Rail Freight Industry

The railway carriers’ market structure is, according to themselves and other carriers⁴⁷⁰, when viewed from an intramodal perspective, often almost monopolistic. One respondent⁴⁷¹ held that such a close perspective seldom is interesting. The railways, almost always, face intermodal competition, and, therefore, they seldom work in a monopolistic market, according to him.

Water Freight Industry

Most shipping markets are characterised by few participants, but intense competitive pressure, according to the respondents⁴⁷². This is, according to the

carriers, due to the shipping market's special characteristic to handle large volumes and that they have lowered the marginal costs. Furthermore, the market is viewed as adaptable, according to one shipper⁴⁷³. This has an effect on the market structure and the competitive pressure in the market. A respondent⁴⁷⁴ from the shipping industry commented upon the low profitability of the business saying: "*Unfortunately, shipping and many other sectors easily over-expand. Decisions are made in a good market situation when you and the banks are optimistic!*"²⁹⁴

Vertical Analysis

Regarding the "market structure"²⁹⁵, as viewed from a vertical, channel-perspective, few things can be concluded. All case studies, as described and studied in this thesis, consist of several parts and they are, in most cases, loosely structured. The "channel is never stronger than its weakest part" are words of wisdom that are important when studying freight transport channels. The market structure for the channel can often, but not always, be regarded as synonymous with the most restricted market structure. Since one part might be monopolistic while another is perfectly competitive, it seldom makes sense to set up a market structure for the channel.

Many actors⁴⁷⁵ say that the freight transport market by and large is built up by local, from a product or geographical perspective, monopolies. Local monopolies result, according to some actors, from carriers successfully having developed and used a competitive advantage, which supports the way competition is viewed by R-A-advocates. Carriers, however, seldom behave as monopolists in trying to gain monopoly profits. This behaviour, to provide a competitive offer in a monopolistic market, can be explained by the freight transport market being workable contestable. The carriers⁴⁷⁶ hold that even if they have a monopolistic market position, this situation is very contestable, and, therefore, it is a fragile market situation.

7.8.3. Opinions about the Railway

The railways (read: SJ) engage most parties independently of whether they are shippers, coordinators, carriers, or "the man in the street" more than the other modes of transportation. Among the reasons for the interest in the railway is, according to one carrier⁴⁷⁷, probably the fact that it has been, and in many observers' eyes still is, the people's railway.

²⁹⁴ "Tyvärr är det så att shipping liksom många andra sektorer har lätt för att överexpandera. Man fattar beslut i en bra marknad när man själv och bankerna är optimister!"

²⁹⁵ The term market structure is within quotation marks, since the channels can hardly be considered to be one single market. However, it makes sense to talk about the freight transport channel as a market, since it, from the shippers' perspective, is often viewed as one market.

Shippers and Coordinators

Many shippers talk, spontaneously, about the advantages and disadvantages of the railway as a means of transport. Many shippers⁴⁷⁸ say that the railway has the potential to become more important as a mode of transport in the future and they, and others⁴⁷⁹, say that they would be glad to use the railway to a larger extent than they do at present, but for different reasons this is not possible. One shipper⁴⁸⁰ pointed out that he, much to his amazement, only once had been contacted by an SJ-representative²⁹⁶. He did not think that SJ was interested in performing the movements for his company even though he regarded the goods to be suitable for the railway.

Many negative opinions about the railway were brought up in the interviews. Shippers and coordinators point out reasons like the following for not using the railway:

- The reliability (punctuality) is too low for national⁴⁸¹ and international⁴⁸² movements
- The prices for the full channel movement are not competitive⁴⁸³
- The flexibility is insufficient⁴⁸⁴
- Mixed cargo is not accepted⁴⁸⁵

One shipper⁴⁸⁶ active in the food industry held that the international movements are difficult, since the national railway companies and administrations focus on national railway movements.

The pros brought up by shippers and coordinators concerning the railway and its services are:

- The environmental issues⁴⁸⁷
- The security and low risk of accidents⁴⁸⁸
- The capacity⁴⁸⁹

One shipper⁴⁹⁰, who, at the time of the interview, was using a water carrier in the channel, contemplated using the railway instead. The reason was that the railway's prices are "significantly lower" and that the water carriers have a drawback in the rules that they have to follow. Another shipper⁴⁹¹, who was using the railway in the channel investigated, stated that "*it seems as if the railway is something that everybody talks about, but nobody gets around to using!*"²⁹⁷.

²⁹⁶ This shipper had railway tracks at the industrial premises (but I do not know if they were in use).

²⁹⁷ "Det verkar som att järnväg är något alla snackar om men ingen får till!"

Carriers

A difference is found between coordinators and carriers working in channels where the railway performs one part and those taking part in channels where the railway is not represented. The former are far more positive to the railway than the latter. However, no group is entirely positive to the railways and their performance. Among the drawbacks that these respondents find with the railway is the low adaptability and the lack of resources (i.e. personnel and rolling stock). Some carriers taking part in railway-channels⁴⁹² said that they were pleased with the railway's representation.

One road freight carrier⁴⁹³ regarded the railways' problem as a priority problem in stating *"Within the EU, first priority is given to passenger traffic. As long as this is so we do not believe in any flourishing future prospects for the railway"*²⁹⁸.

One railway representative⁴⁹⁴, who used to work in the road-carrying segment for many years, responded to a question regarding how he had experienced the shift in mode: *"It was difficult! Very, very difficult and sometimes it beats me even today!"*²⁹⁹ What he had in mind was the modes' different planning horizons. He said that while the trucking industry acts with short notice, the railway, for natural reasons, needs a long planning phase. He further analysed the railway's problem in the following way *"... there is a history that the railway is the railway of the people and therefore, it should not cost anything... We do not live in such a world anymore! You have to cut the old umbilical cord and start over again... It was such an outcry when Green Cargo raised the prices in order to make money!"*³⁰⁰

One railway carrier⁴⁹⁵ said that the intermodal competitive situation is sometimes unfair. The respondent said that the railway is supposed to operate in every part of the country where it, for infrastructural reasons, is possible, otherwise *"...all hell breaks loose"*³⁰¹.

Thus, actors of all kinds are eager to discuss the railway, its problems, and possible solutions. Many opinions refer to the railways future and the conditions given to the mode. In Table 22 below, some similarities and differences between

²⁹⁸ *"Man har inom EU förstaprioritet på persontrafik - så länge det är så tror vi inte på att tåg har en blomstrande framtid"*

²⁹⁹ *"Den var mycket svår! Mycket, mycket svår och ibland begriper jag inte något än idag!"*

³⁰⁰ *"...det finns en historik att det här är hela folkets järnväg det skall inte kosta något... Vi lever inte i den världen längre! Man måste klippa av den gamla navelsträngen och börja om på nytt igen... Sånt ramaskri det var att Green Cargo höjde priserna för att de ville tjäna pengar!"*

³⁰¹ *"...blir det ett jävla liv".*

the shippers', coordinators', and the road and rail freight carriers' views are shown.

Focal Variable	Shipper	Coordinator	Road Carrier	Railway Carrier
Opinion	Diverging views. Users are positive. Others negative. Many see a large potential in the railway.	Users are positive.	Very diverging opinions. They often view the infrastructure and the operator as one unit.	Positive, but critical to the conditions given.
Benefits	Environmental aspects.	Environmental aspects, capacity.	Capacity, external effects.	Price, capacity, quality.
Drawbacks	Quality, infrastructure.	Quality.	Quality, infrastructure.	History of being the "people's railway". Infrastructure (single track and passenger priority).
	The common view is that the potential of the railway is large and that there is much talk about the railway (from politicians), but little action. The diverging opinions about the railway services' quality are striking.			

Table 22. The actors' view of the railway

7.8.4. Entry Barriers

The barriers are of importance for the competitive situation, since they influence the competitive pressure and the market structure. In the following section, entry barriers are discussed in three, partly overlapping, groups. The first group consists of what traditional economic theory regards as *the* barrier. Here, this group of barriers is called the *resource barriers* referring to the firm's resources in terms of land (geographical aspects, infrastructural aspects, etc.), personnel, and the financial matters. This group also includes barriers such as contracts. The second group consists of *mental barriers*. The mental barriers are risk aversion and attitudes toward changes. Thirdly, closely connected to the other forms of barriers, are barriers that refer to the actor's traditional business. This form of barrier is here called an *alignment barrier*. This alignment barrier is, for instance, associated with business expansion in a geographical- or a product dimension and customer loyalty.

The interviews reveal that the barriers are of different importance and magnitude for the groups of actors analysed in this thesis, as will be described below.

Shippers

The shipper must overcome some mental barriers to alter a transport solution that does not work satisfactorily. Some shippers⁴⁹⁶ report that such mental barriers are quite high. Even when channels work unsatisfactorily the shippers regard the risk

involved in taking measures to improve the solution as too high relative the potential benefits. The mental barriers blocking the shippers from altering an existing freight transport channel are in some cases significant. The shippers' mental barriers influence modal choice as well as carrier selection.

As discussed in section 7.4.2, some channels involve irrationalities in form of warehouses, etc. adding little value to the channel. Such irrationalities imply unnecessary costs for the service. This is well understood by shippers having such warehouses₄₉₇ and they state that other reasons might justify the warehouses' existence. Shippers and coordinators pointed out that keeping the warehouse in a transitional period, might be necessary not to lose market shares. What is irrational from a freight transport channel perspective might, thus, be rational from another perspective. In the long run, however, the shippers maintained that this situation will not last, due to the inducement of unnecessary costs.

Coordinators

The most important entry barriers for the coordinators are resource barriers in terms of capital, knowledge and contacts, etc., and, to some extent, alignment barriers restricting them to widening their market. As discussed in Dimensions 7.4.2 and 7.7.5, many coordinators said that for personnel working in a coordinating agency these barriers, to start a competing business, might be low since they know the market. They can break free to start a competing business on a certain market. They, then, take the customers with them, which is possible, since they have the competence as well as the contacts necessary. This is a possibility for the individuals while it might be a problem for the coordinators.

One coordinator₄₉₈ brought up a problem that illustrates a resource barrier. He said that their shipment might be removed from the aircraft to make space for another coordinator's/shipper's shipment, if the air carrier, for some reason, prioritise the other customer (i.e. the larger the resources in terms of volumes, value, etc. the lower the risk of their goods being removed).

Carriers

Railway carriers report significant mental and alignment barriers, while the economic barriers are perceived to be lower₄₉₉. The mental barriers might be found in the shippers' and the coordinators' hesitation to use the railway, but it also regards the railway carriers' hesitation to widening their business. In the road freight segment, the picture is less homogenous. Large carriers₅₀₀ are not affected to the same extent by mental barriers as the small carriers₅₀₁. The relatively speaking lower risk that a large carrier is exposed to as compared with the smaller is one of the reasons brought up for this pattern.

Based on the interviews, the size of the carrier often seems more relevant for finding out what barrier is important to what carrier than the mode/segment they represent. The “large” carriers seem to be less prevented by barriers than the small ones. This is true about all types of barriers. The small carriers have, for natural reasons, more restricted visions regarding their future undertakings and possible expansion. They face mental barriers since the large carriers’ customers state. They face resource and alignment barriers since they do not have the resources (neither do they have the knowledge nor the economical resources needed) to widen their market.

7.8.5. Remarks and Conclusions

It is often problematic for the actors to say what market structure they are active in. Coordinators and carriers have problems defining what competitors work in the same segment as the focal firm. Competition is most intense over a limited period of time (during the tendering process), and, therefore, the respondents hold that it is hard to say who their competitors are. Respondents, typically, do not care about what market structure the segment focused on belongs to. What is important to them is that they treat the market in the best possible way so that they can reap the harvest of their effort and work.

The coordinators’ market structure was, above, said to be workable contestable. However, for the rest, few conclusions can be drawn regarding the market structure that the carriers, coordinators, and freight transport channels work in. This is due to, among other things, the large variety of markets existing in freight transports. Since it covers such a broad spectrum of movements, and movements performed by many different forms and types of carriers, all kinds of market structures exist.

The actors seldom fear fair competition, since they believe that they are superior to the (potential) competitors in some respects. The “market structure” that is preferred from the actors’ point of view, regarding the areas where they have their business is not the structure of monopoly, neither is it “perfect” competition, since this would not leave the focal firm better off than any other firm in the industry. The dominating perception regarding the competitive situation among carriers, coordinators, and shippers is that it depends very much on the geographical aspects.

The railway sector can, based on the actors’ comments, be said to work in a market structure between duopolistic and monopolistic competition. No above-normal profits are made and, an individual carrier’s price changes have moderate effect on the market. However, naturally, the market structures of monopoly and (almost) perfect competition also exist on some relations. Even when the shippers

have preferences favouring the railway, these are generally not strong enough for anyone to view the railway's market situation as a monopolistic one.

Generally, firms will, from a profit-maximizing perspective, prefer to be exposed to less competition than more. What market structure the actors prefer also diverges depending on their role. Shippers, as buyers of the freight transport service, prefer a situation where they have several alternatives regarding what coordinators and carriers to use. This, then, calls for them to prefer a competitive situation among the coordinators and carriers respectively. These matters are further developed and discussed in Appendix IV.

As reported above, many respondents desire a market structure that is characterised by a few competitors, to “*keep them awake*” and to “*make it more challenging*”, but competition should not have an injurious effect on their possibility of making a profit negatively. This is obviously contradictory. Such a situation would be characterised as somewhere in-between oligopoly and monopolistic competition, but with a disproportional allocation of the market power in favour of the focal firm (or some kind of collusion between the companies in the industry). The actors are almost totally unanimous in saying that it is beneficial to them if their business partners³⁰² work in a competitive market, since this would benefit them as sellers and/or buyers of a service.

No conclusions can be drawn regarding the market structure for the freight transport channels, since the channel participants often perceive the channel as a loosely formed group, where the participants' knowledge about the other participants in the channel is limited.

7.8.6. Author's Comments

The freight transport industry can, in some segments and at some times, be characterised by a very intense form of competition (“cut-throat” competition or perfect competition) and in other segments, and at others times, by monopoly. Most freight transports produce a “by-product” in form of a backhaul. If the costs for the backhaul are covered by the headhaul, it is possible to end up in a situation where the price for the backhaul can be very low. Different strategies exist as to how this “by-product” should be handled. They differ based on e.g. the mode used, the OD-pair involved, the distance, the business cycle, and the head haul customers' demands. Since every penny that the carrier can make, *ceteris paribus*, by moving goods on the backhaul when some loading costs, etc. are covered, can be perceived as a profit, the carrier can “destroy” the possibilities for other carriers to offer a headhaul service on this market. The “backhauling

³⁰² This can include roles as shippers, coordinators, carriers, customers, and infrastructure providers.

carriers” are able to offer a very low price, thus causing a very intense form of competition. This is more or less common in all modes of transport.

Transport markets where road freight carriers are usable are seldom carrier monopolies, due to low entry barriers. In the road freight markets, it is possible to find all types of classical market structures from monopoly to (almost) perfect competition. The development in the last few decades, with mergers and acquisitions, has resulted in a declining number of coordinators and carriers in many markets³⁰³.

In the shipping sector, the economies of scale are large. The cost for operating a ship is not proportional to the size of the ship. The shipping sector is, therefore, well suited for the “good times” when demand peaks. The aviation sector, on the other hand, cannot afford to have such an overcapacity when demand is low, and, therefore, it is adapted for a more moderate demand. This implies that the shipping market only lacks capacity in quite extreme situations, while the aviation market has under- and overcapacity respectively, from time to time.

Actors taking part in several markets must treat the markets differently as far as the market structure is concerned. If not, they will not be able to optimise their competitive behaviour. From the case studies, it is clear that many coordinators and carriers talk about competition and competitive pressure in “their” market, thereby referring to every segment that they are active in. In a tendering process, many investigate the segments more carefully. However, in their every-day work, and on ongoing relations, they could benefit from treating the markets differently depending on the actual and potential market structure.

For a market to be (perfectly) competitive, its barriers should be “low”. In freight transports, the barriers are seldom low. But, still, some segments show characteristics that make them look competitive. There are many forms of barriers that must be considered, not only traditional economic barriers. The barriers might benefit, as well as be detrimental to the actors (of all kinds) in freight transports. This thesis indicates that mental barriers are often more important than what has been realized earlier. The mental barriers are often treated carelessly in economic studies. They are very important for the market dynamics and, therefore, they need to be treated more carefully. If the barriers are not perceived correctly, the risks might be misunderstood, resulting in unwise decisions and strategies.

³⁰³ See, for instance, general industry statistics given by SIK/SCB.

8. ANALYSIS OF EMPIRICAL MATERIAL – FUNCTIONAL DIMENSIONS

In this chapter, the functional dimensions, i.e. competitive pressure and surfaces of competition, are discussed. The discussion and the analysis of these dimensions have three different foundations. Firstly, the “raw data” from the interviews influence the way that the functional dimensions are analysed, described, and regarded in the same way as the structural dimensions were discussed. Secondly, the analysis is structured and influenced by the conditions and requirements given to the freight transport market and how it works, according to theory. Thirdly, the analysis uses the worked-up data presented in the structural dimensions as a foundation for the discussion and the results presented. This procedure is in accordance with Figure 9 in chapter 4.

8.1. Dimension VIII: Competitive Pressure

Competitive pressure, as experienced by coordinators and carriers, stems directly as well as indirectly from shippers. It stems indirectly from shippers since the shippers’ choice affect which the service suppliers’ actual and potential competitors are³⁰⁴. If the carrier does not comply with the shipper’s demands, the shipper can consider moving, shutting down the business, or taking other measures affecting the carrier. The findings presented in this section imply that most actors involved in, or depending on, a freight transport channel have a motive for trying to alter the competitive pressure that they face.

8.1.1. Perceptions of Competitive Pressure

Horizontal Analysis

Many shippers and service suppliers working in, or depending on a freight transport channel wish for the competitive pressure in the market to be different from what they perceive it to be. This was made clear in the structural dimensions.

Carriers and coordinators feel the competitive pressure’s intensity directly and/or indirectly. When it is felt indirectly, shippers or coordinators inform them about,

³⁰⁴ The shipper can e.g. choose another supplier of raw material or whatever the freight transport channel concerns, implying that the coordinators and carriers compete with another setting in a region far from their market.

for instance, their perspective on the service suppliers' competitors and their strengths. As reported in the structural dimensions, some respondents pointed out as a risk for the participants, that once the shipper looks closer at one of the channels' participants, for whatever reason, he often, simultaneously, takes a closer look at the other links in the channel, too. This puts an indirect pressure on the channel participants.

Shippers

Many shippers₅₀₂ stress that they benefit from the coordinators and carriers being exposed to competitive pressure. The reason is that an efficient pressure forces the operators to offer the "right" price for the service given the quality. Some, however, state that the pressure also affects the quality in a positive way, and others say that it influences the development of the services in a positive direction. Many shippers₅₀₃ perceive the pressure that coordinators and carriers face as intense, while others₅₀₄ regard it as weak. These differences seem to depend on the industry that the shipper is working in, and what requirements he has on the coordinators and carriers. Those having special demands/requirements, limiting the relevant market, often regard the competitive pressure as low. The fact that the intensity of the pressure varies in segments indicates that the freight transport market, in this respect, is monopolistically competitive. A fact that further supports this perspective on the monopolistic competitive market structure is that many coordinators and carriers₅₀₅ say that they use service differentiation in their efforts to become successful. Such differentiation might involve the service's qualitative aspects, as well as the price.

The perspectives of the future development, 5-10 years from the dates of the interviews, of the competitive pressure differ widely. Some₅₀₆ believe it will increase, while others₅₀₇ are of the opposite opinion. One reason mentioned by representatives of the former opinion is the internationalisation product markets as well as freight transport markets. The advocates of the other opinion believe that MAs will continue and result in a more concentrated freight transport market. Such concentration is, in their view, synonymous with a decreased competitive pressure.

One shipper₅₀₈ pointed out that even though the number of competing carriers was fairly small he perceived the competitive pressure to be high. Such a perspective, separating the competitive pressure from the number of participants in the market is unusual.

The shippers can affect the service suppliers' perceptions of the competitive pressure in several ways connected to the tendering process. This is done when selecting the coordinators and carriers to be invited to the tendering process. Closely related to this, is the frequency of the shippers' (re-)tendering of the

service. According to one shipper⁵⁰⁹, frequent re-tenderings are sometimes “*just for show*”, which can be viewed as a way to describe power. The demands made in the tendering process affect the service suppliers’ perception. Several shippers⁵¹⁰ say that they use information and communication to let the operators feel that their position is challenged, and that they are well-informed about the market.

