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**A Multinational Company Operating in a
Protected Trade Environment
- A case study of DeLaval within the
stainless steel industry in Brazil**

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ABSTRACT

It's essential for a multinational company to understand its trade environment. The trade environment is based on networks of actors, which have their specific interests. Therefore it is important to identify the main actors and their influencing power in the network, especially when operating in a protected trade environment.

The purpose of this study is to increase the understanding of a protected trade environment: identify the main actors, describe how they influence this environment, and investigate how the trade environment influences a multinational company's possibilities to operate and source raw material within the stainless steel industry in Brazil. This is a qualitative single-case study of the DeLaval Cooling Factory in Brazil. The empirical data was gathered through interviews in Brazil.

The trade environment of the stainless steel industry in Brazil is characterised by a small number of players with a strong presence in the network. The main actor has strong linkages with the government, which protects the industry from foreign competition through several measures. These measures harm the competitiveness of DeLaval internationally, but also secure a protected market in Brazil.

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ABBREVIATIONS

ALADI	<i>Asociación Latinoamericana de Integración</i> (Latin American Integration Association)
BACEN	<i>Banco Central do Brasil</i> (The Central Bank of Brazil)
BNDES	<i>Banco Nacional de Desenvolvimento Economico e Social</i> (The Brazilian Development Bank)
CADE	<i>Conselho Administrativo de Defesa Econômica</i> (Administrative Council of Economic Defence)
CDI	<i>Conselho de Desenvolvimento Industrial</i> (Council of Industrial Development)
CIS	Commonwealth of Independent States
CSN	<i>Companhia Siderúrgica Nacional</i> (National Steel Company)
DECEX	<i>Departamento de Operações de Comércio Exterior</i> (Foreign Trade Department)
DECOM	<i>Departamento de Defesa Comercial</i> (Department of Commercial Defence)
DEINT	<i>Departamento de Negociações Internacionais</i> (Department of International Negotiations)
DEPLA	<i>Departamento de Planejamento e Desenvolvimento do Comércio Exterior</i> (Department of Development and Planning of Foreign Trade)
EC	European Community
ECLAC	Economic Commission for Latin America and the Caribbean
FDI	foreign direct investment
FTAA	Free Trade Area of the Americas
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GNP	gross national product
IBS	<i>Instituto Brasileiro de Siderurgia</i> (the Brazilian Steel Institute)
IMF	International Monetary Fund
LAC	Latin America and Caribbean (-region)
LAFTA	Latin America Free Trade Association
MDIC	<i>Ministério do Desenvolvimento, Indústria e Comércio Exterior</i> (Ministry of Development, Industry and Foreign Trade)
MERCOSUR	<i>Mercado Común del Sur/Mercado Comum do Sul</i> (in Portuguese) (The Common Market of the Southern Cone)
MNC	Multinational Corporation
NAFTA	North American Free Trade Agreement
NTB	non-tariff barriers
PCI	<i>Programa de Competitividade Industrial</i> (Industrial Competitiveness Program)
PND	<i>Programa Nacional de Desestatização</i> (National Program of Denationalisation)
PTA	preferential trade agreement
SECEX	<i>Secretaria de Comercio Exterior</i> (Department of Foreign Commerce)
SME	Small and Medium Sized Enterprises
SS	stainless steel
WTO	World Trade Organisation

1 INTRODUCTION

This chapter will explain the background of the thesis, shortly present the case company, and go through the problem formulation and the purpose of the research. In addition, it will discuss the delimitations of the study. This chapter concludes by presenting the disposition of the thesis.

1.1 Background

'No business is an island.' (Håkansson & Snehota 1989, pp. 187)

Networks in business have been widely discussed for decades. In order to survive, companies must interact with other actors. Due to many changes in the trade environment, such as the market integration, networking has become even more crucial. Companies operating in the international arena are influenced by actors not only in their home country, but also abroad. This increases the complexity of their business environment and highlights the importance of understating the role of different actors.

Network is a wide concept and it covers the internal and external environment of a company. A multinational company can be seen as a network itself, but also as a part of a bigger network of external actors (Ghoshal & Bartlett 1990). Especially when it comes to international trade issues, the national government is an important actor. Even though the role of the nation state is being widely discussed, government is still highly involved in creating the trade environment in which a multinational company operates. Sometimes the relationship between the company and the government is involuntary and a result of rules and regulations which have been imposed by the government (Persson & Steinby 2006). However, all the actors in the network can be seen as active partners influencing each others (Hadjikhani & Ghauri 2001). This includes also the companies, which have become more and more active in the political arena and increasingly appealing to the public authorities in order to secure their interests (Attarça 2005).

Business and politics cannot be separated. Any exporting country must understand also the political basis of trade (Yoffie 1981). Because of the linkages in the network, the actions of one actor have an influence on the others. This has caused a lot of discussion on the role of the government as a business regulator. According to the free enterprise system, all government interventions are seen as restrictions (Persson & Steinby 2006). However, the interventions are also claimed to even out the situation in case the other actor is using unfair methods, such as dumping. Moreover, inter-governmental networks can also function as a mean to liberalise trade and create common rules for freer trade, thus practically creating rules to limit their own interventionist power.

Government trade policies have been changing over time and this has had an impact on companies (Doh & Pearce II 2004) both national and foreign. Some of these trade policies have been targeted especially to protect a national industry. This is basically against a widely accepted consensus of overall benefits of free trade (Lederman 2005, p. 1-4) and it highlights the dilemma, which arises when the interests of different actors are not similar. The collision of interests occurs also on the intra-governmental level. Governments are facing pressure in their international networks, to facilitate trade and support the common economic interest, while at the same time satisfying the national actors in their home country (Lawrence &

Bradford 2004). This conflict can be seen in many industries (e.g. steel, telecommunications, and electricity) at the moment, which are struggling with the issue of protectionism and free global trade.

Understanding the conflicting interests, it is not surprising that the negotiation of the trade agreements that aim for deeper integration has created controversy and made the negotiations more contentious and politically difficult. Several studies have investigated the benefits of integration in the context of prices and used market segmentation as an evidence for protectionism. Segmentation refers to a lack of market integration. When markets are integrated buyers can make their purchases from the countries with the lowest prices and will only be charged the additional transport cost of shipping them to their home market. Therefore, if the international markets are integrated, seller cannot raise domestic prices above the level that would attract imports. (Lawrence & Bradford 2004) This price difference is usually understood as protectionism.

The structure, level, and nature of protectionism have been investigated by social scientists as well as economists. The research aims to explain why trade policies that protect national industries exist and change over time. (Lederman 2005, p. 1-4) However, the question can also be taken further by investigating protectionism in the concept of networks and considering how different actors in the network affect protectionism.

Ever since the World War II, steel industry has been one of the most protected industries in the world and it is given a strategic role in many countries. Strategic industries are considered having fundamental importance to the development of the economic potential of the country and in order to support these industries several protective measures are used (Buelens 1999, p. 15-17). However, there are several actors within one industry, and not all of them might have the same interests. In this case the protectionist measures might benefit only some of them. These are the ones with the strongest influence and the biggest importance to the government. Others, normally smaller actors might not have the same interest, but are forced to manage their operations in this protected environment.

As in the case of steel industry, Brazil offers an interesting insight to the phenomenon. Brazilian government has taken many measures to enhance the international competitiveness of the national steel industry. In the case of one special steel industry, stainless steel (SS) industry, this has led to a protected monopoly situation of the formerly government owned company Acesita S.A., which is the only SS producer in South America. Companies manufacturing SS products are in a weaker situation in this network. Since the interest of the SS producer is given the priority in the government policy, it creates a restricted environment for these manufacturing companies operating in the Brazilian SS industry. One such company is DeLaval producing milk cooling tanks made of SS.