From the shippers’ responses, it is clear that their perceptions regarding the intensity of the competitive pressure depend on the tendering process used. If the services are tendered and bought individually, competitive pressure is perceived differently than if it is bought as one full channel. If it is bought in the latter way, the pressure is affected by the carriers’ need to be contracted by the coordinator. The shippers regard the competitive pressure to be more intense if the channel is bought as separate units.

Coordinators

Coordinators and carriers influence how their competitors perceive the competitive pressure in several ways, for example to (not) enter a market, follow a new strategy, or to use direct or indirect information.

As discussed in the structural dimensions, coordinators, to a large extent, conform to the carriers’ perspective when they act as service suppliers. However, they are also able to conform to the shippers’ perspective when they act as the ones demanding a service. Coordinators expose carriers to competitive pressure in the same way as shippers expose coordinators and carriers to competitive pressure.

One coordinator/carrier⁵¹¹ said that he did not face tough competition, since his company “*knows where the competitors are*”³⁰⁵. Two coordinators⁵¹² said that once the contract is signed, they did not face any pressure and only some during the tendering process. Some large, often international, coordinators⁵¹³ said that they face intense pressure. Small, in-house or local, coordinators⁵¹⁴ often regard competitive pressure as less intense, but seldom as weak.

Many coordinators⁵¹⁵ think that the carriers are under intense competitive pressure. Mainly, this refers to the price pressure. Few differences are found between the coordinators’ perspectives. Differences found regarding the intensity of competitive pressure are linked to the product segment that they are active in. Some coordinators⁵¹⁶ hold that carriers working in the mixed cargo segment are exposed to the toughest pressure.

³⁰⁵ “...vet var vi har konkurrenterna”.

Carriers

Representatives of the road freight industry generally perceive competitive pressure to be more intense than representatives of other modes. However, rail⁵¹⁷ and water carriers⁵¹⁸ also report intense competitive pressure in the business as a whole, even though the channels studied often, according to the respondents, are characterised by less intense pressure. As discussed in the structural dimensions, carriers with backhauls in another carrier's headhaul direction exert an extensive competitive pressure.

The rail and road freight industries experience pressure from intramodal as well as intermodal actors. The water freight carriers have a heterogeneous view, but many⁵¹⁹ find the pressure from other modes to be significant in some segments and low in other segments. Many road freight carriers⁵²⁰ stress that the pressure from other road freight carriers is far more intense than the intermodal pressure. Many carriers, representing the road as well as the rail freight industries, say that the competitive pressure from the intramodal competitors was easier to tackle than the pressure from intermodal competitors. Competitive pressure from intermodal carriers was regarded⁵²¹ as more complicated and harder to respond to, since its basic characteristics, are more or less unique to the mode. Some carriers⁵²² say that when the shipper tenders a service, asking other modal representatives to state their offers, they perceive that the shipper already had made up his mind to switch to the other mode. The differences in the characteristics of the modes, and to some extent between carriers representing the same mode, clearly limit the competitive pressure felt from intermodal alternatives.

Respondents that own the carrying firms⁵²³, stress that they would appreciate a reduced pressure. Such a development would make it easier to make money and develop the service. However, respondents of all types, owners or not, appreciate some kind of competitive pressure, since it helps the carrier to "stay awake".

As reported above, many road freight carriers think that they are under very intense pressure. The pressure, they say, forces prices downwards and reduces profits. Other road freight carriers⁵²⁴ perceive themselves as more fortunate than the average carrier in the industry. They regard themselves as working in a market that is characterised by low pressure. The reason would be that they are the market leader, and, therefore, they often find themselves to be the "pressuring" part. Those "fortunate" carriers state that they still have to provide a competitive offering to the shippers/coordinators in order not to jeopardize their market position.

Road carriers⁵²⁵ that do not regard the competitive pressure to be too intense, often say that they have competitive advantages making them unique in their

segment. Other road freight carriers⁵²⁶, however, said that the freight transport market that they are working in was under very intense competitive pressure.

Representatives of the water freight market report competitive pressure to be significant. The actors, who are working in quite different product/geographical segments, consider the industry to be exposed to intense competitive pressure. The maritime³⁰⁶ industry's respondents perceive competitive pressure as coming from intramodal competitors. The pressure from intermodal solutions is regarded as low. This perspective was, however, contradicted by one coordinator's⁵²⁷ perception of the water carrying market. He thought that the industry was not under any significant intermodal competitive pressure.

The railway carriers' perceptions of the competitive pressure they face differ. One carrier⁵²⁸ said that he did not face any intramodal pressure, only limited intermodal pressure. He said that the reason was the large volumes that the railway can handle. However, other railway representatives⁵²⁹ were of the opposite opinion.

Vertical Analysis

Freight transport channels are often put together by the shipper directly or by the coordinator, as individual participants. The carriers seldom work together to present a full channel service. Therefore, it is seldom possible to identify how intense the competitive pressure is on the channel-level. However, when it comes to the individual service suppliers in the channel the intensity of the competitive pressure is easier to handle and discuss.

Often, the shippers and the adherent freight transport channels'⁵³⁰ members stand united in their apprehension about the intensity of the competitive pressure that the individual service suppliers face. However, there are examples of channel members having opposite perceptions as well. In one case⁵³¹, the shipper said that the carriers were exposed to intense competitive pressure, while the coordinator, who was part of the same company group, regarded the pressure as low. In another case⁵³², the shipper viewed a carrier in the freight transport channel to be under intense intramodal as well as intermodal competitive pressure. The carrier in focus⁵³³ made clear that he found competition to be intense from intramodal competitors, while he did not find any competitive pressure from intermodal competitors.

³⁰⁶ Not including inland waterways.

8.1.2. Effects of Competitive Pressure

Horizontal Analysis

Efficient competitive pressure forces coordinators and carriers to offer a service where price is in proportion to quality. Service suppliers are aware of the risk of being substituted by other coordinators/carriers if they charge too much or provide a service with lower quality than expected/demanded. No above-normal profits are made in the industry.

Many actors report considerable variations in the competitive pressure over time. The closer to the tendering process the more intense the feeling of competitive pressure, according to several carriers. This is one likely reason why many shippers⁵³⁴ prefer short contracts (one year or less). The drawback of short contracts is that investments in the service can be low, and that the time-consuming and expensive tendering processes are frequent. At the beginning of a “long” contract, carriers seldom perceive pressure as intense. However, coordinators and carriers know that they are replaceable at any given time during a contract period.

Shippers

Shippers often, but not always, appreciate intense competitive pressure within the groups of operators, since it, normally, means that they are receiving a lower P/Q-ratio. Some shippers⁵³⁵ held that intensified competitive pressure on the service suppliers does not necessarily benefit the shippers. One shipper⁵³⁶ held that coordinators and carriers, if the competitive pressure is intense, often focus too much on this war of competition, and forget the demanders. However, intense competitive pressure is, often, beneficial to shippers, at least in the short run. They benefit from lower prices than they otherwise would face. In the long run, however, one shipper⁵³⁷ and one coordinator⁵³⁸ said, it might be detrimental to them through absent efficiency improvements.

Coordinators and Carriers

As has been made clear in the structural dimensions many service suppliers hold that it is stimulating to work in a market that is exposed to competitive pressure. This might affect the service in a positive direction, according to them. However, on the other hand, it might take much time and effort to keep an eye on each other, which might be detrimental to service development. Thus, the effect on product development and product quality from competitive pressure is, according to the service suppliers, double-edged.

From the structural dimensions, it is clear that the shippers' and the coordinators' *expected* behaviour strongly affects the pressure felt by the carriers. Carriers seldom perceive their position as not threatened at all. As reported above, many

carriers say that they have a competitive advantage and, therefore, the pressure felt is moderate. However, this advantage is seldom found to be strong enough to let them make monopolistic profits.

8.1.3. Internal and External Pressure

Internal pressure results from other channel participants and from the focal firm's own organization. External pressure results from other sources like shippers, coordinators, and carriers external to the channel, interest groups, Governments, etc. Since internal pressure, thus, involves vertical aspects, this section is not split up in a horizontal and a vertical analysis.

Shippers

Some shippers⁵³⁹ say that they actively expose the channel participants to pressure in order for them to improve their service. They typically say that this is best done when re-tendering the service/channel. Such a pressure is, thus, in the borderland between internal and external pressure. Furthermore, they have an ongoing dialogue with the participants to make sure that they understand that they are continuously on the alert for changes in the market.

Coordinators and Carriers

For the individual carrier, internal competitive pressure from other carriers is regarded as relatively "harmless". Carriers often care only about their own service, and do not put pressure on other channel participants. Even when carriers look upon the other parts of the channel, i.e. their potential or natural working areas, competition is very limited. As discussed in the structural dimensions, some carriers would be happy to expand their role in the channel, but this wish seldom comes true.

Most channels and relations investigated are based on formal contracts⁵⁴⁰. For this reason, many coordinators and carriers regard competitive pressure as periodical. The risk to lose a shipper during the duration of the contract is often considered as negligible. However, it is only negligible given that the coordinators and carriers work hard during the contract period to continue to offer the shipper a high-quality/cheap service. Otherwise, the service supplier risks losing the service during the contract period or at least reduces his chance of being re-contracted. Many carriers⁵⁴¹, therefore, stress that they cannot "relax" at any time. The service suppliers, thus, have to continuously use and develop their competitive instruments and strategies in order to improve the efficiency of their service in the competitive environment.

8.1.4. Remarks and Conclusions

The actors' perceptions of the competitive pressure depend on many aspects. The analysis also shows that perceptions vary between, as well as within, different groupings of shippers, coordinators, and carriers. Service suppliers seldom regard

competitive pressure from the channel's perspective, but rather from the individual firm's perspective. A few respondents discuss the channel's service and its competitive pressure. Shippers only discussed this perspective. A few shippers viewed the channel as one unit, while others viewed it as individual service suppliers working in a sequence.

The road and water freight carriers' perception of the competitive pressure often refers to pressure from intramodal competitors. One reason why it is not likely to expect competition between several rail freight carriers on the tracks, as mentioned by one shipper⁵⁴², is the extreme economic barrier. Another barrier mentioned⁵⁴³ is the lack of rental/leasing rolling stock.

Many actors view the competitive situation as tougher when few operators compete than many. This contradicts the general, neo-classical perspective on competition. The perceptions support the (imperfect) contestable market theory, where the number of firms is irrelevant for the experienced competitive pressure. Thus, the "actual" market structure and the number of operators are not the most relevant aspects for determining the competitive pressure experienced by carriers.

Shippers are more concerned about being able to put pressure on the carriers, than coordinators. Furthermore, carriers view the competitive pressure as far more intense than shippers and coordinators in their general opinion of the carriers' industries.

Many service suppliers, mainly representing the road freight, but, to some extent, also rail and water freight industries, find competitive pressure to be intense in many market segments. Whether the pressure comes from intra- or intermodal competitors, potential or actual competitors, whether it is real or imaginary, is not important as long as a carrier perceives the pressure as affecting his position. Further, the pressure might originate in empty return trips, technological improvements, price cutting, and efficiency improvements. The intense competitive pressure, as perceived by the participants of the market segments, suggest that many freight transport markets are perceived to display contestable market behaviour. Many actors hold that profitability is low in the industry, prices are under constant pressure, and there is an everlasting struggle to improve the service to gain a (temporary) competitive advantage. The first two findings suggest that there are contestable market outcomes without the conditions for contestable market being fulfilled. The third finding can be interpreted as the carrier trying to break free from this situation. Parts of the freight transport markets, thus, seem to be, at least, workable contestable. Shippers and coordinators quite often agree on the carriers' description of the freight transport

markets, but, in other cases, they hold that the profitability and the competitive pressure in the industry are not in accordance with the carriers' descriptions³⁰⁷.

8.1.5. Author's Comments

Competitive Pressure – Effects and Perceptions

As reported above, even fortunate carriers considering themselves to be market leaders, putting pressure on other carriers, feel that they need to try hard to further develop their offering to stay in a prominent position. They more often say that they feel competitive pressure from potential than from actual competitors. This is typical of a market that is, approximately, contestable.

In section 7.2, it was reported that coordinators can improve on their offerings by attracting new, and/or getting more jobs from old, customers. More shippers lead to higher power of attraction and more negotiation power in contacts with carriers, this attracts more shippers and so on³⁰⁸.

What the effects on competitive pressure are from mergers and acquisitions in the road freight industry in the last few decades is doubtful. The competitive pressure and the number of firms do not correlate as highly as is often assumed in literature. Competitive pressure will, thus, be affected differently in different markets, and, therefore, it cannot be said that fewer firms imply a less intense competitive pressure.

There is a conflict of interests as regards the actors' objectives, which influences their perceptions of competitive pressure and its effect on the market outcome. This conflict can be described using the classical principal-agent setting. The terminology is helpful to explain and describe the inertia found in the freight transport market. The reasoning is, to a large extent, based on the dimensions regarding shipper behaviour and the actors' motives and objectives. All service suppliers have a (long-term) necessary, minimum objective to cover costs. This objective should be offset to the shippers' objective, which is not to pay too much

³⁰⁷ The freight transport channel markets are less often contestable, since the interchannel competition generally is weak. Competition occurs on actor level and only seldom on channel level.

³⁰⁸ This is obviously, for coordinators, a positive circle. Why, then, are there several coordinators in most markets? Economies of scale, in terms of more attractive offerings by the carriers, exist, but, they are quite modest. This is most likely true, at least after reaching a certain level. The economies of scale are clearly increasing, but at a decreasing rate after reaching a minimum efficient level (the low profits in the business indicate that this can be true). Furthermore, the carriers would not benefit from ending up in a monopsonic (many sellers, but one single buyer) market structure. Partial explanations can also be found in the inertia in changing partners in the market. The shippers tend to hold on to their coordinator/forwarding agents for personal, traditional, sentimental, and/or uncertainty reasons or for more hard fact reasons like wanting to avoid switching costs.

for the transport services, given its quality. Those groups' objectives are often in conflict. The shipper does not want to pay service suppliers more than their reservation prices. The shipper, i.e. the principal, wants the service suppliers, i.e. the agents, to perform the freight transport service. The principal does, however, not know how hard the agents work³⁰⁹, what their costs are, etc. and, therefore, what their reservation prices are. To a large extent, this principal-agent problem is about asymmetric information. In a relation, the agent gets important knowledge of the principal and vice versa. This, at least partially, explains the usual long-term relations, and the importance of social relations and traditions described in the analysis. Inertia is, thus, a form of premium that the agent receives for having information about the principal (and sharing information about himself), and about the channel's characteristics and function. Furthermore, heavy costs are associated, to both parties, with searching for, tendering, and switching agents. To avoid such costs the principal is willing to pay a premium to the agent. The agent, on the other hand, is motivated to continue cooperation with the principal, and the other agents, as long as the utility derived from the relation is large enough.

Effects from Changes in Competitive Pressure

The analysis of the structural dimensions shows that the effects from altered competitive pressure depend on several factors. Some effects likely to occur are discussed below.

Increased competitive pressure affects different actors, levels, and forms of competition differently. Changes in political demands and laws/regulations influence intermodal competition more than intramodal competition, since a certain measure often affects the (domestic) carriers representing the same mode in a similar way. Other measures affect intra- as well as intermodal competition. Still other measurements influence specific carriers, while others affect the whole freight transport channel. However, when pressure increases, their competitiveness is altered, and, therefore, they have to take action to stay competitive. If pressure decreases, the carriers' competitiveness is improved, which they might benefit from. However, such behaviour is likely to attract other carriers to the market. If the competitive pressure increases, *ceteris paribus*, the following effects may occur:

- The service becomes cheaper
- The quality of the service improves
- The number of niche-companies increases (since focus is on finding a competitive advantage)
- The actor/channel takes some efficiency-increasing and/or cost-reducing steps

³⁰⁹ The monitoring costs would be far too high.

- Carrier profits decrease
- Companies are driven out of the market

It is harder to draw general conclusions about likely effects from decreased competitive pressure. The reverse effects from the section above will not necessarily turn out. As in the case above, reduced political demands and changed laws/regulations influence the intermodal competition more than intramodal competition. Decreasing pressure can come from carriers withdrawing from the market or an increasing demand for freight transports, but also from reasons, which are not directly linked to the number or the size of the market participants. Independently of the reason for the decreased pressure, the following effects are likely to occur:

- Services become more expensive
- The quality of the services is reduced
- Fewer efficiency-increasing and/or cost-reducing measures will be taken
- Carrier profits increase
- New participants are tempted to enter the market
- The shipper looks for a more attractive solution
- It can be difficult for shippers to find carriers for their shipments

I stress that it is neither optimal to perform market checks very often nor is it optimal to wait to long between checks. Even though it can appear to be unnecessary to check the market when the channel works in a satisfactory way, it might be a good idea to make the participants feel the competitive pressure.

8.2. Dimension IX: Surface of Competition

In this section, surfaces of competition are analysed and further discussed.

When investigating competition in the freight transport market, to decide whether firms share a surface of competition, the relevant market must be considered, since it affects and influences the channels' and actors' views of competition. Taking the relevant market into consideration implies several things. It is necessary to consider the service demanded and its characteristics, such as geographical aspects, and product needs. However, the relevant market also depends on the subjective aspects of the respondents, such as their social network of contacts, their traditions, and values and moral. The analysis of the structural dimensions showed that many such subjective and semi-subjective aspects are most important for the perception of the freight transport markets and their characteristics. Even though the importance of such subjective and semi-subjective aspects can be highlighted, considered, and described, they can never be made fully predictable.

Horizontal Analysis

Shippers

The shipper must compare the characteristics of diverging modes, carriers, and services offered to be able to decide what carriers/services belong to the same surface of competition. Companies can share a surface of competition even though their offerings diverge considerably, and one service can belong to the same competitive surface as shutting down, or relocating the business. A carrier benefits from offering a service with a certain characteristic, while the service might have a drawback in another characteristic. Therefore, carriers, or coordinators/channels, with quite different characteristics can share a surface of competition. The shippers must compare many characteristics of the offerings. This regards qualitative, quantitative as well as subjective and semi-subjective ones. From the shippers' perspective, it can be seen that the surfaces of competition are often found at different levels. Carriers A and B might in general share a surface of competition. However, when it comes to a specific relation, they might not, due to their respective characteristics.

As discussed in the structural dimensions, many shippers regard the freight transport market to be highly competitive on some relations, while other relations are characterized by less intense competition, or even monopolistic situations. Some shippers are dissatisfied with the competitive situation. Some stress that competitive pressure is low (i.e. many relations are characterised by few actors sharing a competitive surface). According to some of them, this is a result from the markets being split among and within the modes, while others say that their demands make the surfaces small. Advocates of the former opinion, thus, blame the limited surfaces of competition on the market, while advocates of the latter opinion say that they are themselves to blame.

Shippers seldom compete actively to attract certain service suppliers. One reason for such behaviour is found on the supply-side. Coordinators and carriers can, in most cases, rather easily expand their business to meet a larger demand. Service suppliers can, of course, change their offering by, for instance, raising the price if they see that several shippers compete for their service. However, the case studies do not support such behaviour in reality. Furthermore, the fact that shippers never seem to compete about the service suppliers' services can be interpreted as the market being characterised by excess supply. In part, this might be so, but the behaviour is probably also a result from traditions, and formal and informal contracts.

The channel/carrier selection process is, to a large extent, a behaviouristic problem. This regards re-tendering of a service as well as new-tendering. Inertia, as perceived by shippers, can be found on, at least five, partly overlapping, levels. These are (i) the tendering level, where inertia is about actually performing a

tendering process, (ii) the solution level, which regards how, and if, the movement should be performed from a holistic perspective, (iii) the level discussing the intermodal choice, (iv) the carrier selection level, and, last, but not least, (v) the individual level. The inertia found on these levels clearly limits the shippers' perception of what solutions are sharing a competitive surface.

Coordinators and Carriers

Whether competition is real or not, is a complicated story to tell. If two freight transport solutions compete or not, in the eyes of the shipper, depend on factors such as infrastructure, demands, preferences, etc. Even though alternatives exist, a solution's competitive advantage can make these alternatives unimportant to the shipper, and, therefore, they might not be considered to belong to the same competitive surface. The alternatives' existence can, even though they are not regarded as close substitutes by the shipper, result in a competitive pressure forcing the, by the shipper, preferred channel (and its participants) to act competitively.

Besides the traditional ways for the operators to distinguish themselves from each other (i.e. developing a competitive advantage) they have, in the last few decades, developed competitive advantages in "new" variables. These variables, stressed by many carriers⁵⁴⁴, are environmental issues and information technology. According to carriers, and to some extent coordinators, shippers often claim quality, service, and price to be the most important factors when choosing mode and carrier. However, if the "soft" variables, as discussed in the structural analysis, which some shippers say serve as "entrance conditions" to be a shipper's potential service supplier, were not as important as they are, the outcome would have been different. Due to the requirements on these "soft" variables, some service suppliers⁵⁴⁵ say that they do not necessarily belong to the same surface of competition as other coordinators/carriers offering a comparable service.

As discussed in the structural dimensions, with the exception of the railway, the intramodal surfaces of competition are far more common than intermodal ones. Intermodal surfaces of competition are seldom viewed in a symmetrical manner. Mode A might, for instance, perceive mode B as its toughest competitor, while mode B does not regard mode A as a competitor of significant interest. Thus, surfaces of competition are often unidirectional.

The extent to which intramodal and intermodal competitive surfaces are shared varies considerably. The infrastructure and the geographical conditions limit the intensity of competition. Some actors⁵⁴⁶ think about freight transport solutions in intermodal terms, but the majority does not. This affects how the freight transport movements are performed, and how the channels and their participants are

selected. Sometimes, surfaces of competition are strongly affected by the shippers' and coordinators' prejudices. In particular, it is obvious from the structural dimensions that the railway suffers from its history. Some shippers⁵⁴⁷ stress that they have tried using railway services and not found them as competitive as other solutions, even though this might be ten years ago or more. However, they still bring up these experiences when discussing the railway's possibilities in intermodal competition. Whether these opinions are unfounded will not be answered unless the railway gets the chance to perform the service.

Many actors say that the railway struggles with the same variables as the other modes to attract shippers and coordinators. It will, thus, have to be competitive in terms of price, service, capacity, and quality. The main drawbacks that the shippers and coordinators perceive the railway to have are: poor reliability especially regarding international movements, inadaptability, and the fact that it does not handle break bulk. The advantages, on the other hand, are often stated to be its capacity and the fact that the railway is perceived to offer an environmentally friendly service.

As discussed in the structural dimensions, the railway benefits from being an "environmentally friendly mode". This competitive advantage limits the competitive surfaces that the railway shares with other carriers. Even though this competitive advantage seldom is the main reason for selecting the railway as a carrier, it definitely gives the railway's users a "warm glove"-feeling, as discussed in the structural analysis. The role that this competitive advantage plays is more obvious among shippers planning to use the railway, given that certain conditions are met, than among shippers currently using it. Shippers who have begun to use railway services in the last few years⁵⁴⁸ stress the environmental advantages.

Vertical Analysis

From the interviews, it can be concluded that shippers use freight transport channels to a large extent, but they are seldom bought as channels "ready for use". Within the channels, once they are set up, neither cooperation nor competition among the participants play an important role. The channel shares competitive surfaces, fully or partially, with (i) other channels formed by other coordinators, (ii) carriers working together in a more loosely structured group, and (iii) carriers offering a partial solution to the service demanded.

There are few vertical similarities between the channel-actors' views of the surfaces of competition. This is, however, seldom a problem. Since the participants' roles in the channels in most cases are clearly defined, and they often view the channel as a series of services, they seldom find the channel to share any competitive surface with other solutions to the shippers' needs. They,

therefore, seldom have, or need, a common perspective (regarding a channel-based strategy and a common approach to handle the relations) of the channels' surface of competition. The channel participants seldom perceive the channel as more than a loose structure, which the coordinator/shipper uses in order to organise freight flows. The interchannel competitive surfaces are, therefore, almost nonexistent, while the channel's participants can share competitive surfaces with other service suppliers.

8.2.1. Remarks and Conclusions

Horizontal Analysis

Competitive pressure from steps taken that are beyond the actor's control, effects the actor's perceptions of the competitive surfaces. Such measures result, for instance, from decisions made by service suppliers, subcontractors, consignees, or politicians.

Competition among the service suppliers is limited due to historical reasons and social relations and personal selling. Such soft variables are often important for shippers' choice of supplier. Shippers often explain this behaviour by stating that they know what they have, but not what they get if they change carriers/coordinators. This inertia results from such risk-avert behaviour. Whether such behaviour is rational in the long run is impossible to say. The established relations offer security, which, obviously, is one of the most important competitive advantages an operator can have. The shippers thus, restrain competition! This strike back at the shippers, since they, by this behaviour, pay a premium to the established coordinators and carriers.

One important finding is that inertia, its role and consequences, in the freight transport industry are obvious at many levels. It is, though, important to be aware of the fact that inertia often, but not always, as regarded from the shippers' perspective, is negative. It can be an obstacle for the development of the channel and the solution to the shippers' needs, but it can also have positive effects as a deepened cooperation and to make well-founded decisions.

Shippers

To a great extent, the shippers' assumptions, and preconceived thoughts about the freight transport market, the service suppliers, and their services affect the competitive surfaces shared and this limits competition in the market.

Carriers

Most railway carriers report sharing competitive surfaces with road freight carriers, even though some also say that such surfaces are shared with water carriers. The intramodal surfaces of competition in rail freight transports are few,

even though they exist and on some relations, according to a few carriers and shippers.

Since the road freight market covers such a large part of the total market, all types of market structures and very varying competitive surfaces can be found. The intramodal surfaces of competition are often extensive, and many actors perceive them to be extremely dominating for most road freight relations. However, many stress that intermodal competition also is extensive on some relations and in some submarkets. The most commonly mentioned mode to share a surface of competition with the road freight carriers is the railway. To some extent, however, the road freight carriers also share a competitive surface with carriers of segments of the aviation industry (not least the trucking part to/from other European airports) and segments of the water carrying industry.

Most water carriers also find that the most important surface of competition is intramodal. Regarding intermodal competition, they often state that they share competitive surfaces with railway carriers to a larger extent than they do with road freight carriers. The surfaces of competition between water carriers and the air carriers are few, even though such surfaces exist.

8.2.2. Author's Comments

Channels are often set up and formed for a specific tendering process or a specific transport need. Therefore functioning channels are seldom to be regarded as direct competitors, since they rarely belong to the shipper's actual choice set. Shippers, the buyers of the service, make demands on the service suppliers. How tough these demands are, depends on the surfaces of competition. Shippers with few alternatives might have to adjust their demands accordingly. Carriers must take several aspects into account in forming their offering. They seldom take the surfaces of competition, considering supply and demand, and the other channel participants' influence into account in forming their offer. Many carriers seem to be occupied, almost exclusively, with the costs of the service when putting together their offering. The coordinators' perspective is somewhat different. The coordinators are "the spider in the web", with relations that they have to take care of with suppliers as well as demanding parties. In this role, coordinators often understand that they have to listen to the different requirements, but they think that they can make demands on both shippers and carriers.

The view presented by the majority of the respondents regarding the concept of competition is more in line with the concept surface of competition than the traditional meanings of competition, which focus on the conditions and the outcome of competition. The surface of competition, on the other hand, also refers to the process of competition.

Even though the actors studied work in some type of partnership, this partnership is often limited regarding information sharing, development of a channel-competitive advantage, and having enough insight into each other's businesses to take efficiency improving measures for the channel's own good. One conclusion from the in-depth interviews is that the carriers seldom work in stable, clearly defined, long-term relations with other carriers. As a consequence, the vertical analysis of the dimensions is far less extensive than the corresponding horizontal analysis. I think that channel competition would be more efficient if the channel participants worked as one unit.

As reported in section 7.3.7, economies of scale and scope are considerable for many service suppliers in the freight transport industry.

Shippers sometimes spend resources on optimising one part of a channel (or elsewhere), while the service could benefit more from other improvements. The same line of reasoning could be used to stress that the freight transport system on the whole could benefit more from improvements in other channels or on other relations³¹⁰. Therefore, many shippers could benefit from viewing the freight transport system holistically instead of trying to optimise the parts of the freight transport system. They could, for instance, benefit from viewing the system in terms of intermodal solutions, location of the manufacturing industries, and (not) using warehouses.

Modal surfaces of competition are more common than intermodal ones. Often, this is quite natural³¹¹. There is a common view that only a very small portion of the road freight movements competes with railway movements. If the actors had a broader perspective, they would see that this does not have to be true. If it is possible to use another geographical route, the railway might, at least indirectly, be a (potential) competitor. For two modes to share a competitive surface, they do not have to be parallel. Therefore, channels can belong to the same competitive surface even though the carriers, who often have a far more narrow view, do not understand that the carriers in the channels do not view each other as sharing a competitive surface. Even politicians and decision-makers can make the "wrong" decision, since they comprehend the market too narrowly.

³¹⁰ Even broader, it could be stressed that the resources could benefit the shipper even more if they were spent on other parts of the firm than transports. It might, as one shipper said, from the business perspective, be more advantageous to spend the resources elsewhere in their business to get the best possible outcome.

³¹¹ Take, for instance, the road freight industry – for a carrier in this industry to share a competitive surface with the railway, the infrastructural presumptions must be fulfilled and the movement will have to be of a certain minimum length.

PART D

CONCLUSIONS & DISCUSSION

Don't let it end like this. Tell them I said something.
Last words of Pancho Villa (1877-1923)

Part D, which consists of one single chapter, ties up the thesis in presenting its results and conclusions. This part discusses and contrasts the empirical and theoretical findings. The concepts of competition are discussed vis-à-vis the buzz of the industry and the case study analysis. In this part, the overall conclusions are presented and the research questions are answered. Part D concludes by pointing out some areas where research can play an important role to develop and elaborate the competitive issues in the extremely important field of freight transport.

9. CONCLUSIONS

This chapter consists of six sections. Section 9.1, discusses, compares, and contrasts the empirical material with the theoretical findings from chapter 2. The following section, i.e. section 9.2, compares the empirical findings from the main study with the findings from the contextual study. Section 9.3 deals with conclusions and conceptual developments. It also gives short answers to the research questions. Section 9.4 is devoted to my comments and some of the most important findings. These findings are presented as hypotheses. Section 9.5 gives a short discussion of the thesis' quality, and lastly, section 9.6 brings forward suggestions of topics for further research.

When reading this chapter, it should be kept in mind that even though the material, on which this thesis is based is extensive, it only constitutes a small fraction of the population of freight transport channels. The triangulation between case studies, interviews, theoretical investigations, and the contextual study, however, makes the results' reliability high.

9.1. Comparing Theory with the Empirical Findings

This section has a restricted number of references. For more extensive theoretical references regarding the theoretical concepts discussed, I refer to chapter 2.

9.1.1. On Competition

Here, the theoretical concepts of competition and their applicability to the complex phenomenon of competition within and among freight transport channels are further discussed. The comments refer to the concepts' usefulness when studying competitive issues in such channels and their usefulness when studying other competitive phenomena in the area of transport economics.

The theoretical concepts of competition have proved to be of very diverging importance for explaining competition in the setting discussed here. This is reflected in the different space those concepts are given below, in the comparison between theory and reality as discussed in the empirical material.

There is a wide range of concepts of competition that are usable to a certain degree as discussed above. No single concept explains the competitive process and the market outcome in a fully satisfactory way. One of the most important

reasons is that different forms of inertia affect all types of actors heavily. Inertia is found in many forms and on many levels. It is often an “asymmetric process” favouring the carriers when demand decreases, or supply increases, since they can hold on to the contract and its conditions. But, when demand increases and/or supply decreases inertia might be unfavourable to the carriers. The reason is that it might be difficult for the carriers to adjust their offering according to the changed market structure that might allow higher prices and/or other conditions. Inertia affects the dynamic process of competition, as well as its outcome. As will be discussed at the end of this section I find a combination of the R-A theory and the theory of (imperfect) contestable markets to be powerful for analysing competition in freight transport channels. Such a combination is helpful to gain insight into the role inertia plays in the process and the outcome of competition.

The theoretic concept of competition that has most explanatory power regarding competition within and among freight transport channels is the RA-theory. The theory makes it possible to explain the competitive behaviour without all the constraining assumptions that most economic concepts rely on. As will be seen below, many of these concepts can, however, be defended because they do not aim at explaining competition on a firm level, but rather at explaining industries and on aggregated levels.

Theory of the Core

The theory of the core (see Telser, 1988), has little relevance when analysing the freight transport market from the perspective used here. Economists regarding the underlying assumptions made in the traditional neo-classical analysis as unrealistic can find the theory helpful in explaining competitive phenomena. It seems to be more relevant as an alternative to traditional economic analyses when investigating the market on a higher level of aggregation than the firm/channel-perspective used here.

Keynesian and Post-Keynesian Competition

The Keynesian view on competition (see, for instance, Tsaliki & Tsoulfidis, 1998), is useful for analysing the rules and conditions the market is given regarding taxes, subventions, etc. The concept has little relevance in the setting investigated in this thesis. Keynesian competition can be used in answering questions like: How should the conditions, e.g. financial matters or regulative changes, be altered for a desired change in the modal shares to take place?

Marxist Competition

The Marxist view on competition, see e.g. Semmler (1984), Marx (1990), or Lind (1992), has little relevance when analysing issues in a market economy. Furthermore, the relevance of the perspective is higher when studying the markets on an aggregated level than on a business level. The Marxist view is useful for criticising the willingness to intensify competition rather than

constructively analysing the topic. Such criticism is then based on the opinion that competition can be destructive.

The Classical Theory of Competition

Again, this is one of the more theoretical concepts, helpful in economic analyses. The classical theory of competition, see Tsaliki & Tsoulfidis (1998), is based on free mobility of capital and labour. Therefore, it can, for instance, be useful when analysing the effects of cabotage in the road freight market. The theory can be regarded as a “light” version of the theory of contestability in some aspects.

Neo-Classical Competition

The neo-classical competitive paradigm and the reasoning in terms of the traditional market structures are, above all for conceptual reasons, of importance in many studies on competition. Even though the theory can be criticised from a company/channel-perspective, parts of it are important for the conceptual treatment in, for instance, the well-known market structures. The neoclassical theory is developed to be used by economists in studies that differ from this one in the level of aggregation. The neoclassical theory of competition may be brilliant as a framework for such studies, but my point is, that, in studying competition from a company/channel-perspective, it is not. Descriptions of the paradigm can be found in most basic economics textbooks, such as Parkin (1990), or Begg, Fischer, & Dornbusch (1994), but also, from a more critical perspective, in Hunt (2000b).

As mentioned in chapter 7, when discussing competition with the respondents, it is clear that they are well aware of the forms, and the functioning, of the “extreme” market structures, monopoly and perfect competition. This intuitive feeling for these classical market structures can be helpful for benchmarking purposes. The neoclassical theory of competition, therefore, constitutes an important background material. It is important for conceptual and apperception reasons when analysing firms in the trade.

The neo-classical perspective on competition can be used for a discussion of the aggregates in the transport markets when the markets, at least approximately, can be assumed to fulfil the neo-classical conditions. However, if firms are not passive agents of the market forces, its use is limited. It should be kept in mind that the concept is supposed to be a framework, not to fit actual data perfectly. It is possible that many markets, other than freight transport markets, are rather well and correctly described using this classical masterpiece, on a high level of aggregation. However, when investigating competition on a less aggregated level, the neoclassical theory of competition cannot, in a satisfactory way, describe the process and the outcome of competition and competitive behaviour.

Workable Competition

The concept of workable competition in its original form, see Clark (1940), is not usable as a starting point for studying transport markets from a company/channel-perspective as is done here. The concept would be relevant in studies taking a legal perspective, since the concept treats legal limitations to free competition in a dynamic market.

The Social Structure of Competition

The social structure of competition, as described by Burt (1992), stresses the importance of social relations to explain competition. Focus is on social relations of the firm's individual members as well as the social structure as a whole. It combines the social relations of each member and the social structure of the firm. The case studies showed that the freight transport industry, to a large extent, is very personal. Personal selling is the most important part of promotion. It is common that key-persons leaving a carrier or a coordinator for another, or starting a new business, take "their" customers, i.e. the shippers' and/or coordinators', with them to the new firm.

The carrier/channel selection process is seldom based on purely rational economical bases, as discussed in Part C. Several shippers stressed that service characteristics and economical aspects were decisive for their selection of coordinator/carrier. In the same breath, they point out, somewhat contradictory, that traditions, history, and social relations are of great importance in selecting coordinators and carriers. This social dimension of competition is pointed out, not only by shippers, but also by coordinators and carriers. Many carrier representatives say that they do not pay, or get paid, "extra" for the social structure, but without it they would not have been selected as a partner in the channel. Many carriers think that they, in all probability, would not have been invited to the tendering process without being "known" to the shipper.

The social structure of competition does, in accordance with several other concepts of competition, not aim at explaining the phenomenon of competition fully. It rather contributes to the understanding of practical outcomes in pointing at the importance of knowing the "right" persons, etc. The social structure of competition is important. Besides its importance to point out the social dimensions of competition, it is also important to stress other variables' significance for the process, and the outcome, of competition. History and traditions are among those variables. However, other concepts, such as R-A theory, which take a broader perspective on the phenomena of competition, also capture the social structure of competition. Therefore, there is no need to discuss the concept social structure of competition more in detail here.

Theory of Contestable Markets

The IO-perspective on competition is useful when analysing the phenomenon as has been done in this thesis. The theory of contestable markets (CM), see, for instance, Bailey and Friedlaender (1982), Baumol (1984), or Levine (1987), which emerged from the IO-perspective, is not supposed to be a theory of competition. It should rather be viewed as a market structure. CM is useful to understand, explain, and interpret competition in freight transports. As I view it CM reduces the gap between theory and reality in explaining why real market outcomes seldom are fully described by the traditional neoclassical competition theory. The theoretical foundations underlying CM are *very* theoretical and the perspective used is the economics perspective. If the conditions, which were discussed in section 2.1, are relaxed somewhat, the theory can, in a powerful way, describe why markets, consisting of a few participants or just one, can show perfectly competitive characteristics. I therefore stress that the CM-concept is useful for studies of the kind that this thesis represent.

Conditions

The most troublesome condition underlying contestable market is that of the rigidity of incumbents as compared with potential entrants to the market. This assumption is hardly ever fully reasonable. The incumbents might work on a contract limiting their possibilities to raise the price during the contract period, but downward price adjustments are almost always possible, as long as these are not accompanied by a worsened service.

Technology in the freight transport industry is, according to many carriers and some coordinators, often accessible at a low cost (see chapter 7). When potential competitors are willing to expand their operations in the market, sunk costs are often low. In chapter 7, it was mentioned that carriers often, at a low cost, could start to work on a new relation, either as a complement or as an alternative to their existing services. Sound rental markets make the second-hand prices stable and reduce sunk costs. According to CM, entry barriers result from sunk costs, not from economies of scale. Incumbent firms in the transport market can quickly make downward price adjustments. As discussed in the analytical chapters, inertia characterises many parts of markets studied. Therefore, the market is “slow” in many aspects due to e.g. contracts, and imperfect information. Customers’ responses to price differences may be delayed due to imperfect information and contract periods. Thus, the carriers’ supply market, from a comprehensive perspective, can be regarded as contestable. However, relaxing the strict assumptions underlying the CM theory, many markets can be said to be “imperfectly” contestable. Many respondents bear witness to the fact that carriers’ and coordinators’ supply-markets show the characteristics that CM predicts, and the respondents often state reasons that are well in line with the CM perspective.

If the conditions underlying the theory are interpreted literally, they are never fulfilled in freight transports. However, if the conditions are interpreted somewhat more benevolently, they can be regarded as fulfilled. In Table 23 below, I present how well these conditions seem to be fulfilled for the different modes. The table primarily relies on the interviews, as mentioned in the main study, but the contextual study has also influenced the comprehensive impression given in the table. The characters preceding the comments in the table indicate whether they are based on the main study (MS), the contextual study (CS), or if they constitute the comprehensive impression (CI).