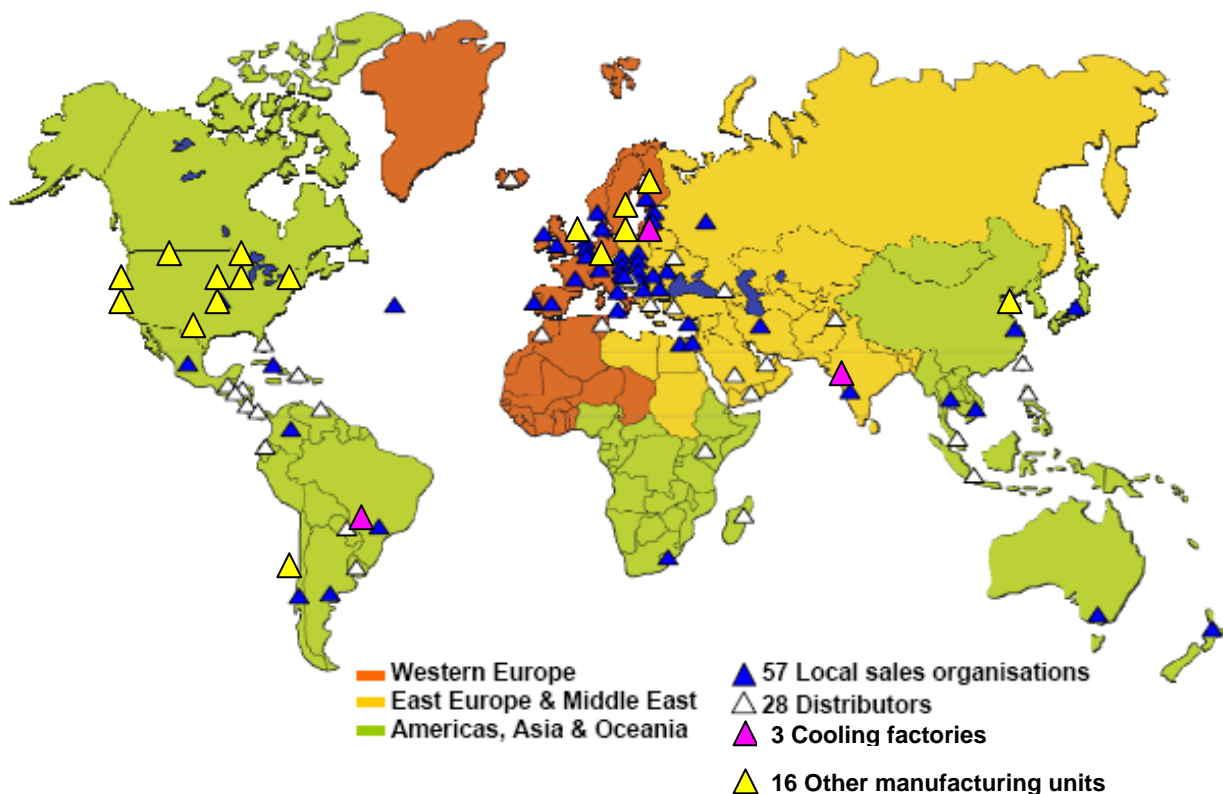
1.2 DeLaval

DeLaval International AB., with the headquarters in Sweden, is a part of the Tetra Laval group. Together with TetraPak and Sidel, DeLaval covers the whole value chain from the cow to the consumer. However, each unit is independent when it comes to operating activities. (Tetra Laval 2006, p. 33-44) DeLaval International is a full service supplier to dairy farmers (organisation structure presented in appendix 1). DeLaval's products include all possible aspects of a dairy farming solution, starting from the udder hygiene to milk cooling, and everything in between. They operate in the field of voluntary milking systems, herd

management, milking automation, feeding, water supply, stalling, maintenance services, feed preservatives, electric fencing, detergents, cooling, cleaning & vacuum, milk filters, animal comfort and even fly control. (DeLaval 2006b)

DeLaval International operates in 100 markets (figure 1) and delivers half of all milking equipment sold worldwide. DeLaval International has over 4000 workers, 19 manufacturing units (table 1), and net sales over € 700 millions. (Tetra Laval 2006, p. 33-44) DeLaval International has 3 manufacturing units producing milk cooling tanks: one in Poland, Wroclaw, another in India, Karad, and the third in the Southeast of Brazil, in the city Campinas, 100 km from the city of São Paulo (Acherman 2006a, interview).

Figure 1 Regional structure and manufacturing units of DeLaval International



Source: Author's elaboration, based on DeLaval 2006b & DeLaval 2006c.

Table 1 Manufacturing units of DeLaval International

Activity	Place
Cooling	Campinas, Brazil
Milking, Cooling, Chemicals, Farm Supply	Wroclaw, Poland
Cooling, On-farm processing	Karad, India
Filters	Tampere, Finland
Milking, Filters, Chemicals	Kansas City, MO – US
Milking, Feeding, Farm Supply	Tumba, Sweden
Milking	Bosio, Argentina Dobre Miasto, Poland Marktschorgast, Germany Waunakee, WI – US Chillicothe, MO – US Mt Vernon – US
Chemicals	Gent, Belgium Shanghai, China Hamilton, New Zealand Hamilton, NY – US Dallas, TX – US Turlock, CA – US Des Plaines, IL –US

Source: Author's elaboration, based on DeLaval 2006c.

The milk cooling tanks are designed to store and cool down the milk. It is placed in a farm where it cools the milk from 35 degrees to 4 degrees in 3 hours for hygiene reasons. This is the common standard in the dairy industry and mandatory requirement for milk producers. The cooling tank is made of SS, more precisely two different kinds of SS: 304 and 430, because of its anti-corrosion characteristic (see chapter 5.2.2). The factory sources its raw material mainly within Brazil, from Acesita, which is also the only SS producer in South America. (Costa 2006, interview)

Production in Campinas started in 1998 and by the end of August 2006 the factory had produced approximately 13 000 cooling tanks. In 2005 it was rewarded as the best manufacturing unit within the whole DeLaval International group. DeLaval Brazil produces milk cooling tanks mainly for the Brazilian market and only 20 % of the production is being exported. (Acherman 2006a, interview)

1.3 Problem Formulation

'Strongly affected by policy decisions, DeLaval has one foot in the barn and one in the corridors of power. The ability to foresee and interpret trends, whether political or agricultural, is one of the drivers behind DeLaval's position as the undisputed global leader in the field of milking equipment.' (Tetra Laval 2006, p. 33)

It is essential for a multinational company to understand the environment it is operating in and the networks it is a part of. These networks exist on a multilateral, regional and national level and they include all the actors, which influence the company. Understanding the characteristics of the trade environment is especially important when the company is

operating in a protected industry. Behind this trade environment is a network of actors, which have their specific interests. For this reason it is essential to identify the main actors and what kind of influencing power they have in the network.

In order to describe the characteristics of the trade environment it is necessary to understand the background which has led to the government protectionism and the trade policies, which are creating the situation. Because a government act as a part of networks as well, it is important to discuss the current trends in inter-governmental relationships and pay attention to the multilateral and regional agreements, to which the government is committed to. Multilateral and regional trade agreements aim to integrate the market and remove the barriers to trade and thus assure the lowest possible prices to the buyers. On the contrary, market segmentation and barriers to trade, allows the seller to raise domestic prices above the level that would otherwise attract similar goods at a lower price from abroad. This is clearly happening in the SS industry in Brazil.

The SS industry in Brazil is protected by the government. The Brazilian government has imposed trade policies which support the interest of the stainless steel producer, Acesita. DeLaval as a part of this network is also affected by the government policies. However, the interest on Acesita and DeLaval are not alike and thus these policies are hindering the possibilities of DeLaval to source its raw material at a best possible price. Because of the characteristics of the SS trade environment in Brazil, DeLaval is facing competitive disadvantage in comparison to its international competitors. This disadvantage is particularly illustrated through the cost of raw material. Due to the segmented product market, Acesita is able to charge higher price on the national market, which in an integrated market could not differ by more than the cost of transportation.

With these aspects in mind, this study aims to understand how the protected trade environment influences the possibilities of a multinational company to operate and source its raw material within the SS industry in Brazil. It will describe the main characteristics of the SS industry in Brazil and how different actors influence this environment. This leads to the two main research questions:

Research Question 1: What are the main characteristics of the trade environment in the stainless steel industry in Brazil and how do the different actors influence this environment?

Research Question 2: How does the protected trade environment influence DeLaval's possibilities to operate and source its raw material within the stainless steel industry in Brazil?

1.4 Purpose

The purpose of this study is to increase the understanding of the characteristics of a protected trade environment, identify the main actors and how they influence this environment and finally to investigate how the protected trade environment influences a multinational company's possibilities to operate and source its raw material within the SS industry in Brazil. The study focuses on the viewpoint of the DeLaval cooling factory in Brazil and will describe the influence of different actors in DeLaval's network, both on a national and international level and how they affect the competitiveness of the unit. The overall production costs in Brazil and the higher SS price, which Acesita is charging in the national market, are used as tools to describe and exemplify the influence of the protectionism, however giving a priority to the latter.

1.5 Delimitations

Networks can be understood on several levels, starting from the internal network of a company to a global business network. To cover the whole range of all different networks was not possible within the timeframe of the study, nor was it relevant considering the purpose of the study. In order to focus on the research questions and avoid confusion, this study focuses on the main networks, and main actors in these networks, which influence the possibilities of the cooling factory of DeLaval to operate in the SS industry in Brazil. This means that the internal network of DeLaval is considered only as far as it influences the cooling factory's possibilities to operate in this trade environment.