Mode	Road	Rail	Shipping	Aviation
Condition				
All producers have access to the same technology	MS: True in most aspects but large carriers can often afford expensive equipment. CS: All domestic carriers have access to the same technology. CI: True.	MS: True for national movements with domestic carriers. CS: Not true for international movements. CI: True for domestic freight movements.	MS: True, but the needs differ. CS: Often true but some infrastructural limitations may exist. CI: Partly true.	MS: True. CS: More or less true, some carriers are, however, prioritised over others at airports. CI: True.
This technology may have scale economies, but not sunk costs ³¹²	MS: True, since the market for used equipment works well. CS: Scale economies exist in the mixed cargo market (MCM). CI: True if the MCM is not regarded.	MS: The short supply of rolling material makes this assumption fulfilled. CS: - CI: True.	MS: In some cases sunk costs occur since regulations make some vessels unusable for certain movements. CS: - CI: Partly true.	MS: True. CS: - CI: True.
Incumbent firms cannot change their price immediately	MS: Downward adjustments occur. CS: Lagged downward adjustments are possible. CI: Partly true.	MS: Downward adjustments are possible but rare during a contract period. CS: - CI: Partly true.	MS: Downward adjustments are possible. CS: Conferences may hinder changes. CI: Partly true.	MS: Downward adjustments are possible. CS: Alliances may hinder changes in both directions. CI: Partly true.
Customers respond at once to price differences	MS: Inertia and contracts often imply a time lag in customers' reactions. CS: Many customers are price sensitive. CI: Partly true.	MS: Some state other reasons than economic ones for using the railway. CS: Price is important to most customers, but some are restricted from responding immediately. Often customers' respond is strong and immediate. CI: Partly true.	MS: The customers are price sensitive. CS: Some customers are more price sensitive than others. CI: Partly true. When a carrier dominates the market, the alternatives may, in the short run, be limited.	MS: The customers' price elasticity varies in segments based on products and needs. CS: Airlines compete in departures, not in prices. CI: Partly true – when there are reasonable alternatives.

Table 23. *The conditions underlying CM and the modes of transport*

³¹² Sometimes costs for developing the infrastructure could be regarded as sunk costs. The comments here disregard such costs.

The situation for the external coordinators can be assumed to be more or less the same as the road freight carriers' situation in the column above. Coordinators often have access to the same technology, which is characterised by economies of scale. The technologies are characterised by some moderate sunk costs, mainly in technology. For contractual reasons, it can be assumed that coordinators cannot raise prices easily, while downward adjustments are easier to make. This condition has a weak spot because changes should be realized immediately. Furthermore, also for contractual reasons, the fourth condition is probably not fulfilled when it comes to customers that the incumbent coordinator has a contract with. However, during a tendering process, this is most certainly fulfilled. The freight transport industry, to a large extent, works with short contract periods. As reported in the main study, some coordinators and carriers think that they face problems if they try to stop customers wanting to get out of a relation. Thus, the CM-conditions can often be regarded as approximately fulfilled.

The Contestability of Freight Transport Markets

Many interviewees said that segments of the freight transport markets are under intense competitive pressure, but they also held that local monopolies are often present. From the main study as well as the contextual study, it is clear that many coordinators and carriers consider themselves to work in a niche market, where they are their customers' natural choice. The coordinators and carriers often state that they, even though they have a strong market position, are not able to earn monopoly profits. The reason can be firms threatening to enter the market. The market, thus, shows contestable characteristics in at least two respects. Firstly, the coordinators and carriers make "normal" profits. The profits are high enough for them to stay in the market, but not high enough to attract challengers. The reason is that the challengers, in entering the market would have to face the incumbents' and the customers' reactions. Secondly, the inertia in the customers' reactions, depending on contracts as well as social contacts and mental barriers, makes the incumbent firms' position stronger than what their quality and price calls for.

Shippers, and their customers, do not always have clear preferences as to what mode to use. Therefore, contestability often must be viewed from an intermodal perspective. For instance, when investigating the market for railway services, the railway cannot be regarded as contestable from an intramodal perspective. But, since the railway, often, belongs to the same competitive surface as some road and/or water freight carriers, the railway could, from an intermodal perspective, be subject to intense competition, and, therefore, its market is contestable.

Some freight transport markets, thus have contestable characteristics. Several advocates of the road freight carriers argue that mergers and acquisitions increase price competition. The market structure is often reported to be more oligopolistic

than monopolistic and it is characterised by low barriers resulting from scale and scope economies. The case studies show that entry barriers often are mental rather than economic. However, several niche markets are not contestable. If a market is efficient from a competitive point of view, the offerings will, from a qualitative perspective, be in proportion to the price. The customers “get what they pay for”, and the coordinators and carriers do not make above-normal profits. Many coordinators and carriers say that this is so in their markets.

CM can be useful as a benchmark and, if the assumptions are relaxed, an “imperfectly contestable market theory” is useful in explaining the market outcome of competition. The IO-perspective, especially CM-theory, is useful in analysing issues as regards competition in freight transports. Independently of whether the conditions are fulfilled or not, effective potential competition results in market offerings that are almost “perfectly” competitive.

Relationship Marketing

The concept of relationship marketing (RM), see, e.g. Hunt & Morgan (1994a) or Gummesson (1997b), can hardly be called a theory of competition. However, all kinds of actors in the freight transport industry can benefit from considering RM-thoughts in the process of competition. Some coordinators and carriers stress that they try hard to take care of, and develop relations with other service providers and with shippers. Coordinators, more frequently than shippers and carriers, stress that they work actively with relations.

The importance of the relations for the success of a firm is stressed by RM-advocates. However, many other concepts also stress relations and their importance for the firm’s success, see, e.g. the social structure of competition, or R-A theory. One interesting feature of relationship marketing is that the concept seldom discusses competition without mentioning cooperation. The relations in a freight transport channel (and between the channel’s participants and the shipper) are complicated from a competitive, as well as from a cooperative perspective. However, the most important aspects in the RM-theory are also covered by the R-A theory, therefore the RM-concept will not be discussed in detail here.

New Concept of Competition

Moore (1996) states that competition occurs, not only on product level and firm level, but also on system level. I find the concept to be useful for longitudinal analyses of channels and interrelations. Table 24 below is based on Moore (1996). In the last column, I give my view of some possible areas of application in transports.

Stage of development of the business ecosystem	Leadership challenges	Cooperative challenges	Competitive challenges	Transport system application
Pioneering	Value	- Work with customers and suppliers to define the new value proposition	- Protect your ideas	- Test a new service or route, improved quality, etc. - Protect by patenting, trademarks, etc.
Expansion	Critical mass	- Bring the new offer to a large market by working with suppliers and partners	- Defeat alternative implementations of similar ideas - Dominate key segments - Tie up customers, suppliers, and channels	- Expanding the (hopefully) successful service, route, etc. to many of the company's products/services - Cooperate with other firms - Buy other firms, etc.
Authority	Lead coevolution	- Encourage suppliers and customers to cooperate in the future	- Maintain strong bargaining power-including key customers and suppliers	- Make cooperators and customers realize that using the firm will continue to be their best choice
Renewal	Continuous performance improvement	- Bring new ideas to the ecosystem	- Maintain high entry barriers and high switching costs	- Continue to do what the channel does best and develop the service - Tie customers and cooperators to the firm

Table 24. The business ecosystem and some transport applications

Evidence can be found that competition is taking place on the system level in some areas of transport. This regards, above all, road carrying organisations and mega-carriers. In such settings, internal competition is also present. As reported in the analysis, the respondents indicated a low activity when it comes to trying to make the channel more efficient and competitive, or to expand cooperation. The analysis, presented in part C, showed that competition is seldom present on a channel-level. Therefore, the concept's explanatory power when it comes to competitive phenomena within and among freight transport channels is limited. Since this investigation has not been longitudinal, it is not possible to say whether such behaviour has become more common over the years.

Resource-Advantage Theory

As have been understood from the discussion above, the Resource-Advantage (R-A) theory, see, for instance, Hunt (2000b), is the most useful concept for an improved view of the freight transport market from the perspective used in this thesis. The theory is, however, in my opinion, not flawless. For simplicity, and clarity, the concept is discussed based on the same dimensions that Hunt and Morgan (1995) use in comparing the theory with the neo-classical theory of competition, which is reproduced in Table 25 below. In the discussion below, some of these dimensions are treated jointly.

	Neo-classical Theory	Resource Advantage Theory
1. Demand	Homogeneous within industries	Heterogeneous within industries
2. Consumer information	Perfect and costless	Imperfect and costly
3. Human motivation	Self-interest maximization	Constrained self-interest
4. The firm's objective	Profit maximization	Superior financial performance
5. The firm's information	Perfect and costless	Imperfect and costly
6. Resources	Capital, labor, and land	Financial, physical, legal, human, organizational, informational, and relational
7. Resource characteristics	Homogeneous, perfectly mobile	Heterogeneous, imperfectly mobile
8. Role of Management	Determine quantity and implement production function	Recognize, understand, create, select, implement, and modify strategies
9. Role of environment	Totally determines conduct and performance	Influences conduct and performance
10 Competition	Quantity adjustment	Comparative advantage

Table 25. Neo-classical theory vs. R-A theory

Demand

The carriers involved in the main study regard the service demanded as complex, while the shippers and coordinators regard demand as homogeneous within broadly defined segments. Many carriers perceive demand as less homogeneous. Some stress that it is homogeneous in segments, where the segmentation variables are products characteristics and time. Actors, thus, regard the freight transport market as homogeneous in segments and it makes no difference if they are supplying or demanding the service.

The analysis in Part C shows that transport demand is homogeneous in the sense that every demanding party would like goods to be moved from one place to another, but in many other aspects demand is heterogeneous.

Information

The view on information varies considerably between the actors, even though no clear segmentation bases are visible. Some respondents consider themselves to be well-informed, while others consider themselves to be poorly informed. Many respondents regard information as difficult to come by. Being well-informed is demanding and implies that you have to spend much time retrieving information yourself and receiving it from different sources, according to many of the respondents. However, rather few respondents draw a direct parallel between time spent and the costs of receiving the information. The majority of the respondents, independently of their position, say that they would benefit from more and better quality of the information. Information, thus, cannot be regarded as costless and it is absolutely not perfect.

Consumer information is neither perfect nor costless for demanding parties. To a large extent the same is true for firm's information. It is often expensive in terms of time and money to find out different customer groups' demands.

Human Motivation/the Firm's Objective

The reason for treating the categories jointly is that the respondents' personal motives can hardly be separated from the firms' motives. This, which is a result in itself, is different when the respondent has some kind of ownership position.

Based on the interviews, but to some extent also on the contextual study, it can be concluded that neither the neoclassical nor the R-A theory is right about the firm's objective. However, using a less strict interpretation of Table 25 above, both can be said to be right. The firm's objectives are broader than what is assumed by either of the views. If profit maximization were the sole driving force for the carriers in the trade, many of them would close down. Many carriers report low average profits, sometimes even below the risk-free interest rate. To have a superior financial performance, which is what the R-A-advocates regard as the firm's objective, is a broader measurement than profitability, but, it can hardly be said to include "soft" values like well-being and the joy of being an entrepreneur and/or, as some respondents called them, "cowboys". From the analysis, it can be seen that actors often have as personal and firm objective to maximise utility from all types of benefits/satisfaction received by the person/firm. This includes monetary aspects for the individual, as well as the company, but also other aspects that an individual, or a firm, can benefit from.

Constrained self-interest is the dominating motive for the respondents. It can be constrained by, for instance, ethics and moral attitudes. Freight transport people are, to a large extent, true enthusiasts. The motive for staying in the business is seldom purely financial. Among the firms' owners, self-interest is more common than among employees who also stress other motives for staying in the business.

Firms' objectives for staying in the trade differ. Some have the over-all objective to maximize profit. Others aim at having a better financial performance than other firms in the business, or being superior to the company's alternatives such as closing down, or working in another niche. Still other firms' respondents say that their objective is "not more financially advanced" than to stay in the business. Even though the objectives differ much, all share the same, long-run objective, namely to maximize the owners' utility.

Resources and Resource Characteristics

Carriers and coordinators use many resources to improve their competitiveness. From the analysis, it is clear that behavioural resources are very important. Such resources can, for instance, be the personnel's contacts and their social networks. The process used when the firms employ new personnel manifests this. These are, to a great extent, recruited from the firms in the trade, and the contacts of the potential employee is often more important than his/her skills. Personnel/individual characteristics are, thus, very important in the freight transport industry. Several actors pointed this out. The respondents also fear that employees might very well start a competing company based on "their" customers. Further, traditions and relations between firms, employees, and customers play an important role in the industry. Among the resources used by the actors one finds capital, human capital, the relational network of the firm as well as its employees, labour, history/traditions, and the organisation.

The main difference between the views is that neo-classicists regard human beings and what they do as the resource, while the R-A-advocates consider soft variables, such as social networks (including the neo-classicists' view of the resources) and history to be the resources of the firm. Therefore, the R-A-view suits the transport market better, since soft variables are very important. In other variables related to capital, land, and financial resources, the differences between the views are less interesting for the purpose of this thesis. The resources in the freight transport industry are characterised as heterogeneous and imperfectly mobile.

Role of Management and Environment

The majority of the coordinators' and carriers' representatives view the role of the firms' management, and, in relevant cases, the management of the channels, as rather "simple". They should lead the firm and the channel to success, or, at

least, a status quo. This goal calls for clearly formulated business strategies in general and competition strategies in particular. Such strategies do not necessarily consider only the channel/service studied. It is, in fact, unusual to have a strategy regarding a specific channel or service performed within the channels among the cases studied. One exception is when the service involved in the channel is a large and/or very important part of the carriers' total business. In these cases the general business strategy and the service/channel strategy, typically, coincide.

The concepts are not mutually exclusive regarding the role of the management even though the R-A-view is somewhat more detailed in the description of what the management should do to be able to compete successfully. However, if the more vague description of the neo-classical perspective should be interpreted correctly, the word *determine* includes the specifications in the R-A-view. The R-A-perspective, however, has one important point in arguing in favour of changing the role if conditions are changed, thus pointing out the dynamic perspective on competition. Such changes could refer to the strategies used. Based on the freight transport channels studied, the environment seems to influence conduct and performance. Many characteristics were said to be important for the performance of the firms and the channel.

Competition

As a corollary from what was discussed above, the studies show that firms compete through developing, formulating, and implementing a well-formulated, and, in the firms, well-known, strategy as to how a competitive advantage can be created, developed, and how to stick to it. In an intensely competitive market, it could be enough for the firms to use quantity as the only competitive instrument. Such a market structure, however, seldom occurs in real life, since carriers distinguish themselves as regards many variables.

Based on the main- and contextual studies, it can be said that many actors consider competition to be an ongoing process aiming at finding/creating, sticking to, and developing a competitive/comparative advantage. This finding points out the need to view competition as a process. Even though it could be interesting to analyse and interpret a static picture in describing the outcome of competition, in number of firms and P/Q-terms, this can hardly improve the understanding of the phenomenon of competition.

Based on the interviews, it can, thus, be concluded that competition occurs in finding, developing, and sticking to a competitive advantage. The advantage is created by using the resources that the firm/channel has. However, this does not imply that quantity adjustments are not important from time to time in adapting the production to the market demand. In this dimension, again, it is clear that the

neo-classical perspective is static, while the R-A-perspective adopts a more dynamic view.

A comparison between R-A and neo-classical theories on competition, made by the originators of the R-A, is not fully correct and relevant, since the perspectives differ. To some extent, this makes them incomparable. The Neo-Classical view aims at pointing at the fundamental features of the issues of competition, principally regarding the outcome of competition. The advocates of the Neo-Classical perspective view competition statically. The R-A theory has, to a large extent, provided a deeper and more developed perspective on the dynamic process of competition. It is suitable for analysing phenomena of competition on a low aggregation level.

Reflections and Concluding Comments

As seen above, most theories of competition aim at describing/explaining the phenomenon from an economics point of view. Furthermore, the theories focus on simple products and not, as in this case, on complicated channels of services. This thesis is justified by the fact that many researchers view competition from an economist's perspective irrespectively of the research's perspective. Competition is, therefore, often thought of in terms of the neoclassical theory. This is also true for people in the trade and many decision-makers and politicians. This view results in a skewed and wrong picture of what competition is, how it works in terms of its dimensions, and where the surfaces of competition can be found. The incorrect picture leads to decisions, by companies as well as politicians, that prevent the potential efficiency improvements in the market from the politicians' and/or the company's managers' perspective.

The dynamic process, its effects, and the outcomes of competition can only in some rare cases be explained by using traditional theories. The reasons are many. Among the most important are that (i) those theories are based on assumptions that more often than not are unrealistic when analysing competition from a company/channel-perspective, and (ii) competition, to a large extent, refers to perceptions. Decisions made are, in many respects, based on the actors' subjective and intuitive feelings.

Resource-Advantage Theory and Contestable Markets

So far, this chapter has discussed the concepts of competition and their applicability to analyses of freight transport markets. Focus has been on the R-A theory, which benefits from being developed primarily for BA-problems, and on the CM theory. Most theories of competition give little, or no, guidance as to how complex phenomena, as competition in freight transport channels are to be viewed, interpreted, and explained. The R-A and CM concepts, however, turn out to be more useful than the others. The analysis showed that the R-A theory is

superior to explain competition within and among freight transport channels as compared to the other concepts. It is useful due to its perspective and the fact that it deals with the dynamic process of competition. The R-A theory has been examined almost in the same way as the analysis in part C. The concept of (imperfectly) CM is useful, principally for explaining the importance of potential competition. These concepts used in combination, make it possible to apprehend competition more correctly and knowledge can be gained of competition as a phenomenon in such complicated market as the freight transport channels make up.

The R-A theory is far less restricted than the neo-classical view on competition. It has superior explanatory power when discussing the process of competition as it occurs in the freight transport market. Its superiority is based on the fact that it regards competition as a process, and that it has a realistic perspective and focus is on one entity, or a few entities, in the market. Several other concepts also stress the importance of investigating aspects such as relations and organisational levels, but the R-A theory has a more holistic perspective on competition. R-A theory, however, has also its limitations when used as a tool for analysing freight transport channels. Even though the R-A-concept covers the most important aspects, it does not explain the market outcome satisfactorily³¹³. The market outcome, in price/quality-dimensions, often shows characteristics that are not in accordance with the number of companies in the industry, as it “should” be, according to the neoclassical view. This outcome cannot explicitly be explained by the R-A theory. To explain these outcomes, it helps to use the theory of (imperfect) CM to complement the R-A theory. CM points out and provides an explanation of real world phenomena, such as markets consisting of one single, or a few sellers, showing competitive market characteristics. Such phenomena are hard to explain using other theoretical concepts of competition. These phenomena can be explained by other theories that take potential competitors into account, but, none of them does it as powerfully as CM.

Thus, in short, R-A is important for explaining the process of competition and the market dynamics, while CM is useful in explaining the outcome of competition. I think that the most fruitful way to use the theories is to alternate between analysing the markets competitive outcomes and their competitive processes. For such an analysis to be powerful the phenomena of competition might have to be analysed using the both theories several times.

³¹³ It could, of course, be argued that the many aspects dealt with in the R-A theory, more or less indirectly involve such subjects, but due to the market outcomes, I find it necessary to point out some important aspects in another way. This regards, for instance, the importance of potential competition and the perceptions of the actors for the market outcome.

View on Competition

Economists often define competition as a “contest for command over scarce resources”. In the market for freight transport services performed by a channel, this scarce resource can have several sources. Shippers need to have their goods moved between an OD-pair. Service suppliers need to perform profitable jobs so that their business is justified from the owners’ point of view. In the former case, the resource that might be scarce is the service suppliers and their capacity given some assumptions regarding the services’ characteristics. In the latter case, the scarce resource is the jobs. Of course, other scarce resources can be identified in freight transport channel settings.

From the theoretical and empirical investigations, it is clear that theorists and practitioners view competition differently, since their perspectives differ. In short, competition from the theoretical point of view often refers to market outcome in terms of price- and quality-vectors, profit, and the number of competitors. The practitioners’ perspective on competition is highly focused on the number of coordinators/carriers working in the relevant market. For politicians and decision-makers to be able to change the market in the desired way, they have to understand the practitioners’ perspective on the surfaces of competition. Diverging views affect the decisions and the outcome of the dynamic process of competition. As described in Appendix II, the correctness of the views is of minor importance. Information about the alternatives, therefore, seems to be the be-all and end-all to achieve a theoretically “correctly” working competitive environment.

When coordinators and carriers discuss competition, it is often mentioned as a problem, not as an opportunity. The reason for this perspective on competition is, at least partly, based on the groups having to work under diverging conditions. The bases for these differences are mode and nationality.