Due to the large amount of different trade policies in Brazil and the limited resources of the research, all trade policies will not be discussed. The main focus is on trade policies affecting directly DeLaval's possibilities to source SS in Brazil.

The aim of this research is to understand the influence of the trade environment characteristics on the possibilities to operate and source raw material. Therefore the research will concentrate only on the import possibilities and how this affects on a larger scale to the competitiveness of a multinational company unit. Thus, the investigation of all export policies and possible export promotion incentives are not included in this research.

1.6 Thesis Disposition

Figure 2 Thesis disposition

Chapter 1 Introduction	Chapter 1 introduces to the research by describing the background of the thesis, presenting the case company shortly, explaining the problem formulation and the purpose of the research and considering the delimitations of the thesis. Also the thesis disposition is presented.
Chapter 2 Methodology	Chapter 2 explains and justifies the research design and describes how data was collected and analysed. The chapter also includes the considerations of the quality of the research and some critical remarks on issues that affected the execution of the study.
Chapter 3 Conceptual Framework	Chapter 3 presents the conceptual framework used in the thesis. It explains the main concepts investigated and describes the current trends on a multilateral and regional level, which offer the framework to understand the trade environment. The chapter also discusses how multinational companies can react to these changes in the environment and the possible strategies they can use.
Chapter 4 Trade Environment	Chapter 4 offers a description of the Latin American region and the regional trade agreements, which Brazil is a part of. The chapter describes the Brazilian economy, the most essential trade policies within the context of trade liberalisation and how these are related to antidumping measures. Finally, this chapter focuses on a specific industry, the stainless steel industry.
Chapter 5 Network of Actors	Chapter 5 describes the network of the main actors influencing the possibilities of DeLaval to operate and source raw material within the SS industry in Brazil. This chapter gathers together the empirical data collected through interviews and presents it by each main actor interviewed.
Chapter 6 Analysis	Chapter 6 combines the conceptual framework with the empirical findings. This chapter will discuss and analyse the different characteristics of the trade environment, and how these influence DeLaval's possibilities to operate and source raw material within the SS industry in Brazil
Chapter 7 Conclusions	Chapter 7 presents the conclusions of the thesis by referring back to the research questions. Also recommendations and future research suggestions are described in this chapter.

Source: Author's elaboration.

2 METHODOLOGY

'A methodology refers to the choices we make about cases to study, methods of data gathering, forms of data analysis, etc., in planning and executing a research study. So our methodology defines how one will go about studying any phenomenon.' (Silverman 2005, p. 97)

2.1 Research Design

In order to achieve the purpose of the study and give answers to the research questions, several variables were analysed and the complexity of the variables such as the trade environment and the role of the actors, had to be taken into consideration. The purpose of the study was to understand variables that cannot be measured statistically or in numerical terms. Because of the complex nature of the research topic and the purpose of the research, the best research strategy was the qualitative study. (Marschan-Piekkari & Welch 2004, p. 13)

This research follows a descriptive approach (Silverman 2005). It aims to describe the main characteristics and how these influence a multinational company, such as DeLaval. Due to the nature of the research and the aim to *increase understanding*, the case study approach was the most appropriate strategy. Case study is used as a research strategy in many situations to contribute to our knowledge of individual, group, and organisational, social, political, and related phenomena. Common for these situations and for the need of using a case study is the desire to understand complex social phenomenon. (Yin 2003, p. 1-17)

Punch (1998) describes the idea of a case study as follows:

'The basic idea is that one case (or perhaps a small number of cases) will be studied in detail, using whatever methods seem appropriate. While there may be a variety of specific purposes and research questions, the general objective is to develop as full an understanding of that case as possible.'

The strength of the case study is its ability to deal with a large variety of evidence, such as documents, artefacts, interviews and observations, which can all be used in order to understand the situation. Also in the spirit of the case study, the theoretical background is not meant to give straight answers to the questions, but rather create an understanding of what is known, to be able to develop sharper and more insightful questions about the topic. (Yin 2003, p. 1-17) Consequently the case study gives to the research the flexibility to deal with a range of different type of questions. (Ghauri 2004, p. 109)

The case study design in this research is the single-case study. This was chosen because of the purpose was to create deeper understanding of the phenomenon, and also because the representativeness of the unique case. (Yin 1994, p. 38-39) The case of this research is DeLaval cooling factory in Brazil.

The research on DeLaval's situation and the trade environment will help us to answer the research questions. However, when studying an organization there is a dependency of the gatekeepers, who can limit the study by telling that, they alone can provide comprehensive information. To overcome this limitation it is important to question given information and constantly look for alternative support for the information. (Silverman 2005, p. 125) In this

research we followed Silverman's (2005) principle and doubted all the interview answers and re-framed same questions to different actors in the same network.

2.2 Data Collection

The theoretical data was collected mainly from the academic journals, books, research publications, working papers, economic and financial analyses and publications, trade policy reviews, and industry associations. In addition some electronic sources were used, such as newspaper articles, magazines and the web pages of well known institutions, such as the Central Bank of Brazil. This information provided good background knowledge of the topic. With the help of the conceptual framework and the preliminary understanding of the trade environment characteristics, we were able to plan and prepare for the collection of the primary data.

The crucial stage considering the collection of the empirical data was the field trip to Brazil during 24.10-9.11/2006. During the trip we stayed in the city of Campinas where the case company is located. The trip lasted approximately 2 weeks, which allowed us to collect a vast amount of data. Being at the location also allowed us conduct most of the interviews face to face. By conducting the interviews face to face we were able to observe the environment and the interviewees more closely. Only one interview was conducted by phone, because of the incompatibility of the time schedules. However, this was also done in Brazil.

The conducted interviews were open-ended, which is also the most typical case study interview form. It allows the interviewer to set direct questions about the facts but also the possibility to the respondent to give a free opinion about the events. This can also be used to gain knowledge about the respondents own insights into certain occurrences and as a basis for further inquiries. (Yin 1994, p. 84) The interviews lasted approximately 2 hours each and were recorded. For the interviews we had prepared some specific questions as well as broader themes, which were aimed to help to guide the discussion in the right direction. These themes were originated from the conceptual framework and evolved the main issues of networks in multilateral, regional and national level as well as protectionism within the stainless steel industry in Brazil. More precise questions were thought beforehand considering the background and specific knowledge of each interviewee. The themes followed the research during all the interviews and we often asked same questions from many interviewees in order to compare and analyse the different point of views of the actors. One example of questions, which were asked from most interviewees, was 'How is the market price of the SS in Brazil formulated?' However, we did not want to set too precise limits to the discussed issues, rather give the respondent the opportunity to provide broad answers and a new insight to the topic. The interviews were conducted either in English or Portuguese.

The parties interviewed were DeLaval Brazil, Acesita the stainless steel producer, Amorim, which is an intermediary between DeLaval and Acesita, and an independent industry expert João Assad who is the owner of several companies in the stainless steel industry in Brazil, such as LaserJob. These interviews with other actors in the industry were conducted to collect more information and to reduce the dependency from the gatekeeper, as suggested by Silverman (2005). These additional interviews were originally proposed by DeLaval, but during the stay we were able to organise one more interview, which was not originally planned. This was a telephone interview with a business analyst from Acesita.

In the case of DeLaval we interviewed several departments and persons separately, while at Amorim and LaserJob, more persons were present. In the interview with Amorim, the manager, commercial manager and sales representative were present. In the interview with João Assad, the industry expert, also 3 executives from his companies were present. This provided an interesting opportunity to hear and observe different actors in the same company. The interviews occasionally turned into heated discussions between the interviewees and we were able to get an insight into different opinions. The interviews with Amorim and the industry expert were held in the city of São Paulo, 100 km south from Campinas.

Several interviews were conducted at DeLaval in different departments and with different persons. We interviewed the factory manager as well as 2 other experts from the factory. From the commercial side, the logistics manager and the manager director were interviewed. During the stay in the case company, data was collected continuously, also on informal occasions. This was supported by the fact that we spent most of the days in the office, at the location provided by the case company, where we were able to conduct clarifying interviews constantly. Being present at the company also provided a freer environment to observe and discuss a variety of topics. We were also able to have an access to some company material, which helped us to comprehend the cost structure and the price of the stainless steel.

In addition to the personal interviews, we had the opportunity to visit the factory of Acesita in the city of Timóteo. Because the factory is located almost 1000 km north from São Paulo, this field trip took us two days and four separate flights. We spent one day visiting different production phases at the factory and discussing with several people. Getting to know the factory was an extremely useful experience, but also gave us better understanding of the community where the factory is situated. This was extremely important in understanding the impact of the company within the community of Timóteo. We also had the opportunity to discuss with several factory engineers and to develop better understanding of the stainless steel industry.

2.3 Analysing the Data

Interpreting and analysing qualitative data is a challenging task when conducting a case study. The idea is to present an authentic understanding of people's experiences by interpreting the data against the background of the context. In order to avoid misunderstanding the data, it is essential that the data analysis and the data collection are closely linked during the life cycle of the research. It is important to analyse the data when it is still 'fresh' and not months after the data collection. (Ghauri 2004)

In the data analysis we followed the first step described by Ghauri (2004). The data analysis was started in a chronological way and each interview was written open in a 'story-telling' manner immediately after the interview. If several interviews were conducted regarding one actor, these were all added together. This also helped to find any conflicting data and verify the correct information on time. We became to the conclusion that the most convenient way to present the empirical data (chapter 5), was to loosely follow the chronological way, and thus the information regarding each main actor interviewed was presented separately. If one interviewee referred to another actor, this was taken into consideration when presenting the specific actor.

After organising the information in described way, the data was sorted according to concepts and themes. In the analysis of the data, two main themes that lead process were networks and

protectionism. These themes were closely linked to the theoretical framework and they helped us to categorise the information according to the common characteristics. Basing on these we were able to create an actor network matrix, which was then further analysed in order to emphasise the interlinkages between actors. During the analysis we focused especially on the viewpoint of the case company.

2.4 Quality of the Research

2.4.1 Validity

Validity refers to the truthfulness of the research. According to Hammersley (1990) validity means the truth and how accurately it represents the social phenomenon to which it refers. Validity can be divided into internal validity and external validity. Internal validity refers to the specific case while the external validity refers to the extent, which the results can be generalised. (Yin 1994, p. 34-36)

The internal validity is a concern only for causal case studies, in which a researcher is trying to determine whether an event x has led to event y. (Yin 1994, p. 35) This research speaks a lot about influencing and the effect of different actors, however it is not trying to explain the causal relationship, but rather understand and describe how the different actors operate in the network.

The external validity, i.e. whether a study's findings are possible to generalise beyond the immediate case study (Yin 1994, p. 35) has been widely debated in the context of a qualitative single case study. Some researchers argue that it is not possible to generalise basing on one case study, while others have a more radical view. According to this view, the basic structures of social order are to be found anywhere, if does not matter where we begin our research. Looking at any case, the same structure will be found. (Silverman 2005) This research does not aim to generalise the results beyond the level of the purpose. However, the results of the trade environment characteristics can be generalised at the level of other companies such as DeLaval, which operate on the stainless steel industry in Brazil.

In this research several methods were used in order to secure and enhance the validity. One of the main ways to gain this was through triangulation. It refers to the use of multiple data collection methods or even the collection of different kind of data on the same phenomenon (Ghauri 2004). According to the traditional view of triangulation, the use of multiple methods allows to check for controversial issues (Yin 1994, p. 92). The results obtained were generally the same, especially when considering the facts, such as the trade policies, or the functions and actions of an actor. However, occasionally some differences occurred. These differences were not bypassed, but taken seriously and solved yet from additional sources. This was possible, because of conducting interviews at the location. Some differences were even expected. These were related to the different perception of the actors and their position in the value chain, for example, whether they saw antidumping measures as justified actions or not.

The validity of the information is supported by observations, which add an additional source of information to the interpretation. (Yin 1994, p. 145) Observations were possible because the interviews were conducted at the location and mostly face to face. Nonverbal elements are important when discussing sensitive topics and, for example, help in detecting different emphasis and if the interviewee is embellishing the facts.

In order to gain triangulation another source of information, which needed to be studied was the written documents, such as the official company material and industry information. These provided complementary information along with the interviews and observations. Validity of the research was also increased by allowing the case study subject to review the research (Yin 1994, p. 145). In this case the final research was sent to the case company for a revision and they confirmed the accuracy of the information.

2.4.2 Reliability

According to Hammersley (1992) ‘the reliability refers to the degree of consistency with which instances are assigned to the same category by different observers or by the same observer on different occasions’ or in others words whether the findings would be equal if the study was made in another occasion. Of course, the access to the information must be considered, and willingness of the interviewees to share their knowledge. Also trade policies are dynamic change over time, but the *same* case study would be conducted again, the results would be replicable.

The reliability of the study was enhanced by maintaining the chain of evidence (Yin 1994, p. 98). All the interviews were taped, typed and stored. Some persons were interviewed several times to decrease the bias. We also tried to remain as neutral as possible during the interviews in order to minimise the personal affect on the results and not to guide the answers. The role of the interviewer should be to allow the interviewee to construct his/her own meaning (De Geer et al. 2004). The open nature of the interviews enhanced the reliability, since it allowed clarifying the questions in case the interviewee did not understand the question. The interviews were also held in a language most convenient to the respondent (English or Portuguese), to increase the reliability.

2.5 Critical Review

Main drawback of this research was the fact that all actors discussed could not be interviewed directly. Interviewing the government policy makers would have been extremely useful. However, one must stay realistic and understand the limited resources and the difficulty in accessing government agencies, especially when considering a sensitive topic such as protectionism. A more straight forwarded comparison with the European situation and an analysis of the role of the factory in Poland was not possible, because of the lack of access. Despite the contact provided by DeLaval Brazil, we were given no answers appealing to the confidentiality of the issues.

Confidentiality of information is always an issue which affects research, especially when studying enterprises. The limited access to some sensitive information and companies’ documents has to be mentioned as a drawback. However, we were able to come over much of these obstructs by interviewing several actors. For example, a subsidiary offered us the information that the holding company refused to offer, appealing to the confidential nature of the data.

3 CONCEPTUAL FRAMEWORK

This chapter will present the conceptual framework of the thesis. First of all, it will explain the concept of networks and discuss the role of the state as well as the role of the corporation. Secondly, it will describe the current trends and debates in the multilateral and regional negotiations, which have an impact on the trade policies implemented by a country. Thirdly the concept of protectionism is investigated and how this can influence a company. The chapter will also discuss how multinational companies can react to these changes in the environment and the possible strategies they can use.

3.1 Networks

3.1.1 Global Network and Role of the State

Our everyday existence is to varying degrees sustained by a complex web of global networks and relationships of production and exchange, of which we remain largely unaware. In an interdependent world, domestic matters are in some ways also governed by external factors. (McGrew 1992, p. 1-28) Conventional maps of the political world disclose a very particular conception of the geography of political power. While the early civilisations developed largely as a result of internal forces and were to a large extent separate and autonomous, the emergence of the modern nation-state and the incorporation of all civilisations within the intern-state system changed all this. This resulted as a geographically illustrated division of domestic and foreign issues, which functioned as the basis on the political, social and legal institutions of the modern nation-states. (Held 2000)

However, since the early 20th century, this separation to the internal and the external world became more fragile and was increasingly intervened by regional and global flows. (Held 2000) In the post-war era, governments realised, that achieving domestic policy goals in a highly interconnected world system, requires enhanced levels of international cooperation. This has led to an enormous expansion of both the amount and the functional scope of international institutions, agencies and regimes. It is argued that in the late twentieth century, politics can no longer be understood as purely local or national social activity but the global dimension of politics must be understood. (McGrew 1992, p. 1-28) The changes across different social and economic areas are creating new forms of regional and global networks, which in turn are challenging and reshaping our political communities and the aspects of the modern state. (Held 2000)