Channel participants seldom improve the service until the shipper points out a problem. Many coordinators, carriers, and channels would gain in competitiveness by being pro-active. They could benefit from comprehending the shippers’ needs and suggesting solutions to them, preferably before the shippers see the problem. If the shipper is to take the first step, he has already begun to think about what can be done. Then, the risk that he might switch service supplier is higher than otherwise.

Many respondents made clear that they see their own, and other firms’, situation asymmetrically regarding expected benefits of competition. Shippers seldom believe that their customers would be favoured by intensified competitive pressure in the shipper group. On the other hand, many shippers think that an intensified competitive pressure among the coordinators and carriers that they are

using would favour them. A similar line of reasoning was found when talking with coordinators and carriers. In general, they do not see any large favours for their customers from a more intense competitive situation. Thus, the actors regard the possible gains from a more intense competitive pressure on the “level” they depend on as high, while they regard the possible benefits in the “level” that depends on their services as lower.

9.1.2. On Cooperation

Porter (1990) says in *The Competitive Advantage of Nations* that “*Swedes are taught to cooperate, not compete*”. If this statement is correct on average, then, the channels investigated are very international by nature, since this thesis shows that extensive cooperation between channel participants is rare. However, Porter has a point in stating that competition is limited, but, based on this thesis, it cannot be said whether this is a Swedish behaviour or not. To say that competition is limited is, at least, true for interchannel and intrachannel competition, as the analysis has showed. The international contribution to the structure and behaviour among Swedish carriers is substantial and important in many respects. The freight transport industry is a highly international industry, and borders, at least within the EU, are often of minor importance. This has become clearer in the last few decades, when barriers have been reduced or removed, and when the process of internationalisation of many markets has developed.

Many reasons can be given explaining why firms should cooperate from a theoretical point of view, as was discussed in chapter 2. Cooperation between firms can deal with a wide range of aspects. For instance, it could be an isolated case or a deep and long cooperation, information sharing of varying intensity, or mergers/acquisitions. Mentzer et al. (2000) point out the importance of the social network for a cooperation to be realized, and that the most important obstacle to cooperation is inertia in different forms. To a high degree, this thesis supports that conclusion. Carriers working in freight transport channels seldom develop cooperation with other carriers, as long as the channel works satisfactorily, and the carriers’ roles and obligations are clearly specified by the shipper or coordinator.

Intrachannel Cooperation

Cooperation, as well as competition, among the channels’ participants, in the vast majority of the cases studied, occurs on a superficial shipper/coordinator, more than on an operational carrier level. On the operational level, the need for cooperation is often reported to be low as long as the channel works as it is supposed to. Since an extensive cooperation on an operational level is rare, parts of the cooperative/collaborative issues, as discussed in chapter 2, do not prove valid for freight transport channels. Carriers often find issues regarding trust and commitment with, and among, other carriers in the channel to be of little

importance. They are more interested in issues that refer to their relation with the shipper and the coordinator. In the analysis it was stated that shippers mention trust and commitment as reasons for not using cabotage carriers or less well-known coordinators and carriers.

Cooperation is often superficial, and, therefore, respondents of all types have little scope for such issues. This lack of interest in cooperative issues is due to the carriers seeing little or no difference between their undertakings in channels as opposed to relations where they have the full responsibility for the service. Few carriers care about where they pick up and where they deliver the goods, as long as there are no disruptions in this process (i.e. as long as everybody in the channel does their job in a satisfying way). Some cases studied, however, report a deep and well-developed cooperation. Those cases are characterised by the respondents as not sharing any competitive surfaces and, therefore, they do not constitute any realistic potential threat to each other. Cooperation is easier in such channels, since the parties do not regard each other as competitors, but rather as partners serving the shippers. Furthermore, they seldom have information that they believe that the other party would find interesting.

The respondents mentioned several reasons for not expanding the channel cooperation. Among the most frequently mentioned ones were (i) unwillingness to share information, since it can be abused, (ii) legal aspects, (iii) lack of resources, and (iv) uncertainty about what might come out of the cooperation.

Working Together in Interest Groups

Cooperations in interest groups may improve the carriers' situation in the freight transport market. Such cooperations make them stronger in discussions with, for instance, shippers, politicians, and other types of decision-makers. Many carriers, principally in the road segment, report on the importance of such cooperations, which often, but not necessarily are intramodal. One carrier stressed the low profitability in the industry and he said that the freight transport industry was "*known to work for free*". Some respondents pointed out the banking industry as a good example of charging extra for additional services. Theoretically, a carrier could benefit more from not taking part in such cooperation if it is possible to be a free-rider. Then the free-rider could benefit from non-exclusive favours resulting from the interest groups efforts. They could benefit from the results without spending the costs associated with the cooperation, and, further, they could "create" a competitive advantage by being "independent" in the eyes of the shipper.

Carriers, and others, need to cooperate to be able to compete efficiently, regarding the channel's success, to be able to charge for additional services, etc. If firms are working together in a team, the team might not be successful if the

members work as individuals. However, if they try to reach common goals e.g. by cooperating or exchanging information, the potential for the team to be more effective, as compared with acting individually is great. This thought finds theoretical support in, for instance Sudharshan (1995). However, from the case studies, it can be concluded that cooperation is not a well-developed area in freight transports. This conclusion is based on the carriers' and coordinators' comments regarding their offerings, and, to some extent, joint service to the shippers.

Power

Power is a concept close to cooperation. The perception of what constitutes the foundation for the powering situation in freight transport channels is well in line with what theorists focusing on other industries discuss, see for instance Porter (1980), and Thorelli (1986). Many actors mention reasons like financial, technological, and trust/personal contacts as important for the powering situation, if, and how power is exercised. However, many shippers, coordinators, as well as carriers said that they neither were powering nor being powered by other channel participants.

9.2. Comparing the Empirical Studies

The conclusions drawn from the analysis of the empirical material are, in many respects, supported by the findings in the contextual study. This section compares the findings presented in the contextual study with those from the main study.

The contextual study and the main study have, at least partially, different types of advocates. While the main study discusses the views pointed out by the interviewees, the contextual study mainly deals with interest groups' views as discussed in different published sources. Among such interest groups are trade associations³¹⁴, politicians, shippers, and carriers. The contextual study is, thus, mainly based on secondary data, while the main study, exclusively, rests on primary data.

The "buzz of the industry" regarding the phenomenon of competition is dynamic. When the environmental consciousness increased in the 1990s, the railway was the centre of attention in terms of newspaper articles and other media coverage. When cabotage was introduced, much of the debate dealt with international comparison reflecting the conditions given to the haulers. The just-in-time, and, more recently, the supply chain management philosophy shifted focus to the

³¹⁴ One important reason for having trade associations, at least for the road, water, and aviation sectors, is that they should function as pressure and information groups. They are positioned "in-between" carriers and politicians/decision-makers. This phenomenon is striking in the road freight industry, but there are organisations, like, for instance, the Swedish International Freight Association representing all types of modes.

channel level. However, channels still get fairly little attention in the press and in the “buzz of the industry”.

9.2.1. On Competition

In this section, aspects regarding competition are discussed. First, similarities found are analysed, and thereafter the differences are analysed.

Similarities

There are many points of similarity between the contextual study and the main study. Both studies stress the importance of freight transport channels. Furthermore, both find profitability among carriers to be very low³¹⁵. The contextual study and many interviewees state that the average profitability of the carriers is low. This is partly blamed on the conditions that the sector has to work under, partly on the competitive situation, and partly on the carriers’ inability to charge for their services. Some respondents in the main study stressed that the differences over the business cycle are larger in the shipping sector than in the other modal sectors.

The contextual study and the main study point out the importance of fair competition. They also showed similar views on modal competitive advantages and disadvantages, and the characteristics of the freight transport buyers and their demands on the service.

The studies agree on where competitive advantages can be generated and lost. In international competition, such advantages/disadvantages can be achieved through legislation allowing a country-specific technological design of the vehicles. Competitive advantages are often to be found in qualitative aspects and in the price, but also in value-adding services and in the service provided by the supplier. It is harder to gain a competitive advantage than to lose one and, therefore, customer care is very important, according to both studies. Further, it can be observed that competitive advantages can be achieved in every variable that the coordinators and carriers control. Price is often mentioned as a very important variable in the process of competition by all categories of actors in the studies. Quality and service are principally stressed in the contextual study and by shippers as variables in which competitive advantages are obtained.

To a large extent, it can be gathered from the contextual study as well as the main study that the modes have natural markets regarding types of goods. The railway is, however, an exception. The railway competes with the road freight industry as well as the shipping industry. Markets where the railway does not face any intermodal competition are rare. The railway, which is frequently discussed in the contextual study, is reported to have its main advantages in environmental issues

³¹⁵ The aviation sector is excepted due to the limited material regarding this mode.

and, to some extent, in capacity. The drawbacks are mainly found in the reliability, the price of the railway service, and the fixed, starting- and end points that often require a complementary movement by truck. Capacity is considered to be a problem when the railway and the maritime industry share a competitive surface. Both studies show a “theoretical” willingness to use the railway to a greater extent. It is theoretical, since many say that it would have been used more “*if things were different*”. Therefore, this willingness is seldom put into practice. The “warm glove feeling” from using the railway, reported on in the studies, is due to the movement having low environmental consequences. The water carriers’ main disadvantages are found, according to both studies, in the handling of the goods at the ports, in the infrastructure, and in the insufficient departure times. The main competitive advantages, from the shippers’ perspective, are found in capacity and prices. The road freight industry is less homogeneous regarding the issues of competitive advantages and disadvantages than the other industries. This is made clear, principally in the main study. However, according to both studies, the main competitive advantage of the road freight industry is found in its accessibility, while an often-mentioned drawback is capacity.

Many articles in newspapers and trade journals stress that intermodal road/rail competition is limited as compared with the intramodal competition in the road freight industry. Anyhow, intermodal competition between road and rail is frequently discussed in media. The railway is given disproportionate attention in the “buzz of the industry” in relation to its market share. This interest reflects the environmental debate and the heavy governmental involvement in the mode. Furthermore, cabotage is not, according to the vast majority of the articles, a large competitive problem for domestic road haulers, but still cabotage is frequently debated in trade journals. Thus, it can be concluded that the areas discussed in newspaper articles do not always mirror the areas where the competitive action can be found.

Some obstacles to competition, which are often discussed by the respondents in the main study, but also to some extent in the contextual study, are taxes and charges imposed on carriers. Such discussions regard profitability in the industry, intermodal competition, and international competition. Few respondents, or secondary sources, point out the inertia in the market as an obstacle to competition. Some interviews, as reported on in the main study, however, reveal that inertia from the supply as well as the demand-side is viewed as a barrier to increased competition. Inertia results from shippers contracting coordinators and carriers for e.g. traditional reasons, but also from coordinators and carriers unwilling to enter a new geographical market or product market.

Differences

A distinct difference between the studies regarding the view on competitive advantages refers to the focus of the studies. Politicians, and other sources of information as reported on in the contextual study, often focus on international and intermodal competition. The main study shows, on the other hand, that the respondents to a high extent focus on national, or regional, and intramodal competitive situations. The case studies, which this thesis relies on, cover many different types and settings of freight transport channels and shippers with diverging demands, needs, markets, etc. Therefore, this difference is not likely to result from the cases selected, but it rather indicates a real difference in perspectives between the service providers and the opinions discussed in the contextual study.

While the contextual study, in many respects, discusses competition, and other phenomena, on an aggregated level, the main study, of course, focuses on the company, and channel level, but to some extent the aggregated level is treated there as well. This is clear when it comes to transport policy, where the contextual study, in the main, considers competition from an international and intermodal perspective. The international perspective refers to comparing the conditions that the modes are given as regards taxation and regulations. Trade associations, as reflected in the contextual study, focus on the conditions that the transport sector lives and works under from an international perspective. The contextual study often considers the EU transport policy, while the carriers' opinions refer to the national transport policy and the conditions given to the transport industry. The contextual study has a holistic industry perspective, while the main study, mainly, has a business perspective. In the main study, many carriers and coordinators focus on intramodal and regional conditions for competition. The carriers in the main study focus on the national conditions in terms of taxation, charges, technical requirements, and laws and regulations to be followed.

The sources covered by the contextual study often discuss intermodal competition, while the carriers with the exception of some railway representatives seldom treat this topic. The transport buyers often state that their primary interest is to have the goods moved to the destination and that the movement fulfils some basic characteristics. Intermodal competition is, from the shippers' perspective, seldom considered to be very important. Intermodal competition, thus, seems to be more attractive to politicians and interest organisations than to shippers, coordinators, and carriers. This difference between the studies, in their view on intermodal competition, is one of the most striking findings. It is, however, worth repeating that the contextual study and the main study do not represent findings from fully comparable groups.

The threats, and possibilities, from cabotage are discussed far more frequently in the contextual study than in the main study. The low interest among the respondents in the main study is likely to be due to the type of relations investigated. Since the thesis deals with “complicated” freight transport channels, and the services are not of a one-off type, cabotage carriers are seldom perceived as an alternative for the movements.

Infrastructure is far more intensely discussed in the contextual study than in the main study. Infrastructural conditions are discussed among politicians, interest organisations, and some carriers, as reported in the contextual study. Some coordinators and many carriers regard infrastructure as an external variable, which they may have opinions about, but not as a thing that they actively try to affect.

As reported above, the studies by and large agree about where competitive advantages are found and lost. However, politicians, trade associations, and service suppliers often view and discuss competition and its conditions from different perspectives. Politicians and trade associations, as reported in the contextual study, often focus on intermodal competition, international competition, transport policy, and combined transports.

9.2.2. On Cooperation

Channels are frequently discussed in both studies even though the term “freight transport channel” is seldom used. Many shippers said that a significant part of their movements involve some type of channel. The vast majority of movements involving water-, rail-, or air carriers are, of course, part of a channel. Both studies indicate that the shippers’ interest in channel-solutions to their freight movement problems has increased over the last decade.

Combined transports, involving the railway, are frequently discussed in the sources focused on in the contextual study, but more rarely in the main study. The interest in combined transports differs between parties. Politicians’ and interest groups’ seem far more interested in such solutions than the shippers. Combined transports can, therefore, be said to be more of a theoretical than practical interest.

It appears from the main study that several respondents bear witness to the importance of the freight transport channels. However, as stated above, the “buzz of the industry” seldom deals with such channels and, when it does, it almost exclusively, discusses channels involving the railway. The debate and decisions made by politicians and others often refer to the modes of transport. Many shippers stress that they are indifferent to what mode is being used as long as the characteristics of the movement comply with their demands.

9.3. Conclusions and Discussion

Most findings presented in this section are based on the main study, even though they often, as discussed above, find support in the contextual study as well.

9.3.1. Conclusions from the Analysis

Driving Forces

The actors typically stress soft variables as the main motive for them to be in the business. Persons working close to the operating business, in the carrying businesses, often state an interest in the mode itself as a personal driving force. For respondents that have been recruited to the top positions in these companies, in contrast to those that have started from the bottom, and for persons working in forwarding agencies, the motives are usually the challenge to improve a system and career possibilities. A few respondents state that earning money is an important driving force for them.

The motives for the firms to stay in the business are less homogeneous. Many actors point out profitability as the most important objective. Growth is another frequently mentioned driving force for the firms. However, many respondents do not know what the company's driving force is. This is, they say, a question for the top management and/or the owners of the company. Several carrier respondents state that profit maximisation hardly can be the goal for the companies, since generally the profits made in the industry are very low. Shippers' representatives find it harder to separate personal motives from company motives than the coordinators and carriers.

Shippers Limiting Competition

Many shippers say that they benefit from an intense competitive situation, in terms of more participants, among carriers and coordinators. However, shippers, to some extent, prevent such a development themselves. They limit the competitive surfaces by selecting the carriers/coordinators to be invited to the formal, or informal, tendering process. When no tendering process is used, competition is even more limited. This might be wise, at least in the short run, since the tendering process will be more expensive when more firms take part. In the long run, however, it can be detrimental to the shippers to narrow the market, since the competitive pressure felt by the coordinators and carriers is reduced. The behaviour can be fully rational and improve efficiency in both the short and the long run, if the market shows contestable market characteristics. Shippers, thus, often have themselves to blame for the limited competition in the market.

Coordinators and Carriers Limiting Competition

Coordinators and carriers, for natural reasons, try to limit the competitive surface shared. This is, primarily, made in two ways. First of all, competition is, actively, limited by developing a competitive advantage. A competitive advantage aims at

signalling superiority to the shippers, but also at deterring potential competitors from entering the market. Secondly, the carriers, and, to some extent, the coordinators as well, passively limit competition in choosing not to approach a specific market. Such limitations can be viewed in a geographical, product, as well as dynamic perspective.

Asymmetric Perceptions

From the analysis in Part C it can be understood that shippers and service suppliers seldom have the same apprehension about what variables that are the most important ones when shippers select what service suppliers to use. Many shippers stress the qualitative variables as the most important ones. Service suppliers, on the other hand, say that the price is the competitive instrument that the shippers focus on.

The reason for the asymmetrical perceptions is that shippers and service suppliers have different perspectives. The shippers say that their requirements on the qualitative instruments must be fulfilled for the service suppliers to take part in the tendering process. Therefore, the shippers regard these variables to be the most important ones. The service suppliers interviewed have, naturally, fulfilled these first “basic” requirements on the qualitative aspects of the service since they had won the contract. The price is, therefore, often decisive given that the suppliers fulfil the qualitative requirements. Since the tendering process, and competition, thus takes place in several steps the perceptions differ between the service suppliers and the shippers. Shippers thus focus on the competitive instruments that make the service suppliers qualify from the “first step” in the tendering process, while the service suppliers that have won a tendering process focus on the instrument used to win the “second step”. The price is often the decisive variable in this step since the other variables have already been controlled.

Competitive Pressure/Strategy

From the shippers’ perspective, price pressure is efficient in many segments of the carrier industry. This gives the shippers advantageous prices benefiting the shippers in the short run, but, in the long run, such behaviour could have a “boomerang” effect, since improvements might be lower than otherwise. Several carriers state that they face difficulties in developing and following a competitive strategy, which is detrimental to their ability to compete. In some respects, this is positive and in others negative for the shippers.

Channel Awareness and Interchannel Competition

Many shippers stress over and over again the importance, for their business, of having well-functioning freight transport channels. Shippers often demand a channel, but end up using a sequence of carriers that, at the best, have the same characteristics as a channel. Few carriers are working closely together with other

carriers and coordinators to set up channels. Some carriers did not know what other carriers were involved in their own channel. The dominant reason for this limited degree of cooperation is that they do not have to cooperate more intensely for the channel to work satisfactorily. The carriers are clear about their role, and what is expected of them, in the channel. They often regard other carriers in the channel as competitors. The “channel-feeling” is often weak, and, therefore, carriers seldom offer joint services, such as channels. As a direct consequence, interchannel competition is very limited.

Intrachannel Competition

Intrachannel competition is rare. Few coordinators or carriers express a willingness to expand their undertakings in the channel. Sometimes this is due to infrastructural limitations. Among the few willing to expand, the majority say that this is a desire they seldom express to the shippers, or try to realize in any way. Intrachannel competition is not regarded as a feasible way to become more successful. One important explanation for the limited intrachannel competition is that carriers consider the expected pay-off to be larger from other forms of expansion. Furthermore, if their role in the channel was expanded, some carriers said that they would become too dependent on that specific shipper. A third reason is that they regard their competitors as companies working “next door”, in their product and geographical market. These companies are seldom involved in the channel, and, therefore, the focal firm has a better possibility to expand in other directions.

External Competition

As discussed in the previous paragraphs, competitive action is neither in interchannel competition, nor in intrachannel (internal) competition. The action, according to this thesis, instead occurs in external competition. External competition refers to competition faced by the channel participants from firms, or consolidations, outside the channel. Such competition results from individual coordinators/carriers or from full freight transport channels. External competition can be inter- as well as intramodal.

Intramodal competition, from individual firms, is the form of external competition that is most intense in the road and the water freight carriers’ segments. The rail freight carriers are exposed to intermodal competition to a rather large extent, since they face competition from the water carriers and/or the road freight carriers on many distances and relations. Few relations are of such a character that the railway does not face realistic intermodal competition, even though such relations exist. One example is the iron ore line running from Kiruna to Narvik. External competition is concentrated on the tendering process, but it is always present in the coordinators’ and carriers’ minds.