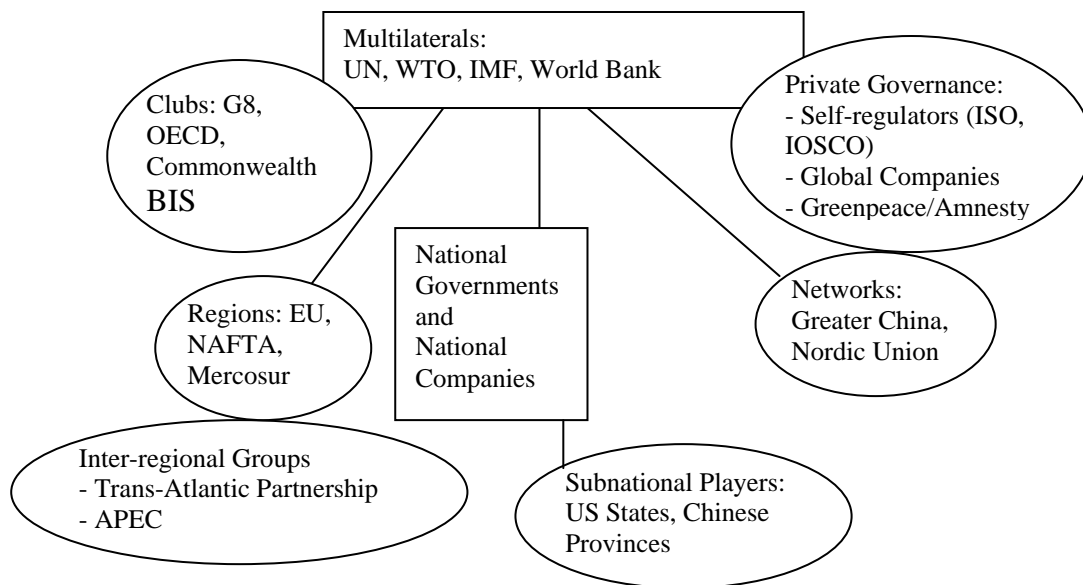
Even though there are many international actors and practices that inhibit governments' freedom to shape the economic policy, they do not eliminate it. There are many legal and generally accepted ways, how governments can make their economies more attractive to investors. This can be done, for example, by supporting infrastructure development and increasing efficiency. However, there are also signs of revival of political debate of deploying 'national security' arguments on the economic field. (Cable 1999, p. 35-42)

Globalisation means different things to different groups of countries. This attitude can change from general political acceptance of the smaller role of the nation-state to securing the national politics and power. (Cable 1999, p. 40-43) Public and private bodies, operating at national, regional and international level, are deeply entangled with the decision-making and

regulatory activities in several areas. Since organisations operate with different agendas, this has resulted as a fragmented policy making. (Held 2000)

The system of global governance is a complex network of different actors (figure 3). The jurisdictions of the different actors overlap and there is a competition between different kinds of rules and institutions. In order to function in this complex area, the governments are forced to network. There has been an increase of voluntary intergovernmental clubs: regional clubs to promote regional integration, as well as functional clubs to self-regulate for example product standards. (Cable 1999, p. 54-68)

Figure 3 World governance



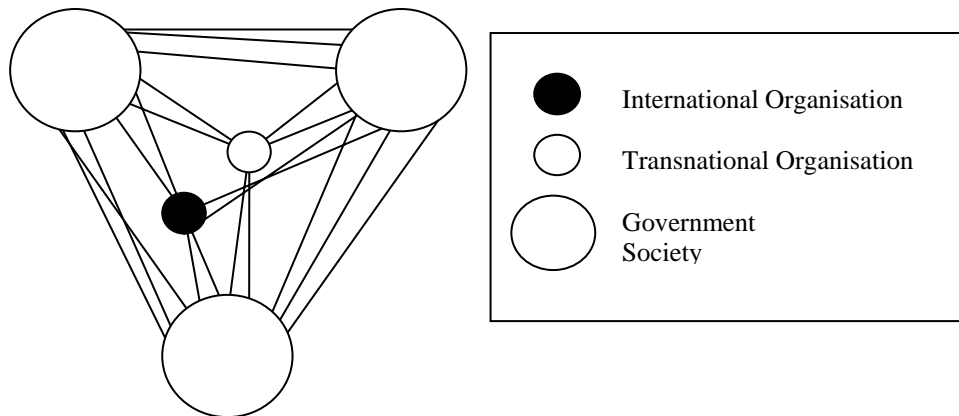
Source: Modified from Cable, V. 1999, p. 68.

The implications of the current development are debated. There are several allegations that the intensifying globalisation diminishes the regulative capacity of the state. (Held 2000) The liberalisation movement, which aims to free the markets, reduces the role of the government in terms of ownership and control over production of goods and services. It also challenges the legitimacy of many actions performed earlier by the nation-states, such as running nationalised industries; trade, exchange and price controls, and monopoly control over infrastructure and public services. (Cable 1999, p. 15-18) According to this view, national states have become more of a decision takers and the social and economic process operates mostly on the global level. However, there are also opposing views stating that the nation state is as strong as ever (Held 2000) and that many of the constraints on national freedom of action are self-imposed. (Cable 1999, p. 33-35)

There are strong arguments which claim that economics may be increasingly global but politics is still national. These support the view of the strong influencing power of the state. These opinions criticise the political power of the international bodies, such as the European Parliament. These international bodies are claimed to have no political power on their own right, and in the case of international cooperation, such as the International Monetary Fund (IMF) or the World Trade Organisation (WTO), this power is created through the mediation of national ministers. Thus, it can be argued that the legitimacy of politicians resides

essentially in their domestic electorates. (Cable 1999, p. 31) Even though there are different views on the relationship between economics and politics, it is clear that these two are undoubtedly interlinked (Tooze 1992, p. 244) as illustrated by the cobweb image of global politics (figure 4).

Figure 4 Cobweb image of global politics



Source: McGrew 1992, p. 13.

The cobweb image of the global politics highlights the richness and complexity of the interconnections between different actors in a global system. It also emphasises the fact that development and decisions of one party can have an impact on the other and thus also underlines the vulnerability of the nation-state to external influences. (McGrew 1992, p. 1-28) Even though the international economy is characterised by the interdependencies of the actors, countries struggle to achieve and enjoy autonomy in the conduct of their economic policies, while at the same time they are progressively influenced by the interdependence of the other actors. (Thompson 1992, p. 198) This clearly illustrates the interconnections between states, corporations, and different organisations, in other words the interaction between different actors.

3.1.2 Business Networks and Political Power of a Corporation

Business relationships have often been seen as a dyadic relationship between two parties. However, a relationship should not be looked merely in isolation, but investigated within the context of relationship with other parties. (Blankenburg et al.1996) Relationships in networks are connected to each other and therefore embedded in the environment. (Persson & Steinby 2006) This suggests that the social exchange networks can be used to analyse the cooperation in business relationship and within business networks. Two relationships are connected if a change in one of them will have an impact on the other. Social exchange theory pays special attention to the nature of the connection and distinguishes between positively and negatively connected relationships. In a positively connected relation the change in one actor supports or complements the change in another, while as in a negatively connected relationship the change in one actor hinders or competes with the change in another. (Blankenburg et al.1996)

This view is taken further by the network approach which claims that instead of creating relationships through voluntary interactions between actors, the company might not always have a choice whether to commit or not. These involuntary relationships can be a result of rules and regulations that restrict the choice of interaction partner. This criticises the

autonomous role of each actor and highlights the interdependence between actors. (Persson & Steinby 2006)

Rowley (1997) combined the network theory with the shareholder theory to explain the phenomenon further. He argues, that network models begin, where stakeholder research stops and examines systems of dyadic interactions, capturing the influence of multiple and interdependent relationship on an organizations' behaviour. He emphasised the importance to broaden the view to cover a larger social environment while keeping in consideration the structure of the individual actors and their impact on the company. Rowley (1997) highlighted the importance of not concentrating too much on the individual actors in a network, but to understand their combined effect, since a company in reality does not respond to only on one actor, but to the whole network of actors simultaneously.

Networks can be understood on different levels as already discussed earlier. Actor-network theory allows the research to analyse the complexity from different distances. Often the analysis is simplified by treating networks as individual actors, but this does not have to be the case. (Sarker et al. 2006) One actor in a network can have its own internal network, but still be a part of a bigger network. For example a multinational company can be seen as a network itself, embedded in a bigger network consisting of regulators, suppliers, etc. (Ghoshal & Bartlett 1990) According to the actor-network theory, an actor can be human or non-human. This expands the window through which the network-phenomenon is examined, since it does not a priori distinguish between micro and macro actors. It also acknowledges the naturally unstable character of actors. (Sarker et al. 2006)

Research suggests that government policies can have a significant impact on business activities. There have been some dramatic changes in government policies as how they relate to private corporations, such as democratisation, privatisation, deregulation, re-regulation, and trade liberalisation. These initiatives have had a profound impact on market structures and business strategies and have definitely resulted as a growing importance to understand the impact of government policy on private actors. (Doh & Pearce II 2004)

Several models of management and international business have paid attention to the interdependencies between firms and other business actors, while the interaction between firms and political actors has drawn less research. Most of the research on the relationship between firms and political actors, concentrates on how the political environment influences the company and considers the company only as an inactive party. However, firms' business activities are interrelated with political activities. Company is not only an inactive party but an active partner, as some studies on the dyadic relationship between these parties represent. According to the dyadic view, both sides are active and influence on each others. (Hadjikhani & Ghauri 2001) Together with other actors they create a network, which in the end influences the possibilities and restrictions of a company. Firms in the international business arena function as a part of a big network, where also their political relationships need to be considered.

Political behaviour is intrinsic to international business because crossing borders introduces firms into other sovereignties. It is claimed that creating a comprehensive theory of international business political behaviour is impossible because of the number of factors involved and its temporal and spatial variations. (Boddewyn & Brewer 1994) However, some researchers have made an extensive effort to include this uncertainty factor by considering the corporate entrepreneurship strategies in a specific policy environment. Research in this area suggests that there are several strategies a company can adopt to cope with these government

policies and that understanding a specific situation of a company, will help to create a bigger entity. (Doh & Pearce II 2004)

The political activity of corporations has become a more common phenomenon and a more researched topic during the past twenty years. Trends of globalisation and deregulation have made corporate interventions in the political arena unavoidable. Paradoxically enough, although government intervention in the regulation of national economies is declining, companies are increasingly calling upon public authorities, to privatise public sector industries, to ease anti-competition laws, or, on the contrary, to put in place protectionist measures. (Attarça 2005) The level of trade liberalisation also differs between different sectors. In some sectors there has been relatively little liberalisation and challenge to the state's protective role and the policy regime, and trade policy has remained mostly the same. (Cable 1999, p. 15-18)

Politics and business are undoubtedly interlinked. Schuler (1996) investigated the corporate political strategy in the steel industry in the United States and the research showed that the largest firms in the industry dominated the politics surrounding the trade protection. Within industries, which are characterised by a high degree of regulation, governmental authorities can control and permit firms' activities. These can be described as protected industries. (Persson & Steinby 2006) This gives yet another proof, that companies can influence the policy environment and seek gains from the governments' industry protection. (Schuler 1996)

When considering the influence, the concept of democracy becomes essential. Traditionally democracy is described as a system of inclusion, participation and pluralism: it includes several parties, which participate in the system. In the context of democracy, the decision making process must include different actors of the society who participate. However, this is not always the case. Therefore, it is important to understand: How important is the productive sector in this process? What is the role of the entrepreneurs and the unions, and how do they participate? And, which are the mechanisms and tools for their participation? The active participation of all the actors can only be achieved by the creation of policies that encourage the participation of these actors. (Mellado 2001, p. 133-159)

Actors have a different influencing power. This might not be only related to the size but also to the capabilities to network and gain advantage through connections. The different influencing capability of actors has been described by some researchers. Actors can be divided into different circles of influence according to their grade of influence, location and resources. To understand the behaviour of the business sector, it is important to begin by separating the actors by size. The multinational corporations (MNCs) and big economic groups that integrate in the first circle of influence together with the government, have a protagonist role in the national and international decision-making. These actors have an access to the governments and they also have the capacity to influence the decision making process in individuals terms. This influence might not be achieved through the institutional way, but more through the informal channels of lobbying. The smaller companies are in a more difficult situation. Since their influencing power is very limited, they belong to the second or the third circle of influence, along with universities, consultative groups, business associations etc. These companies haven't been able to capitalise their influence in the local or in the regional terms. However, they have participated in the public debates creating concerns among the decision makers about the collective and individual interest. The main problem is that, they don't have the capacity to organise themselves. Also there are no formal channels to communicate their needs and thus their capacity to influence is very limited. (Mellado 2001, p. 133-159)

3.2 Trend of Multilateral Trade Agreements

3.2.1 The World Trade Organisation

The increased complexity of the trade environment has led countries to seek common rules and agreements, in order to avoid trade disputes. The most successful integration effort achieved between governments so far is undoubtedly the World Trade Organisation. This has even been claimed to be the most democratic organisation existing, due to its decision making process, which is essentially based on consensus between the members.

The WTO is the only international organisation at the moment dealing with the global trade rules between nations. It aims to ensure that trade between the nations flows as smoothly, predictably and freely as possible. Established in 1995, it has nearly 150 members. These countries account over 97 % of the world trade. (WTO 2003) At the moment it is clearly the main forum for negotiating the rules of global trade. It persuades the gradual liberalisation of world trade by promoting principles of non-discrimination, reciprocity, and preferential access for less developed countries. (Koenig-Archibugi 2002, p. 55)

The main goal of the WTO is to improve the welfare of the people in its member countries. It does so by assuring that the producers and consumers can enjoy secure supplies and a greater choice of the finished products, components, raw materials and services that they use. It also ensures that foreign markets will remain open to producers and exporters. (WTO 2003)

The WTO is the successful outcome of the General Agreement on Tariffs and Trade (GATT), which was established already after the World War II in 1947. The agreements of GATT were the base for the global rule-based trading system. Its main principle was the non-discrimination clause, when applying tariff concessions. Through a series of trade negotiations, called rounds, GATT contributed significantly to trade liberalisation. However, there were 3 trends that affected the GATT. First, the increasing number of member countries made the negotiation process more complex. Second, the increasing number of issues discussed within the negotiations and the increasing importance of exports to the economy of the member countries, slowed down the negotiations. Third, the effect of the tariff reductions was decreasing since the tariffs had been reduced already in previous rounds. (Van Dijk 1996, p. 1-19)

The Uruguay Round has been described the most ambitious and important round during the history of multilateral trade agreements. Not only did it create the WTO and thus an important institutional framework of rules and regulation to guide the economic development, but it also managed to reduce the tariffs for industrial products more than ever before during the previous GATT rounds. The Uruguay Round also managed, for example, to reduce the non-tariff barriers (NTBs), change the safeguard provisions of GATT, establish agreements on Trade Related Intellectual Property Rights and Trade Related Investment Measures, and renew the dispute settlement system. In general the Uruguay Round and the establishment of the WTO have been described as a victory for a rule-based multilateral trading system and a milestone in the evolution of the international economic relations. (Van Dijk 1996, p. 1-19)

The main decision making body in the WTO is the Ministerial Conference, which meets at least every two years. In November 2001, the fourth WTO Ministerial Conference in Doha, Qatar was launched, along with the Doha Development Agenda. A lot of new issues were included in the discussions, such as negotiations on non-agricultural tariffs, trade and

environment, WTO rules such as antidumping and subsidies, investment, competition policy, trade facilitation, transparency in government procurement and intellectual property. Also several issues were raised especially by the developing countries and their difficulties in implementing the present WTO agreements. (WTO 2003)

The Doha Round passed through very hard time trying to achieve results in the negotiations. In July 2006 the conversations were suspended, while the initial deadline had passed a long time ago. Many have said that the Doha Round is dead and the whole WTO along with it. The main problem is the decreasing of subsidies in agriculture in the northern countries, especially in the US and in the European Union. Without this condition, the southern countries, led by Brazil and India, are not willing to make concessions in others issues. Nevertheless, ministers and heads of state from all over the world have insisted that they are committed to getting the talks started again. Even some discussions have taken place, to consider specific concessions that could encourage the continuation of the negotiations. (ICTSD 2006)

The system is still far from perfect. The founding principle of the GATT was the 'most-favoured-nation' clause, which means that all the members should be treated equally when a member country applies any trade restrictions. However, exceptions to this principle have become more common and many areas and industries are still not fully integrated in the WTO framework. (Feenstra 1992)

3.2.2 Trade Issues within the WTO

A number of WTO agreements deal with various bureaucratic or legal issues that could obstruct trade. There are several principles, rules and regulations and discussing them all in this context would be impossible. However, two important aspects are closely related to the NTBs. These are the import licenses and the 'rule of origin'. According to the Agreement on Import Licensing Procedures, licensing should be simple, transparent and predictable. It requires that the governments publish sufficient information for traders to know how and why the licences are granted. The aim of the agreement is to minimise the importers' burden in applying for licences, so that the administrative work does not in itself restrict or distort imports. The rules of origin, i.e. where a product was made, are essential part of trade rules because a number of policies discriminate between exporting countries. This discrimination occurs as quotas, preferential tariffs, antidumping actions, countervailing duties, and more. The Rules of Origin Agreement requires WTO members to ensure that their rules of origin are transparent. The rules of origin should also not have restricting, distorting or disruptive effects on international trade and they should be administered in a consistent, uniform, impartial and reasonable manner. The agreement aims eventually to harmonise and create common rules of origin among the WTO members. However, the initiated harmonisation work programme was due to end almost 10 years ago, but several deadlines have been missed. (WTO 2005)