Competition in the rail freight transport markets is very limited in a spatial dimension, since the carriers are limited by the infrastructure. The natural or traditional markets mainly limit the road freight carriers, i.e. they tend to stick to their geographical market and not offer their services in neighbouring markets. Competition among carriers is seldom global. Some segments of the shipping and aviation industries can be considered global, while segments of the road freight industry (mega-carriers), if anything, are continental. The railway industry and the middle-sized and small haulers in the trucking industry are even more geographically limited. Most carriers' services are limited in a geographic and/or product dimension. The carriers, therefore, face big risks when turning into a new arena in addition to the traditional risks when expanding the business in a well-known market.

9.3.2. Conceptual Development

This thesis contains two important conceptual developments that contribute to taking the analysis of competitive phenomena one step further. This section aims at providing a short reminder of the conceptual developments made in the thesis. These are (i) the split up of competition in dimensions for a better comprehension of the complex phenomenon, (ii) the discussion and the conceptualisation of the notion surface of competition, and, (iii) conceptual development occurred in section 4.4.1, namely the adaptation and elaboration of the concept of competitive pressure with respect to freight transport channels. The last conceptual development is regarded as less important, and, therefore, it will not be further commented here.

Dimensions of Competition

One of the contributions of this thesis is the conceptual development and use of the dimensions of competition. The concept constitutes a method for competitive analysis. The idea of splitting the concept in structural and analytical dimensions could easily be expanded into other research topics. It deals specifically with how competitive analysis could be performed. The dimensions of competition were treated extensively in sections 4.1, 4.3, and 4.4 and, therefore, I refer to these sections for a detailed description of the ideas.

Surfaces of Competition

Surface of competition, as a concept, has been taken further in this thesis than anywhere else before. The concept is not new since it has been used before, as discussed in section 4.4.2, primarily by a few Scandinavian researchers in different academic disciplines regarding transport. However, the modifications, and the presentation of the concept contribute to the comprehension of the phenomenon of competition.

The concept could improve politicians' and decision-makers' knowledge of competition in the freight transport market. The concept, used in combination

with the dimensions of competition, could be useful as a tool for making the correct decisions and interventions in the market. Carriers and coordinators can use it to find and develop a competitive advantage. Shippers can use it to benefit from the suppliers' offerings, and, finally, researchers and others can better understand the market and its outcomes by means of the concepts. The concept was extensively used in the theoretical, as well as the analytical part of the thesis. The development and description of the concept will not be repeated here.

9.3.3. Short Answers to the Research Questions

This section gives short explicit answers to the research questions. The answers should be regarded as hypotheses rather than true answers, since the thesis has analysed a small sample of the population of freight transport channels. The section aims at summarising the most important findings. For more detailed descriptions and answers, see part C, and other sections in this chapter.

- 1) *Are any of the existing theories of competition adequate when analysing the market for freight transport channels? If not, could any theory of competition, or combination of such theories, be used after modification(s)?*

All existing theories of competition have flaws when used for analysing competition in a complex setting from a company/channel-perspective. Some theories prove to be more useful than others in this respect. It can, however, be concluded that no single theory is able to explain the process and the outcome of competition in freight transport channels in a fully satisfactory way.

The R-A theory is powerful in explaining the dynamic process of competition. Therefore, internal and external competition, within and among, freight transport channels can, in many respects, be understood using this concept. However, the behaviouristic dimensions need to be stressed more to explain, for instance, the importance of inertia of different types for the process and outcome of competition. To explain the outcome of competition within and among freight transport channels calls for an imperfect version of the CM theory. Using both these theoretical concepts in combination provides a solid foundation for analysing competitive matters. I do not formally combine these theories into a new one, since such a mixture would add little extra knowledge to the comprehension of competition. I do not regard the explanatory, or pedagogical, value from conglomerating these theories into one, to be significantly larger than if each theory is used separately. Such a "new theory" would be, more or less a modified R-A theory.

The second research question reads:

2) *What can be said regarding the surfaces of competition within and among freight transport channels?*

The question is broken down, and answered, in a number of subquestions. The answers to these subquestions partially overlap.

a) *In what variables, and how, do the channel members and channels compete?*

Many stress the price to be the most powerful competitive instrument once the basic requirements on the service are fulfilled. However, inertia often limits internal as well as external competition. Channels and their members compete in qualitative variables like hard characteristics of the service such as regularity, value-adding services, usage of IT, and transport time as well as soft variables such as e.g. emotions and history. However, they stress that price is decisive in most cases.

During a contract period, competition is very limited, but in the tendering process, in whatever way it is performed, competitive pressure as experienced by the coordinators and carriers is intense. Internal and interchannel competition is not as common as external competition, which is by far the most common form of competition.

b) *Where are the most significant competitive surfaces in freight transport channels and their building blocks?*

Freight transport channels seldom compete as channels (interchannel competition). The reason is principally that the channel participants' expected benefit from such behaviour is low, but also the lack of "channel-feeling". The lack of "channel-feeling" is often due to the channel participants' limited cooperation. Channels quite often cooperate only in a specific setting in one, or a few, channels. Therefore, they resist competing as channels, since the drawbacks in terms of costs, revealed company secrets, etc are assumed to outweigh the gains. Very few channel participants view the channel as an entity. More often they regard the channel service to be a sequence of services standing alone. The demands on the contact surfaces among the participants for the channel to work well are often low. Carriers involved in a channel are often satisfied with the scope of their participation. Thus, interchannel competition is rare.

Further, intrachannel competition is also very limited. Intrachannel competitive pressure can, however, still be substantial, since the members make demands on each other, even though they are not competitors. Forms of inertia, diverging natural geographical supply markets, and lack of communication are important explanatory factors for this behaviour.

External competition during the tendering process is, by far, the most extensive and intense form of competition faced by coordinators and carriers. External competition, from real, or potential, coordinators and carriers trying to take part in the channels or to win the full channel contract, does also occur at other times but it is at its peak during the tendering process. It is in the external competition that the most significant surfaces of competition are found. Such surfaces mainly have to do with intramodal, but, to some extent, also intermodal surfaces of competition. Furthermore, the coordinators and carriers compete intensely during the tendering processes, which limit the surfaces of competition in a temporal dimension. Competition from cabotage carriers, which is one form of external competition, is very limited regarding contracted freight transport channels.

The surfaces of competition depend on hard variables, such as the relevant product market, geographical market, quality, and price aspects. However, they also depend on soft variables such as the decision-maker's feelings and his personal contacts and preferences. The surfaces of competition experienced by, for instance a carrier, thus, are due to the coordinators and carriers, as well as the shipper.

c) *What impediments to competition, affecting the competitive pressure in the freight transport industry, are there?*

Inertia is the dominating impediment to competition. Inertia is not necessarily bad for the competitive situation, the development of the services, and the offerings that shippers face. All types of actors benefit sometimes, and lose sometimes from inertia.

d) *Is intermodal competition strong?*

The general answer would be – no, intermodal competition is not strong, an answer which, of course, might depend on the method used and the channels studied. It is not hard to find intermodal competition if one looks for it. The analysis of the interviews shows that shippers often view intermodal competition as more intense than carriers, even though many shippers as well say that it is fairly limited. Further, it is clear that carriers not always know that an intermodal selection process has preceded the shippers' intramodal carrier selection process.

The limited intermodal competition is, to some extent, due to a mental blockage. It is, for all types of actors, from time to time, hard to regard the intermodal solutions, which often imply different routes, as competitors. Furthermore, the intermodal competitive situation depends on the infrastructural conditions as well as the nature of the goods and its characteristics.

Intermodal competition is most pronounced in the railway sector, due to the limited extension of intramodal competition in the segment. Even though parts of

the road freight sector are subject to tough intermodal competition, road freight carriers in many areas “only” face intramodal competition. In the road freight industry, intermodal competition is almost always complemented intramodal competition. What mode the shipping industry faces competition from depends on the shipper’s demands, goods- and OD-characteristics, and the route connecting the start and end points, but all modes are competing with the shipping industry to some extent. However, the shipping sector’s representatives say that intermodal competition is often very limited on their relations depending on modal characteristics, infrastructure, and geographical conditions.

e) Is intramodal competition strong?

Based on the service suppliers’ responds the general answer to this question would be – yes, intramodal competition is strong, at least when discussing road freight transports. This result must, however, be treated with caution, since examples easily could be found where monopolistic market structures exist. The number of coordinators and carriers working in the relevant market is seldom large. But, in accordance with the contestable market theory, competitive pressure from the threat of potential competitors makes sure that the market outcome is competitive. Competition can, thus, be very intense with only a few, or even one single, firm active in the market.

When there is intramodal competition in the railway industry, it is for, as opposed to in, the market. The road freight carriers mainly face intramodal competition, the rail freight carriers mainly face intermodal competition, but the water carriers face both types of competition.

9.4. Author’s Comments and Conclusions

In this section, my comments are presented. In the analytical chapters above, I commented on many issues at the end of the respective sections. In the following section, some cross-dimensional issues and other issues that were not discussed in the analytical chapters will be commented upon. The findings and comments diverge in importance, consequences, and how extensively they are treated below. Some comments are close to what could be regarded as theory development, while others are minor observations drawn from my theoretical studies, empirical investigations, and analysis. Some important findings are presented as hypotheses in this section.

It could be manageable to optimise one freight transport channel, but when a freight transport system should be set up in the best possible way for a large shipper with many freight transport relations, he has to compromise in the channels. When studied in isolation, a specific channel can, therefore, be far from optimal, but from the perspective of the total system, it might be the best choice. To optimise a channel could, therefore, sub-optimize the system.

Competition is an important feature of every modern economy. As shown in this thesis, competition, and many of its pillars are subjective and complex phenomena. This, on the one hand, motivates such research, and, on the other hand, makes it difficult to perform research on the topic.

9.4.1. Channel Awareness

Few channels work well from a cooperative perspective. Sometimes, the channels are rather to be regarded as carriers working in a sequence than freight transport channels. I stress that both shippers and carriers would benefit greatly from improving the “channel awareness”.

The finding that many channels work as separate units brought together, rather than as an entity, calls for a more intense collaboration between the participants. Such improved collaboration can, for instance, concern information sharing. A closer cooperation increases the demands on the parties, since the information shared could be confidential. If it is not used improperly, and the benefits are mutually shared, but not necessarily evenly distributed, between the service providers and the users, improved cooperation benefits all parties. However, it must be stressed that not all channels would benefit from the channel participants working more closely together.

Shippers' can find benefits as well as drawbacks from channels working closer together. Many shippers would welcome the benefits from an increased supply of “ready-for-use”-channels, i.e. increased interchannel competition. However, they would not appreciate decreased competition among the carriers, which can result from closer cooperation within the channels. Increased intrachannel cooperation might, for instance, result in reduced competition on carrier-level. Furthermore, when competition increases on one level, it might decrease on another. Increasing intrachannel competition might reduce the competitive pressure from external carriers/coordinators. The reason is that the potential benefits for an external actor from getting a position in the channel decreases when intrachannel competitive pressure increases (i.e. the expected profits are lower). If the intermodal competition increases, *ceteris paribus*, carriers representing the same mode might find it necessary to take actions together to stay competitive, and, thereby, the intramodal competition decreases.

Many carriers work with some kind of blinkers. Independently of variables such as their size, role, and mode, they focus closely on their role in the freight transport channel. Shippers often perceive the channel as one service, and not as a sequence of individually freestanding services. Shippers, viewing the channel as an entity, may consider changing the full freight transport channel when the service is re-tendered. Therefore, each coordinator and carrier depends on how

the channel as a whole is viewed by the customer. The participants must, to improve their, and the channels' competitiveness, take other channel participants' services into account.

Hypothesis 1. *Close and extensive cooperation within freight transport channels is typically limited. This is due partly to the limited need of such activities, partly to the fact that service suppliers are real, or potential, competitors on other relations.*

9.4.2. Competition

In this thesis, it has been argued that the number of participants is often regarded as tantamount to the intensity of competition. Support for this view can be found in measurements of competition and in the theories of competition discussed in chapter 2. This is, in my opinion, an understandable, but incomplete, perspective on competition. Such a view on competition does not cover the intensity, the process, and the outcome of competition.

Carriers often search for competitive advantages in complicated parts of the service. I believe that they often could benefit from more easily reachable competitive advantages like, for instance, consider emphasizing existing strengths or improving the characteristics of the staff. Lorry-engines are continuously becoming less detrimental to the environment. The environmental argument may, therefore, become weaker as a competitive advantage for the railway. Therefore, the railway has to develop another competitive advantage, like, stressing the capacity of the railway and the increasing congestion of the roads.

Competition and collaboration are often viewed as antonyms, which they certainly are in some respects, but their effects on the companies are often similar. If competition works effectively, there is no room for achieving an above-normal profit. Competition puts pressure on companies to improve their service, i.e. develop a competitive advantage, and to offer a "good deal" to their customers. Collaboration, on the other hand, will allow the collaborators to benefit from a larger network. Thereby, economies of scale and scope can be used with improved offerings as a result (if the channel is not a profit-maximising monopolist). Thus, while the competitive companies will offer lower price/better service due to the forces of competitive pressure, the collaborating companies will offer lower price/better service due to the increased use of economies of scale/scope. Collaboration and competition often co-exist.

A shipper can benefit from using competitive pressure. However, using competition efficiently is not an easy task. If the shipper does not know the competitive situation among coordinators and carriers in the market, and the

consequences of his actions, it might be detrimental to him to try to use the competitive situation. If competition is correctly used, the shipper receives a more efficient service, in terms of a “better” and/or cheaper service. If the shipper abuses the competitive situation due to, for instance, a poor understanding of the freight transport market, consequences could be devastating for him, as well as for the coordinator and carriers. If the shipper puts pressure on the coordinator/carriers, they could decide to leave. If the shipper’s picture of competition in the market was false, he could not find any better alternatives. He, then, has to return to the previous coordinator/carrier, who then could adapt his offerings to the “new” situation. The shipper, thus, ends up in a worse situation due to poor judgement of the competitive situation. If shippers view the freight transport market in a correct way, they can benefit greatly from putting pressure on the coordinators and carriers.

If freight transport channels were used more efficiently, new surfaces of competition could occur between freight transport solutions. I think that this could benefit many carriers, since their potential market would become larger.

Hypothesis 2. *Intrachannel, as well as interchannel competition within and among active channels, is rare. External competition between service suppliers about a role in, or about the whole, freight transport channel is intense.*

Hypothesis 3. *Intermodal surfaces of competition are far narrower than intramodal surfaces of competition, with the exception of the railway industry.*

9.4.3. Competitive Pressure and Market Structure

Shippers seldom actively make the service suppliers perceive that they are exposed to competition. Shippers regard the freight transports as a market where the industry itself exerts an efficient internal competitive pressure. However, many service suppliers report that they are being exposed to a low competitive pressure. I, therefore, think that many shippers would benefit from putting a more intense competitive pressure on coordinators and carriers. Such an increased competitive pressure would benefit the shippers but it might also benefit some service suppliers.

It could be difficult for actors to decide what firms are their competitors. If firms share a competitive surface or not depends on many factors, such as their capacity, prices, quality, geographical market, and product market. It is seldom possible to say that a specific road carrier competes with another specific road carrier. From the customers’ perspective, the carriers’ competitors can be found in another mode, a potential carrier, or a re-localisation of the business or even

such a drastic alternative as shutting down the business. To state what market structure a carrier works in is difficult, if not impossible, since the relevant market must be decided and the perceptions of the market must be taken into account. Therefore, I hold that market structures must be used very carefully.

It is, almost always, impossible to be able to say that a company belongs to this or that market structure. Most companies and services belong, in some respect, to a highly competitive market and, in another respect, to a less competitive market. Competition is, thus, a relative concept. Does it, then, make sense to speak in terms of the classical market structures? Well, for internal benchmarking and certain cases it might, but it is very important to be as specific as possible about the context in which this market structure is supposed to be valid. The context comprises the relevant market, preferences, service characteristics and their valuations, etc.

Since the freight transport market is such a huge market, it, naturally, covers each and every theoretical market structure. I find the prevailing structure to be “monopolistic competition” regarding the number of firms and the fundamental economic laws they follow. The services that the carriers offer are close substitutes in many respects, however, they are seldom considered to be perfect substitutes by the shippers. Each firm faces a downward-sloping demand curve, and, the industry is, in general, characterised by low average profits. One thing not fully complying with the monopolistic competitive paradigm is that price changes have substantial effects on other carriers in the industry, even though the time lag, for contractual reasons, many times makes this process somewhat sluggish. Due to the low degree of freedom and the poor average profitability, the market appears to be contestable. I would, therefore, say that the freight transport segments studied are “workably contestable”.

I believe that one important reason for the low profitability characterizing many sectors of the road and rail freight industries is the carriers’ problems of adapting the offerings to the prevailing market. In price-decisions and when setting the terms for the offer, carriers often use an existing service as a base. They seldom take the competitive situation into account when setting the price.

Hypothesis 4. *Price is decisive in the shippers’ service supplier selection process, given that certain qualitative requirements are met. It rarely pays for the service supplier to be better than the service buyer’s requirements.*

Hypothesis 5. *Significant parts of the service suppliers’ markets investigated have contestable characteristics. The service suppliers report normal, or low, profits due to an intense competitive pressure.*

In many respects scale economics technology is accessible to most suppliers.

9.4.4. Inertia

On the surface, many decisions made in the freight transport industry seem to be made on economically correct and sound bases. However, according to the case studies, the decisions are often highly influenced by variables such as intuition, history, and social relations. It is important that shippers have faith in the tendering parties and their offerings. The scepticism many shippers have toward coordinators and carriers that they have not worked with might be sound, but it is also an obstacle for improvements. This regards improvements for the shipper's transports, as well as for the coordinators' and carriers' situation. Shippers typically hesitate to introduce major changes in their transport systems, but this hesitation must not develop into fear of making necessary changes. If inertia/hesitation is strong, there is a risk that shippers pay overprices for a service, and/or that they receive a service with a relatively, poor quality. Major changes in the shippers' freight transport solutions can often be evaluated only after several years.

The conservatism in the industry is extensive as shown in the contextual study as well as the main study. It is reflected e.g. in the modal choice, the carrier selection process, and the way to think about the freight transport system. Conservatism limits the market dynamics, which might be bad for all types of actors as well as the society as a whole. However, some service suppliers, and indirectly shippers, benefit from the security that conservatism offers. On the other hand, conservatism could be an obstacle to the development of the service.

Hypothesis 6. *Inertia is an important explanatory factor for describing competition within and among freight transport channels and their participants. Inertia originates in shippers' as well as coordinators' and carriers' behaviour. Since inertia, having its good points and bad points, is a very important factor in explaining the shippers' choice of transport solution shippers have, to some extent, themselves to blame for competition not working better in the industry to provide them with more attractive solutions.*

Hypothesis 7. *Besides the infrastructural, qualitative, and quantitative barriers preventing the shippers from switching service suppliers, the mental ones are very important.*

9.4.5. Usefulness of the Theories

The difference between the neoclassical view and the R-A view is, more terminological than real, in my opinion. I regard the neo-classics' broad perspective on utility as one important tool for distinguishing the views in this respect. R-A theory explains much of the competitive behaviour in freight transport markets. The main advantage of neoclassical theory is the improved understanding of the outcomes of competition on an aggregated level. It is, however, meaningless to try to explain the dynamics of competition and the effects of competition from a company/channel-perspective using the neoclassical theory. By and large, the R-A theory's originators' criticism of the neoclassical theory is well founded.

The strength of the R-A theory is that it combines attractive parts of other concepts to explain real world phenomena. In many respects, the theory is successful in explaining competition. However it lacks some important aspects covered by the theory of contestable markets. CM is, as discussed in chapter 2, based on four, unrealistic, assumptions. These assumptions are never fulfilled in reality, which is a disadvantage. As pointed out in the analysis and in the description above, CM sheds light on a competitive phenomenon that was commented upon by many respondents and it finds support in the contextual study. CM describes how potential competition puts pressure on the market, resulting in the market characteristics being almost the same as they would be in a highly competitive market. Therefore, the number of competitors is sometimes irrelevant for the market outcome. I, therefore, would say that an imperfect version of contestable market, where the assumptions are relaxed, is relevant for explaining market outcomes from a company/channel-perspective.

I think that many competitive phenomena can be explained, and viewed, in a superior way, if they are studied in the light shed by R-A theory in combination with the theory of (imperfect) CM. None of these theories can fully explain the process and the outcome of competition separately, but together they can help out to understand and explain the complex phenomenon. When analysing a phenomenon of competition in the light of these theories, problems could arise due to the theories' diverging foundations and premises, if they are used simultaneously. I think that theories are most helpful if they are used in a sequence. R-A theory explains the dynamic process of competition, while CM-theory helps the R-A theory out in explaining the outcome. To my mind, the imperfect CM theory can be used, since the conditions are not "too" economic in nature, and they do not need to be totally fulfilled.

The explanatory value of the other theoretical concepts described in chapter 2 is lower. The realism of the concepts, when studying the complex market for freight transport channels, differs significantly. Some concepts could be used for

explaining parts of the competitive phenomena found. Some concepts, such as the social structure of competition, hypercompetition/relationship marketing, and resource-based view of the firm, could be helpful in explaining the findings. However, since the core ideas of them are caught by either R-A-theory and/or CM-theory, the additional explanatory power of those concepts is marginal. Therefore, they are not regarded as concepts that add power to this thesis.

An empirical phenomenon that the theories are not able to explicitly explain in a satisfactory way is the importance of inertia as regards the competitive process and outcome. Inertia implies that a certain relation is sustained and, therefore, the tendering processes sometimes are just for show or “to look good”. This thesis shows that within the area of freight transports, inertia is often crucial in the carrier/coordinator selection process. The importance of inertia is by no means proportionally reflected in theory. Inertia refers to such aspects as the choice of firms invited to a tendering process and the selection process. Inertia in the carriers’ and coordinators’ mind is also important for what markets and shippers that are approached. No concept deals explicitly with this important phenomenon of inertia in the buyer-seller dimension.

Hypothesis 8. *Describing and analysing the dynamics and the outcome of competitive processes can successfully be accomplished using a combination of the R-A theory and the theory of Contestable Markets.*

9.5. Quality

Large parts of what constitutes this thesis have, in one way or the other, been exposed to inspection and review when presented at seminars, conferences, and by giving the respondents the possibility to read through and comment on the material. The thesis’ quality has gained from these presentations and comments. The quality is also fostered by the triangulation between case studies, interviews, theoretical investigations, and the contextual study.

9.5.1. Reliability

As discussed in section 3.4.1 above, a study should be replicable to have a high reliability. This is reasonable in many studies in the natural sciences, where the studies can be performed in a controlled laboratory environment. In social sciences, however, this condition must be taken with caution. Studies in social sciences are seldom fully replicable. The collection and analysis of the data this thesis relies on followed well thought out procedures.

Reliability, referring to the notion of repeating the case study with the same results given the same conditions, is, in this study, fostered by:

- The data collection procedure used in each case study interview, more or less, followed equivalent pre-constructed interview templates.
- The interviews contained “check-questions” i.e. similar questions asked several times during the interview.
- The interviews were recorded on a MD-player and transcribed word-by-word. The purpose of this procedure was to increase the reliability of the research.
- Additional cases were selected until I reached the subjective feeling of saturation in the material. When the subjective feeling of saturation was met, two additional case studies were conducted, to be “on the safe side”
- Most respondents³¹⁶ were given the opportunity to comment on earlier versions of this thesis.

9.5.2. Internal Validity

Given the purpose of this study, I stress that the internal validity of the investigation is high. Checking has in the research process occurred through comparing and contrasting the material horizontally as well as vertically, and by using check-questions in the data collection phase. The questions used in the interviews (see Appendix III) lay the foundation for a high validity. They follow the template described by Yin (1994), see section 3.3 above. Kvale writes “*Deciding whether a method investigates what it intends to investigate involves a theoretical conception of what is investigated*”. This theoretical conception was described in chapter 2, and the analysis of the empirical material was described in terms of the R-A theory.

Using different sources of empirical information, where the empirical data were contrasted with each other, ensures the construct validity. The thesis has used triangulation between interviews, the contextual study, and the frame of references. Attending to, and presenting papers at, conference and seminars guaranteed the quality of the theoretical discussion as well as the empirical data collection method and some preliminary case study results. Furthermore, the respondents have been given the opportunity to read through and comment on drafts of this thesis. Since I have interviewed several actors in each case study, I stress that, for each case, some kind of “internal triangulation” has been used through interviews.

The companies/persons were told that the material would be treated anonymously³¹⁷ to prevent information told/not told to “look good” (respondents

³¹⁶ Among the reasons why not every respondent were given this possibility was that they had left on absence or been retired.

³¹⁷ Only one respondent explicitly asked to be treated anonymously, therefore the respondent’s name and company is not revealed in the list of participants.

are more likely to answer honestly if their responses are treated anonymous), and to avoid any crediting/miss-crediting of the company/person.

9.5.3. External Validity

The type of generalisations made in this thesis aim to identify “*what is*” rather than to be predictive trying to identify “*what may be*” (referring Schonfield (1990) discussed in section 3.4).

External validity has been enhanced by investigating a heterogeneous material consisting of shippers with different characteristics, cases/channels of varying constellations and lengths, and in different regions. The interviews were conducted at the respondents’ place of work. In selecting the cases/channels it was important not to select too many “extreme cases”. The large number of investigated cases of different types improves the external validity.

External validity is further enhanced by replication logics. For the case of literal replication, shippers of equal types and with similar transportation needs and cases/channels with equal configurations were selected. For theoretical replication, cases/channels of different types were selected. This refers to the type of shipper, the use of coordinator, modes, and distances involved in the freight transport movement. Comparisons within and between channels with shippers from different industries have ensured the external validity of the results. This broad approach enabled comparisons within as well as between actors and freight transport channels. Even though the empirical material is extensive, it should, in all humility, be stressed that the sample, from a market perspective, is rather small.

Even though this thesis has focused on freight transport channels, which most generalisations regard, some generalisations can be made regarding other segments of the freight transport market. The latter type of generalisations can be made since many comments regarded the respondents business in general and were not channel specific. For instance, one generalization that regards the freight transport market in general is the importance of the different forms of inertia for explaining competitive phenomena.

9.6. Further Research

In this section, some further research suggestions, which have emerged through the research process, are presented. The industrial relevance is high for some suggestions, while others might be more interesting from a theoretical perspective. The suggestions are not described in detail. They are rather presented as loosely structured areas of interest. From this investigation of the freight transport industry and its interested parties it can be concluded that the specific characteristics of the industry and its participants show some areas where further

behaviouristic research could deepen our understanding of the industry and improve its performance.

9.6.1. Problems of Competition

Two important problems of competition that call for more research for an improved understanding of the freight transport markets have crystallized in the thesis. These deal with: i) fair competition, and ii) unhealthy competition.

As reported on in the analysis, carriers as well as coordinators stress that they are happy to compete with other firms as long as the rules of the game are fair. But what is “fair competition”, can it be reached, if so how can it be reached? Competition, from an intramodal perspective, can be regarded as (un-)fair from different points of view. Representatives from one mode, or segment, might regard a certain situation as fair, while representatives from another mode regard it as unfair. Some respondents apprehended international competition on the freight transport market as unfair. The reason was that these carriers were given other conditions in terms of taxes, etc. From an intermodal perspective, many respondents said that each mode must be given fair rules in order to be able to compete with other modes. The ideas of what is fair, however, diverge. The ideas might diverge between the company/channel-perspective and the economists’ perspective. Fair competition can, for instance, refer to responsibility for emissions, the infrastructural investments and payments, taxation, etc. Furthermore, fair competition can regard inter-, as well as intramodal concerns.

The second problem has to do with unhealthy competition. To some extent, this problem overlaps the problem of fair competition. Unhealthy competition prevents the market forces and dynamics from working freely. Therefore, it prevents the market from converging into an optimal situation. Unhealthy competition can, for instance, be abuse of dominant position, price dumping, agreements between actors that limit competition, etc. Unfair competition can, but does not have to be, unhealthy. It is, of course, possible to identify examples where competition works “theoretically correct” that is, unhealthy for the users of the service and for the society as a whole.

In Table 26 below, the process of competition is described as either healthy or unhealthy and the market effects are described in the same way. Probable market outcomes are described in the table.

Process of Competition \ Effects of Competition	Healthy	Unhealthy
Healthy	¹ Ideal state. The customers will get a good service at a low price, but not <u>necessarily</u> better and lower than in situation described in the other squares in this table.	² Might be temporarily beneficial to some customers. Seldom a likely long-term solution – but if the economies of scale are large enough, unhealthy competition might end up in this position.
Unhealthy	³ A monopolistic situation might result from the process of competition. If such a monopolist sets price accordingly the outcome can be unhealthy.	⁴ The worst scenario for the shippers and society. This position is characterised by high prices and/or low quality.

Table 26. *The Process and the Effects of Competition*

The concept of unhealthy competition and its market effects need to be clarified and analysed. Such research could show how, and if, a desired competitive situation could be reached.

9.6.2. Improving Logistics Systems

A logistics system includes a wide range of parties and functions such as shippers, coordinators, third parties, warehouses, manufacturing plants, carriers (and, in some cases the carriers' subcontractors), and customers. It is of great importance for the firms', trades', regions', and countries' success and competitiveness to have an efficient logistics system. Such systems must provide a satisfactory service at an attractive and competitive cost for the manufacturers to be competitive on a regional and national level. If such systems are not good enough, the manufacturing industry will face the risk of having diminishing market shares. An efficient logistics system implies lower costs for the shippers and/or a service that has higher reliability, efficiency, and usability. It benefits the users, since it provides them with a strategically important competitive advantage.

Freight transports are a fundamental pillar in the logistics system. Even though technical improvements, which make the movements more efficient, can be made, this thesis shows the importance of behaviouristic barriers. Such barriers need further research. This could be made by finding out the shippers' and the transport suppliers' views on these barriers to find out where the inefficiencies are and how these can be made less important as barriers. This thesis shows on inefficiencies such as different forms of inertia, preconceived ideas about gathering goods, and capacity utilization. Further research on what logistics

system improvements that can be made are important since such improvements can give shippers and customers lower prices and higher quality. Improvements can also benefit the society on the whole, for instance by reduced harmful effects on the environment stemming from the freight transport sector. However, the goals are often in conflict.

This thesis also shows an asymmetric understanding of the importance of different variables for carriers to win a contract. For the logistics system's competitiveness, it is important that its members know the competitive environment in which they work and act. Then, the system can develop, or hold on to, a competitive advantage. Knowledge of the competitive surfaces might be a matter of survival for a firm, a system, and, in a broader perspective, a region. However, it might also be crucial for an industry's and a nation's well-being in the long run.

9.6.3. The Mental Dimension and the Railway

From the interviews, and the contextual study, it is very clear that actors of all types, from the public and the firms' end-customers to researchers, politicians, and people working in the industry have opinions about the railway. The mode is, in relation to its market share, relatively often discussed in different situations and contexts. As pointed out by one interviewee, one reason for "almost everybody" to have an opinion about the railway is that railway services are "everybody's concern" since it has been developed and offered by the State. The railways compete in the price-, product-, and service dimensions, but they also, according to the results presented in this thesis, compete in a mental dimension. The mental dimension might imply a competitive advantage or disadvantage to the railway. Even though the mental dimension exists and affects other modes of transportation as well, it is most obvious and important to the railway. The mental dimension refers to a large extent to assumptions rather than facts about the railway and the services it provides.

Improving on the understanding of the shippers' and coordinators' decision processes regarding the inter- and intramodal choice could help to make the importance of the mental dimension clearer. To improve the knowledge of what influences the intermodal choice is of great importance to be able to move any significant freight flows from the road freight industry to the railway industry. Irrespectively of whether the foundations for the decision are actualities or fallacies, they must be found, discussed, and analysed. Furthermore, it is important to understand what influences them. Improved understanding of this area might affect how the infrastructure is developed, what services are offered, and what political decisions are made.

The understanding of the industry would be improved if more research was done focusing on, for instance, soft decision variables for the selection process. To gain an improved knowledge of why, and why not, the railway is used can benefit the railway as well as other modes and it will improve the material on which politicians base their decisions regarding a modal switch. Even though this thesis contributes to deepen the understanding of the selection processes, this important area for carriers as well as for politicians, would benefit greatly from further research.

9.6.4. Future Competitive Advantages

The research described in this thesis refers to the present competitive situation, competitive advantages, and, to some extent, competitive dis-advantages as they are viewed by freight transport actors. For transport service suppliers, in a longitudinal dimension, to stay competitive, or gain in competitiveness, they must be pro-active. Thinking about what variables will constitute competitive advantages in the future is one way to be pro-active.

Among the most important areas today, stressed by politicians, interest groups as well as freight transport suppliers and demanders are the congestion of roads and environmental effects. Irrespectively of the road freight carriers' responsibility for the emergence of the problems, they affect them. The problems could be, at least partly, solved by infrastructural investments, legal restrictions, changed consumption and shipper behaviour, etc. If they were solved, the road freight sector could benefit greatly from this, and win more market shares from the other modes, but, on the other hand, if they remain unsolved, the congestion will benefit other modes of transportation. Looking at the railway sector, it can be concluded that the industry has had, and still has, one important competitive advantage, namely the environmental issue. However, as time goes by the trucks' combustion engines become less harmful to the environment, therefore, this advantage gradually becomes less important for the railway and the railway industry need to develop the service, finding another competitive advantage not to lose market shares in the future.

Future competitive advantages can be found in improving the service's efficiency, developing (or reducing!) value adding services, differentiating the offerings using demanders' needs as a base, expanding the market, etc. The perspectives used in research on future competitive advantages could be many. Either focus is on broad segments of the markets, such as modes or regions, or the perspective is on a single carrier, or even on a single service. Even though these perspectives might show the same potential advantage areas, there might also be important differences.

To develop this area, improving the knowledge about the importance, and the effects of mental dimensions would clearly be important from an empirical (railway) as well as theoretical perspective.

9.6.5. The Role of Competitive Pressure for a Sustainable and Efficient Freight Transport Industry

Numerous problems originate in a non-sustainable freight transport industry. The problems imply large direct, and indirect, costs that could be avoided if the movements were more efficient. Such problems are congestion, environmental influence, and other external effects. The problems imply long- and short-term costs for carriers, shippers, end customers, and third parties. In spite of these problems, modern society depends on these movements and the utility they, indirectly, produce.

Laws and regulations might control some of these problems. However, such measures have negative consequences for the freight transport industry, shippers, and end-customers. Furthermore, imposing laws and regulations creates an incentive to cheat, something that it might be hard/expensive to control for. Furthermore, imposing laws and regulations might decrease the competitiveness of service suppliers, industries, and regions. Therefore, a sustainable development calls for solutions that neither harms the service suppliers nor the service demanders. It is necessary to gain an improved understanding of the competitive pressure's importance for efficiency improving measures to reach such an optimal situation. Then, the carriers' endeavour to create competitive advantages could be used to reach a sustainable solution.

In order to understand the competitive pressure's role in creating a sustainable and efficient freight transport industry, one needs to analyse at least the following research questions:

- What variables affect the shippers' and the service suppliers' perceptions of the competitive pressure?
- What are the effects of changed competitive pressure on the supply and demand markets?
- How can competitive pressure and its driving forces be modelled?
- When do modes and service suppliers share competitive surfaces, i.e. what transport solutions do the transport buyers regard as competing solutions in tendering processes?

9.6.6. Freight Transport Mergers – Effects on Competition

As has been made clear by the contextual study as well as the main study, intramodal as well as intermodal mergers and acquisitions have been common in the freight transport industry during the last decade. Such market changes have

effects on the users. Some users would benefit from the changes due to more attractive prices and/or quality of the services offered. Others would experience a less attractive service and/or a higher price. From the interviews performed within the scope of this thesis, it is clear that more suppliers offering a certain service, i.e. what most economists and the man in the street regard as more intense competition, not necessarily benefit the customer.

When firms merge, or for any other reason becomes a larger actor in terms of market shares, they are likely to benefit from economies of scale. Such advantages might reduce their costs and widening their markets. Some effects are might be positive for the customers while other effects might be negative. Since the seller reaches a larger market the number of possible sellers can, in some areas increase while it in other areas decreases. The total effect of such market concentration changes is therefore not obvious. It is, therefore, important to conduct more research on the important topic of mergers and acquisitions in freight transports to find out what groups gain and what groups suffer from such actions. Furthermore, it is important to further investigate what positive and negative effects result from MAs. There is a close connection between such research and research regarding the market structure's influence on the offerings provided by service suppliers.

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APPENDICES

"Not everything that can be counted counts, and not everything that counts can be counted."

Albert Einstein (1879-1955)

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Appendix I. Channel Competition

This appendix describes my perspective on competition within and among the freight transport channels. The description makes use of some elementary figures, which, for the sake of simplicity, describe duopolistic situations. Focus is on the shippers, i.e. the demand-side. Shippers are, primarily, interested in having the goods moved from the origin to the destination, given some conditions that must be fulfilled. Carriers must assume a broader perspective taking, for instance, the return trip into account.

The following symbols are used in the figures:

○ = Origin/Destination (OD)

⊗ = Point where another carrier using the same mode takes over the carrying role

⊕ = Point where another mode takes over the carrying role

The Case of Monopoly

Figure I show a freight transport channel having a monopoly on a route. There is, thus, only one single channel that can perform the service in a monopolistic situation.

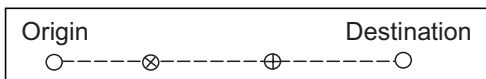


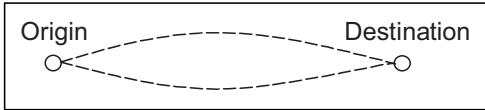
Figure I Monopoly

The channel in the figure consists of three links. The first link uses a certain mode, then, the good is reloaded onto another carrier representing the same mode, and a carrier using another mode performs the last link. The channel shown, thus, has a monopolistic position. However, competition might occur for the roles in the channel. Whether it is possible for the channel to behave in a profit-maximising way or not, depends on many factors that may influence the whole route, some links, or only one link. Some factors influencing the power of the channel are the shipper's traditions, potential competition, and what substitutes are available to the shipper. Furthermore, laws and regulations affect the power and the behaviour of the channel participants.

The Case of Competition

Often there is competition in many different forms between parts of, and complete, freight transport channels. Below, some forms are described. The number of modes, links, routes, and combinations might be large for some links/routes. The channels described below consist, for the sake of simplicity, of a maximum of three links in each route.

- a) The first case (see Figure II) illustrates two competing carriers. Both are able to fulfil the shipper's demand by themselves. Solutions like this are, thus, not to be regarded as a freight transport channel in the sense the term is used in this thesis, since they consist of only one carrier. However, solutions where



one single carrier performs the whole service himself might very well compete with the freight transport channels studied.

Figure II Duopoly (A)

- b) The second case, illustrated in Figure III below, describes two competing channels. Channel A, represented by the unbroken line, consists of three links and two modal shifts. Channel B, the dotted line, consists of two carriers representing the same mode.

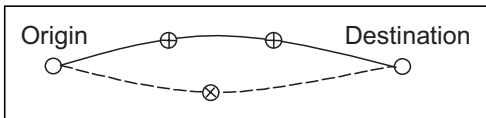


Figure III Duopoly (B)

- c) In the third case, there is only partial competition (see Figure IV below). There is competition on the first and on the last links between two carriers. In-between these links, another carrier has a monopolistic position on the channel's second link.

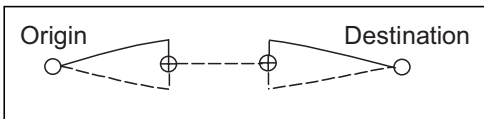


Figure IV Duopoly (C)

- d) In the last case, illustrated in Figure V, some rather different solutions compete. The shipper can, as one alternative, choose to follow "channel" A, the unbroken line, in which one carrier performs the total channel service. Another alternative is to let channel B perform the service, following the dotted line to (i), the unbroken line to (ii) and lastly the dotted line from (ii) to the destination. Still other alternatives are to follow the unbroken line to (ii) and from that point switch carriers to reach the destination or to use the dotted line to (i) and then finish the transport with the unbroken line. All channels must use the carrier performing the service from (i) to (ii). One interesting feature of this model is that the carrier represented by the unbroken line is part

of every alternative channel. This carrier, thus, competes with himself to some extent!