The terms 'competition policy' and 'trade policy' are used to describe two different branches of government economic policy. Trade policy concentrates on removing government-created barriers to competition while competition policy focuses on removing barriers created by private interests. (Hudec 2003) While the WTO has a broad interest in all characteristic of competition law that affect conditions of competition in world markets, there is a special interest in private anticompetitive behaviour and therefore this is an important area that needs to be investigated more closely when discussing the WTO and obstructs to trade. Private anticompetitive behaviour can be explained as 'private trade barriers', arrangements by domestic producers that exclude imported products from their market. (Hudec 2000)

The private anticompetitive behaviour can be dealt with either under the WTO antitrust law issue or as a trade policy problem. The predecessor organisation GATT, paid practically no attention to competition law and policy. In 1996 the WTO created a 'Working Group on the Interaction Between Trade and Competition Policy', to identify main areas that needed to be included in the WTO framework. However, still in the latest trade negotiation round, the Doha Round, the subject of competition policy was not included in the agenda of the subjects to be negotiated. This highlights the sensitiveness of this area and there remains still far too much disagreement about the need, nature and substance of international cooperation. Thus the anticompetition law is still administered by national competition law authorities. (Hudec 2003)

Over the years, private anticompetitive behaviour as a trade policy problem has focused on restrictions that obstruct or even block imports of goods into certain markets. These private restrictions are considered as a partial denial of common benefits upon which most WTO trade agreement are based on. In theory, these private restrictions could be dealt with under WTO legal framework designed to protect the balance of reciprocity. To date, however, only two legal remedies specifically address to private anticompetitive behaviour, both under the General Agreement on Trade in Services (GATS). (Hudec 2003)

The private trade barriers need to be treated as a separate issue because they are not perceived to be government measures. The key conclusion, which normally immunises such private measures, is the notion that the government is not responsible for what a private corporations are doing. However, this is clearly a grey area and in many cases governments do have an important role in encouraging or helping to organise anticompetitive conduct by private enterprise. (Hudec 2003)

3.3 Trend of Regional Integration

The importance of geography has been dramatically reduced by several advancements, for example in communications and transportation measures. Lower tariffs and the elimination of many import quotas have reduced the importance of trade barriers at the border. Even though differences in national laws and regulatory systems still create frictions, the international agreements are increasingly aiming to constrain these differences. There is also a general agreement that more integration is still needed and this remains as an important driver of trade policies. In addition to the multilateral trade negotiations, and especially the WTO, the countries continue to negotiate regional agreements. (Lawrence & Bradford 2004)

Regionalism, as already the name exposes, is about a certain geographic region. Regional integration aims to integrate the different members of the region more closely together. Basically this means that states collaborate with other states in order to achieve economic and welfare goals (Dicken 2003, p. 144-150). Regional integration has become one of the dominant features of the contemporary global economy and regional economic blocks have increased their importance.

There are different types of regional collaborative arrangements all based on the principle of preferential trade agreements (PTAs). Through PTAs states agree to provide preferential market access to the other members, mostly in the form of tariff reductions. However, there are different types of regional arrangements, distinguished by the different degree of economic and political integration. The most important regional arrangements have been argued to be the free trade area, customs union, common market, and economic union. Free

trade area only aims to the removal of the trade restrictions between the member states, while customs union also establishes a common external trade policy towards non-members. Common market takes this even further by adding the free movement of production factors between member states. Economic Union has the highest form of regional economic integration with harmonisation of economic policies under supranational control. The European Union is the only existing economic union at the moment. (Dicken 2003, p. 144-150)

Lately there has been a growing interest and tendency of economic integration through regionalism. This phenomenon has happened either spontaneously through market forces or created by formal structures. Whichever the case, in most cases this leads to the creation of free trade areas, custom unions, common markets and several types of preferential associations. In 1990, when the development of GATT and the spirit of multilateralism were experiencing difficulties and the process was slowed down due to difficult debates, regionalism raised its head. The European Community (EC) was speeding towards the common market and the North American Free Trade Agreement (NAFTA) was being negotiated in a very optimistic spirit. The idea of an alternative to multilateralism through regionalism was a strong fear to the ones who felt excluded from them. However, the profound problems that regionalism and multilateralism faced were much the same, i.e. nationalism and powerful sectoral interests. (Cable 1994, p. 1-13)

Even though the different regional arrangements look fairly similar, they are all in a way trade blocks and there are many differences between them. There are several ways to determine the different approaches to regional arrangement and these can also be classified. Most common approaches to regional agreements can be described as following: market-led versus institutional driven, complementary versus competitive economy structure, open and closed regional agreement and deep versus shallow integration. The different approaches reflect the different objectives of the integration and the effect that the integration will produce among its members. (Cable 1994, p. 1-13)

Cable & Henderson (1994) researched the possible effects of the regional integration and the possible effects it would have among its member states. Based on different studies of regional integration, they raised questions about the possible impacts. First, if there is any evidence that intra-regional trade is growing faster than trade in general? Second, if there is any evidence that regional integration schemes as such, have successfully redirected trade flows on a regional basis? Third, if there is any evidence that regional integration stimulates welfare and growth? Fourth, if there is any evidence showing that regional integration has an impact on third parties? After analysing these studies and the questions they proposed, the authors came to the conclusion that in general the evidence seemed ambiguous and they ended up questioning the role of regionalism and its actual impact.

3.4 Regionalism versus Multilateralism

There are different approaches concerning regionalism and multilateralism. Some say that regionalism is a threat to multilateralism while others claim that these two are actually parallel phenomenon and that regionalism is a complement to multilateralism. Some authors have a negative perspective on regionalism. They claim that some actors involved in regionalism have only partial interest in the liberalisation of economy while their main goal is to have a large, self-sufficient and protected home market. However, there is also the opposing view, which argues that regionalism is a breakdown to nationalism and it paves the road for the future and for a deeper multilateralism. This view is easily supported with an argument, that regional blocks make multilateral negotiation easier because they reduce the number of participants. (Cable 1994, p. 1-13)

The main issue of regionalism is the relationship with multilateralism, whether it creates a threat or a catalyst. Cable (1994) argues that based on empirical data, there no reason to claim that regionalism affects the multilateral process. On contrary, he argues that regionalism has been an important player to advance multilateralism. (Cable 1994, p. 1-13) Tussie and Woods (2002, p. 72-73) agree with the fact that regionalism affects deeply on multilateralism, however their view is more critical. According to them, whether regionalism has a positive or negative effect on multilateralism depends especially on three issues. Firstly, it is crucial to define whether the region still remains open to outsiders and if there is still movement towards multilateralism. Secondly, what is the role of regional institutions compared to multinational ones? The last issue deals with the fact that regionalism can provide a good vehicle to the small countries to make their voice heard in the WTO.

3.5 Challenge of Protectionism

The idea that trade integration should go further does create a great controversy. The steps already taken to deepen the international integration between the states have launched a storm of protests. The critics claim that deeper integration is not necessarily better. International agreements excessively constrain the national sovereignty and threaten the welfare-enhancing effects of national diversity. They claim that harmonising wrong policies could be worse than allowing policies to differ as each country decides the policy to suit its needs. Because of the different preferences and circumstances in each country, harmonising international standards does not necessarily enhance international well-being even if they do remove obstacles to trade. Considering these two strong opposite views, the one supporting trade liberalisation and other supporting national diversity, it is not surprising that trade agreement negotiations have become more contentious and politically difficult (Lawrence & Bradford 2004) and the integration efforts are struggling with the rising national protectionism.

The research on political economy of trade policy in economics and political science has been growing rapidly since the 1990s. This literature aims to explain why trade policies that protect national industries exist and change over time. (Lederman 2005, p. 1-4) Thompson and Vescera (1992) pointed out the collision of different governmental interests. When domestic economic growth slows down, producers seek protection against foreign competition. This causes the national policy makers to raise barriers to trade while at the same time criticising other governments for engaging in similar practises.