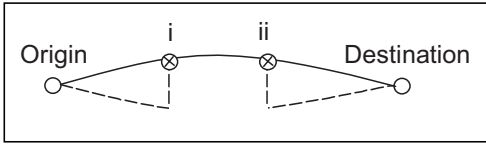


Figure V Duopoly (D)

Appendix II. Perceived Competition

The importance of the perceptions that the actors' have on competition and how these perceptions affect the market outcome is discussed below. Diverging perceptions about competition are due to many sources, such as varying views about what constitutes the relevant market.

Some assumptions are used to facilitate the discussion:

- Only two possible outcomes of competition exist viz. weak and intense. The parties know that the competitive situation is binary, but they do not know whether it is weak or intense.
- The focal firm's competitors know the actual competitive situation.
- The buyers are a homogenous group.

For the sake of simplicity the discussion follows two steps. First, focus is on the seller, and then, on the buyer. The perceptions' importance for the competitive outcome is discussed using three variables: (i) buyer perception, (ii) seller perception, and (iii) the true competitive situation. The variables have two possible outcomes, i.e. weak or intense. Therefore, the number of possible outcomes is eight. The possible outcomes are shown in the tables below. Firstly, the actual competitive situation is analysed from the sellers' and the buyers' perspectives respectively. Secondly, the effect of potential competition is analysed from the same perspectives.

Actual Competition

Seller focused analysis

In Table I below, the perceived and the actual competitive situations are compared focusing on the seller. In this setting, the seller might be an individual actor or a complete freight transport channel, even though the discussion is general, not explicitly discussing freight transport channels.

Actual competitive situation The seller's perception of the competitive situation	Weak	Intense
Weak	1 Correct	2 Underestimated
Intense	3 Overestimated	4 Correct

Table I Seller focus: actual and perceived competition

Squares number one and four can be left almost without comments. In these cases, the seller's perception about the competitive situation is correct, and he can be assumed to behave accordingly. In square number one, the seller has some monopoly power, while the intense competitive situation in square number four leaves him with a minimum of power.

The worst situation for the seller is if he underestimates the actual competitive situation, i.e. square number two. There is a risk in overestimating the customers' dependence on the seller/channel. The seller, then, thinks that he has more market power than he actually has. Therefore, he has a motive to impose conditions that are unfavourable to the customer, in terms of low quality and/or high price. Since the customers have alternatives, they do not have to tolerate the monopoly-like conditions set up by the seller. They can switch to the seller's competitors' services instead. As an alternative, they can inform the leader, in one way or the other, of the actual situation in order to receive a better offering. When the customers choose not to use the seller's services anymore, he might have to shut down his business, or take measures to attract old and/or new customers again. It can, however, be hard to regain the customers' trust and, therefore, the seller might have to provide an offering that is better than the competitors' offerings. There is, thus, a risk of losing market shares associated with underestimating the competitive situation. If the original seller of the service decides to leave the market, the remaining sellers' power increases. This might leave the customers in the same, or even a worse situation than they were at the beginning. The reason is that the remaining sellers might change their offering according to the weakened competitive situation on the market. The market situation, then, changes towards the one indicated by square number one!

In the reasoning above, the seller's competitors and/or the customers knew the actual competitive situation. If they do not, i.e. if they also have imperfect information of the market structure, very little can be said on a general basis. The reason is that if the customers and the competitors have as poor information as the seller in focus, "monopoly" power can successfully be used. It is possible that this situation lasts and it would, then, look as if the sellers had formed a cartel. If the customer has knowledge of the actual competitive situation, it would not prevail, since they would inform the sellers about the actual situation.

Square number three describes a situation where the seller overestimates the competitive situation. This benefits the customers, since the seller's offer then is more attractive to the customers than it would have been if the competitive situation was understood correctly. Of course, the customer does not have any incentive to inform the seller about the actual situation. Once the seller improves his knowledge of the actual competitive situation on the market, he is likely to use the power to benefit more from the situation.

Buyer focused analysis

Below, in Table II, the perceived and actual competitive situations are compared focusing on the buyer of the service. Since the reasoning is similar to the discussion above, this one is more condensed.

The buyer's perception of the competitive situation \ Actual competitive situation	Weak	Intense
	Weak	1 Correct
Intense	3 Overestimated	4 Correct

Table II Buyer focus: actual and perceived competition

I do not comment on the cases where the perceptions are correct here. The same goes for the subsequent analysis as well.

The competitive situation is underestimated in square number two. The buyer has more alternatives for his movement than he realises. If the seller does not realise this, he behaves competitively and the buyer cannot get better offerings from the (unknown) competitors. If the seller, on the other hand, realises that his customer lack information, he can benefit from the situation. However, the seller's competitors would, then, have an incentive to inform the buyer of their existence. Then, the situation changes into the one described in square number four.

In the other square of imbalance, i.e. square number three, the buyer overestimates competition. He, then, thinks that he has more alternatives than he actually has. The buyer would not accept the seller's imposing monopoly power conditions, since he believes that there are alternatives. The seller has an incentive to inform the buyer of the correct market situation. If the seller believes that the buyer is correct in his perspective, he might adjust the offering. Information might occur through a process where the seller refuses to adjust his conditions, and therefore, the buyer looks actively for the competitors until he realises the actual situation. The situation has, then, changed to square number one.

From this discussion, it is clear that perceptions are important in discussing and analysing competition. Table III below summarises the most important results of the buyers' and sellers' perception about the actual competitive situation.

Real competitive situation	Buyer's perception	Seller's perception	Case	Primary Short-run Market Effects
Weak	Weak	Weak	1	Stable equilibrium high P/Q-ratio
Weak	Weak	Intense	2	Disequilibrium, low P/Q-ratio. The situation prevails until the seller understands that his perception is wrong.
Weak	Intense	Weak	3	Disequilibrium, high P/Q-ratio.
Weak	Intense	Intense	4	Stable equilibrium, low P/Q-ratio
Real competitive situation	Buyer's perception	Seller's perception	Case	Primary Market Effects
Intense	Weak	Weak	5	Unstable equilibrium, high P/Q-ratio
Intense	Weak	Intense	6	Stable disequilibrium, low P/Q-ratio
Intense	Intense	Weak	7	Disequilibrium, high P/Q-ratio. The buyer will make the seller understand the actual competitive situation in one way or the other.
Intense	Intense	Intense	8	Stable equilibrium, low P/Q-ratio

Table III Summary of competition outcomes

In the short run, it does not matter for the market stability whether the actors have a correct perception or not. As long as they agree on the situation, it prevails until one of the actors (the buyer in case 5 and the seller in case 4) understands that his perception is wrong.

Potential Competition

Following the same line of analysis, the importance on the perceptions on actual and potential competition is discussed briefly below.

Seller focused analysis

Table IV below focuses on the seller's perceptions of the potential competitive situation.

Correct potential competitive situation		
The seller's perception of potential competition	Weak	Intense
Weak	1 Correct	2 Underestimated
Intense	3 Overestimated	4 Correct

Table IV Seller focus: potential and perceived potential competition

Square number two shows a situation where the seller regards potential competition to be weak. He, then, exert monopoly power. He might start losing customers when the potential competitors have become real. Then, the seller realises that he underestimated the situation and, by using his monopoly power, gave the potential competitors a reason to become real. If the buyer of the service perceives the potential competition in another way than the seller, he has a motive to inform the seller about his perceptions. It might, however, be difficult for the buyer to take advantage of potential competition, since he cannot threaten the seller to leave the cooperation at once. The potential competitors have an incentive to inform the buyer, but not the seller about their entering the market, since this could drive the original seller out of the market.

If the perception of the potential competition is overestimated, as in square number three the seller can keep low prices and/or high quality of his service in order to put up a barrier to deter potential competitors from entering the market and to prevent the customer from leaving him. The buyer may enjoy advantages he would not have if the seller had a correct perception of the situation.

Buyer focused analysis

The effect of the buyer's perception of potential competition in the market is indicated in Table V below.

Correct potential competitive situation		
The buyer's perception of potential competition	Weak	Intense
Weak	1 Correct	2 Underestimated
Intense	3 Overestimated	4 Correct

Table V Buyer focus: potential and perceived potential competition

When the buyer underestimates the potential competition, as shown in square number two, it is likely that he accepts a situation of high prices/low service quality. If his perception was correct, he could have put pressure on the seller and demand better conditions. When potential competition becomes real, the situation will not prevail.

If the buyer overestimates the potential competition, as in square three, he can impose demands on the seller. The seller will not agree to alter his offerings, if he views the potential competition differently.

Appendix III. Interview Guide

This section describes fields covered by the interview questions used to illuminate the purpose. The questionnaires, which were used as memoranda during the interviews, were not given to the respondents and they consisted of approximately 50-60 questions of different scope. Sometimes explanations were given to elucidate a question.

Each and every interview guide was formulated in a unique way, even though many questions and topics were identical. The questions differed depending on the type of respondent (i.e. shipper, coordinator, and type of carrier), channel/company type (regarding the geographical area covered, products moved, etc), and the respondent's personality. The interviews were loosely structured, and, therefore, the respondents were allowed to talk rather freely. Then, they often gave answers to other questions, and, therefore, many questions were not directly asked. Additional questions were asked to follow up interesting sidetracks in the respondents' statements. Such questions aimed at letting the respondents motivate, and further explain their points of view.

I started most interviews by asking the respondent some general questions about the company and some questions about his understanding of the term competition. These questions aimed at "softening" the respondent for the more important part of the interview, but they also aimed at improving, and broadening, my understanding of the perspective from which the questions were answered. Since the questionnaires used differed, and were not followed strictly, I do not present an actual interview guide. The questions below only show the fields covered. Thus, the following guide is neither complete nor does it represent the questions in their sequence.

Describing the person and the firm

Describe your company, focusing on the transports!

Describe your role!

Who are the firm's customers?

Describe the firm's transport history!

The case

Why is a freight transport channel used?

What insight do you have into the channel?

What is the channel's function?

How is the freight transport channel set up and constituted? Why?

Describe the information flow in the channel!

Why do the companies in the channel work together? How does the work function?

How would you describe the channel's competitive advantages/disadvantages?
In what way does the channel face competition?
How does the channel develop/hold on to competitive advantages?
Is power exerted in the channel?
Describe the obstacles to enter/exit the market!
How do the actors in the channel face competition?

Contractual issues

What types of contracts are there among the channel participants? What is specified, for how long periods are the parties contracted, etc?
Do perform tendering processes? How? Why? What variables are most important when selecting service providers?
Who pays for the transport?
What effects do contracts have on competition?

Competition

What does competition mean to you?
Describe your/the channels competitors!
How would you describe the intensity of competition in your market?
Describe the competitive environment that the firm/channel faces in spatial and dynamical dimensions!
How do you compete? Why?
What are your competitive advantages/disadvantages?
What affects the competitive pressure from a firm/channel perspective?
How do potential competitors affect you?
How do you keep informed?
In what variables do you find the channel's competing most intensely?
Do you plan to improve your competitiveness – how?
What strategy do you have regarding the transports and the channel cooperation?

Appendix IV. Market Structures

In this appendix, two “extreme” market structures are discussed: monopoly and perfect competition. Focus is on what structure the actors are likely to prefer.

Monopolies that are not acting according to a profit-maximisation philosophy might offer attractive short- as well as long-run solutions. Some people, like Adam Smith, stress that monopolies never, or very seldom, are good solutions in the long-run. Smith held that “*Monopoly is a great enemy to good management...*” (The Wealth of Nations, 1776).

Perfect competition is popular among analysts, since its implications can be used as standards of optimality for industrial performance:

- Firms in the trade can make no excess profits.
- Inefficient firms are forced out of the market.
- No cross subsidies are given.
- Prices are set in relation to availability of resources in the economy, which serves the customers most efficiently.

The first two implications follow from the fact that, in a free market, the most efficient producer can earn the highest profit and he can lower the price to drive the other producers out of the market. Cross subsidies, i.e. when a multiproduct company lets the profits from one product subsidize another product, constitute an obstacle for companies to enter the market, and it raises the price of the subsidising product. It is not possible to cross subsidise in a perfect competitive markets, since profits cannot be made on the subsidising product. The fourth point rests on the fact that all firms in a perfectly competitive setting are price takers, i.e. they have to equate MC and P. When each firm produces the amount at which the MC-curve cuts the horizontal price curve (the firms in a competitive environment are price-takers), the resources are, according to economic theory, allocated optimally.

Preferred Market Structure

Sometimes actors prefer a monopolistic situation and, in other cases, perfect competition is the preferred market structure. In the following section, it will be described how the shippers and the actors in the freight transport channel are likely to look upon the market structures. Shippers, coordinators, and carriers do not wish for the same competitive situations.

Shippers' Perspective

The shippers can be expected to prefer a more intense competitive situation among the coordinators and carriers to a less. However, shippers' demands diverge. Some have large freight flows, which are irregular in space as well as in

time, while others have small and more predictable flows. These actors are likely to have different demands on the competitive situation. While the former call for some large carriers offering a broad spectrum of services and taking care of almost every wish, the latter group might need many small carriers, since their demands can be less complicated. The same line of reasoning could be applied to the coordinators. The shippers' needs are based on different conditions. The shippers are normally winners of an, *ceteris paribus*, intensified competitive situation among the coordinator and the carrier, at least in the short run. In perfect competition, a large number of small actors that cannot influence the quantity supplied to the market constitute the supply, but this large number of actors has drawbacks from the shipper's perspective, since they typically have to contract many actors. Therefore, a contestable market situation with a few large actors is likely to be beneficial to most shippers. Then, they could gain from the service suppliers being able to earn and use economies of scale and scope. The situation could be even better if there was a monopolist offering the market supply as long as this monopolist is not able to earn monopoly rents due to other carriers threatening to step in, and the investments and the efficiency improvements do not suffer.

Coordinators' Perspective

When looking at the situation from the coordinators' perspective, the situation is more complicated. As in the case with shippers and carriers, coordinators can be expected to benefit from less competition in their segment and their role, and, therefore, they are likely to perceive a monopoly as the superior market situation. More interesting is how they are affected by the competitive situation among the actors that they depend on, i.e. the shippers and the carriers. The coordinators are by definition "middlemen" buying services from one party selling to another. When looking at the competitive situation among the carriers, the same line of reasoning could be applied to the coordinator as the shipper. Both benefit from a tougher competitive situation among the carriers. But the coordinators are also service suppliers, selling their services to the shippers. In this role the coordinators benefit from many shippers demanding their services giving them an extensive customer base, where they do not become too depending on one or a few buyers of their service.

As stated above the coordinators are the middlemen. They sell one service and buy another service. Therefore, their goals are partly similar to the shippers' and partly similar to the carriers' goals. Depending on this role their goals, and the effects these goals have on their own and others businesses, are similar to the carriers' *or* the shippers'. They will, since they are customers of the carriers, appreciate a tough competitive situation among the carriers. They would, as every actor, prefer to have a high degree of monopoly power in their market. What kind of competitive situation they would prefer among the carriers is difficult to say.

Since the coordinators are agents, they can pass on the prices and conditions given by the carriers to the shippers. From this perspective, the coordinators have no reason to care about the competitive situation among the carriers. However, the situation might be complicated if the competitive situation among the carriers forces prices upwards. If the shippers find the freight transport channel to be too expensive, they might look for alternatives. Such alternatives might involve other actors, freight transport channels, but they might also imply relocation of the shippers business.

Carriers' Perspective

The carriers, as discussed here, are “only” service suppliers. As such, they can be assumed to prefer less competition in their group to more. A less intense competitive pressure gives the carrier more degrees of freedom. What would the carriers prefer as regards the competitive situation among the buyers, then? From looking at the extreme cases, it is possible to say that doubtlessly, they do not appreciate when there is one single buyer, because they would be very dependent on this buyer and his decisions. But on the other extreme, they would, most likely, not find a situation with many small buyers attractive either since this would imply extra work assuming that the work effort put into each relation is not linear to the size of the job. This ends up in carriers preferring - in more or less the same way as the reasoning above regarding the coordinators selling a service - a contestable situation in which there are medium-sized buyers lacking monopoly power. Carriers do, of course, prefer to have as much monopoly power as possible. The more monopoly power they have the more profitable the business is likely to be. If there is intense competition, the price pressure is likely to be high and the profits will be reduced.

If a carrier or coordinator in a freight transport channel faces intense competition this forces him to offer competitive price/quality, which benefits the shipper. In the long run, the shipper might have been better off with a lower competitive pressure among the carriers. They might be better off if the carriers had some degree of monopoly power. A well-functioning and well-managed monopoly has certain benefits, which I hold are forgotten in the time of deregulations and privatisations³¹⁸. The problem with the monopoly is the risk that necessary improvements are not made to secure an efficient and effective service. The drawbacks of the monopoly show why the customers might not benefit from a monopolistic situation. The best solution for the shippers is probably a market

³¹⁸ If a monopoly is serving the customers'/society's interest and if it is efficient, this situation might be pareto optimal. However, it is always hard to measure whether the monopoly is “behaving” well and if it is efficient without deregulating the service. Normally, the monopolies are trying to optimise their own situation as any other companies. If they use their monopoly power in such a way, the best solution, in the long run, is probably to deregulate the market.

situation characterised by a few large service providers, working in an almost contestable market. The aggregations in the freight transport markets in the last few years may be one step in this direction. Having a short time horizon, the shippers and, to some extent, the coordinators are the winners in a tough competitive situation among the carriers. In the long run, a less intense competitive situation with fewer large actors might imply a more efficient industrial organisation making use of economies of scale.

Firms facing an intensifying competitive situation in their market segment typically see their declining profits. But is the opposite also true, i.e. does less competition lead to higher profits? Well, it might be the case, but it is not necessarily so. There is doubtlessly an extensive sluggishness in the direction to increase profits and, typically, prices as described in the analysis of the empirical material. It is not easy to start using recently acquired monopoly power fully, since this would meet massive opposition and the parties facing it increase their efforts to find alternatives. The actor, therefore, has to respond immediately to an increased competitive pressure, but he is likely to have to adapt slowly in the other direction.

Appendix V. Code System

In the analysis of the empirical material in chapters 7 and 8 I used codes given as endnotes. These notes are found in this appendix. The company names are not given, since the respondents were told that their names and answers would remain anonymous. The idea of using codes is twofold. First of all, to describe what each actor said increases the reliability of the analysis and it makes it easier to check the results. Secondly, the reader can, thanks to the codes, gain a deeper understanding of the answers. For instance, if actor X responded in one way to a certain question it might be interesting for the reader to compare this with what he responded to another question. The reader can, thus, compare and contrast answers given by different actors without knowing exactly who the respondents are. It is, however, important to stress that it, generally, is of no or little interest to know what actor said what on a more detailed level than the shipper-, coordinator-, and carrier-level. This is the reason for giving the codes in endnotes. Furthermore, as mentioned before, not all respondents were given exactly the same questions. Consequently, the fact that a certain actor is not represented among those giving an opinion to a certain idea does not necessarily mean that he does not share the opinion. Therefore, it is important not to interpret the material “inversely” i.e. by drawing the conclusion that a certain actor did not say a certain thing and, therefore, he does agree to the opinion.

To most readers, these codes are less interesting and they could be ignored. For readers with a certain interest in some topics, they may provide valuable information for comparing what type of respondent, i.e. regarding the role, or the industry they represent, said what.

The cases/channels are roughly divided into manufacturing and petroleum industry (abbreviated M/P in the table), food industry (F), and retailing and clothing industry (R/C). There are six cases representing the M/P-industry (A, B, C, D, E, and F, where E and F consist only of interviews with four shippers), three cases representing the food industry (A, B, and C), and four cases representing the R/C-industry (A, B, C, and D). For instance, Food_B, thus refer to the second case belonging to the food industry.

Some interviewees have had dual roles why they can be represented in more than one column. In most cases were the interviewees had dual roles one of these roles was to be a shipper and the other role was to be a coordinator for the channel service.

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Competition in the Freight Transport Sector – a Channel Perspective

In this dissertation, Rikard Engström penetrates competition in the freight transport sector from a channel perspective. He confronts a number of theories of competition with an extensive empirical material based on interviews with shippers and carriers in eleven Swedish transport channels. He finds that two specific theories, used together, have superior power for explaining the competitive behaviour of actors in freight transport channels.

The author also develops the valuable concept of competitive surfaces in freight transport. In order for carriers to advance their competitive positions, shippers to sharpen their skills in buying transport services, and governments to make better transport policy decisions, they all need to understand the concept of competitive surfaces.

Engström's dissertation gives an important contribution to our understanding of competition in the freight transport sector.

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