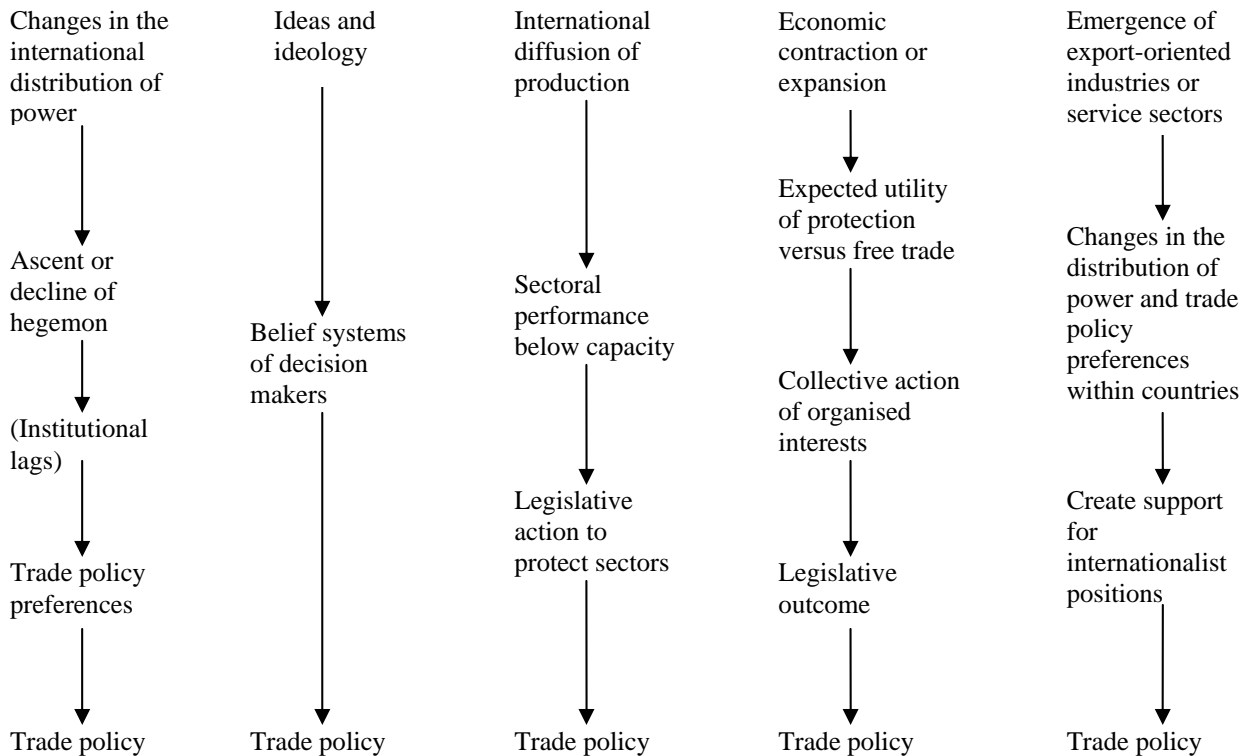
In the business context, the regulative role of the government and authorities is often debated. On the one hand, the supporters of the free enterprise system see all interventions as

restrictions on business activities, while on the other hand, the influence of regulations is also argued to protect the common good as in the case of environmental issues. (Persson & Steinby 2006) The same perspective is also behind some interventionist actions, those which are targeted against unfair trade actions, such as dumping. While antidumping measures interfere in the free trade, they are also used to protect the economy from *unfair* actions of the opposing party. Nevertheless, it is clear that interventions happen all the time, in all business systems. This is the heaviest reason why politics, policies and business cannot be separated.

Thompson and Vescera (1992) discuss five different approaches, which aim to distinguish the underlying reasons behind government trade policy and why it moves to a more open or protected approach (figure 5). Krasner's (1976 cited in Thompson & Vescera 1992) arguments focus on the still widely disagreed dilemma of who gains and loses from international economic openness. He discusses the changes in the international distribution of the power and the importance of the size and development level of a country. He also establishes the significance of external crises in changing trade policy preferences. Other four approaches discussed by Thompson and Vescera (1992) are the role of ideas and ideology, the role of surplus capacity, the role of business cycles and the role of shifts in the orientation of business and government elites.

The widely accepted consensus of the benefits of free trade is an underlying ideology that has been developing ever since the writings of Adam Smith and David Ricardo. This is of course challenged by opposing ideas, which are aiming to influence the general trade policy preferences. Another issue is the international diffusion of production. The surplus capacity and the insufficient demand are bound to affect the policy making. Also sustained poor performance by specific industrial sectors, within the context of excessive foreign competition, increases the need for protection through government legislation. Presumably, the more significant this specific sector is, the more likely some form of protection against foreign competition will be issued. The fourth approach concentrates more on the fluctuations in the economic prosperity and recession and how these link to the political demands of organised interests. This means that in the times of economic boom, the free trade supporters are more likely to be able to get their view supported by the government. In a case of economic decline, the opposing party will have greater opportunity to press for more government intervention and protectionism. The fifth approach discusses the importance and the emergence of the new corporate and elite interests and orientations. As the domestic importance of these actors grows, political actors will also become increasingly sensitive to their preferences. (Thompson & Vescera 1992)

Figure 5 Five approaches to explaining movement toward and away from systemic openness



Source: Thompson & Vescera 1992, pp. 501.

Investigating the nature of protectionism is important due to the broadly accepted consensus that free trade is usually preferable from the point of view of a nation as a whole. Social scientists have approached the issue using the structure of protection within countries and level of protection across countries as determinants of the phenomenon, while economics literature emphasises the importance of interest group pressure as a determinant of the structure of the protection. The economics view has been broadened to include some welfare considerations, thus moving further from the mere self-interest approach. Regardless of the different views between different disciplines, there is a general agreement regarding the set of factors that determine both the structure and the level of protection. Economic conditions, interest groups, ideas and ideologies, and institutions are seen as potential determinants of the commercial policies both in developed and developing countries. (Lederman 2005, p. 1-4)

As the tariffs have been falling since the 1970s and early 1980s, there has been a considerable rise in protection through variety of NTBs. (Sanna-Randaccio 1996) Consequently the concept of ‘new protectionism’ was introduced to describe the difference to the old, mostly tariff and quota based protection structure. The concept of most favoured nation, which was the cornerstone of this ‘old protectionism’, does not uphold in the new system where tariff and quotas are no longer the main tools for limiting imports. (Yoffie 1981) The removal of the new forms of protectionism, have since been the major goal of trade negotiations in the past decade. (Sanna-Randaccio 1996)

This new protectionism is traditionally seen as the way for industrial nations to continue to discriminate against developing states. (Yoffie 1981) However, protectionism is also restricting the trade within newly industrialised countries. This is the case, for example, in

Latin America, partially due to the regions history of import substitution industrialisation (Lederman 2005, p. 1-4). The phenomenon of protecting domestic businesses is occurring all over the world at the moment. Countries use NTB-methods to protect strategically important industries and justify these with, for example, blaming the unfair actions of other countries or pleading to the issues of national security. This protectionism is seen to endanger the current global supply chain (Trunick 2006, p. 38).

There is also another, more radical approach to new protectionism. This new development is reinforcing the power of the state and criticising the globalisation. (Cable 1999, p. 24-28) Some researchers see the new protectionism as a basically good thing, which sets out to protect and heal the environment, to reduce economic inequalities, and to meet basic social and human needs for all. According to this view, the new protectionism aims to protect the environment by reducing international trade and by reorienting and diversifying entire economies towards producing the most that they can nationally, then looking to the region that surrounds them, and only as a last option to consider the global trade. (Lang & Hines 1993, p. 3-4) This view emphasises the change of economic policy from the global towards the regional and local. (Lang & Hines 1993, p. 138)

Given these considerations, the costs and benefits of further international integration need to be measured carefully. It is important to know whether reducing the reminding obstacles to integration would create significant economic benefits. Investigating this is not an easy task. Official border barriers, such as tariffs and quotas, are easy to detect and measure. However, barriers behind the border are unclear and harder to identify and measure. (Lawrence & Bradford 2004) For example the private anticompetitive behaviour can create such an obstacle for trade (Hudec 2003). For this, many researchers have tried to detect the price differences of goods in different countries and used this as an identifier of losses versus benefits of the trade integration.

Thinking about goods prices and exchanges rates, it matters a great deal whether markets are integrated or segmented. According to Goldberg and Knetter (1997) markets are integrated when the geography or nationality does not have systematic effects on transaction prices for otherwise identical products. Gold is a good example of this: the location of the buyers and sellers is practically irrelevant to the terms of transaction. Segmentation on the other hand refers to a lack of integration. 'A product market is geographically segmented if the location of the buyers and sellers influences the terms of the transaction in a substantial way (i.e., by more than the marginal cost of physically moving the good from one location to another).' (Goldberg & Knetter 1997, pp. 1245) This means that when markets are integrated rather than segmented, buyers can make their purchases from the countries with the lowest prices, and will only be subject to the additional transport cost of shipping the product to their home market. Neither can the seller raise domestic prices above the level that would attract similar goods at a lower price from abroad. (Lawrence & Bradford 2004) But by making the resale across the nations costly, these measures permit nearly identical products to be sold for different prices in two markets. In this case the location of the buyer and the seller clearly affects the transaction beyond the marginal transportation cost. (Goldberg & Knetter 1997)

The level of market integration can easily be understood as one determinant in explaining price differences between different markets. However, it has to be noted that an integrated market can also be affected by monopoly situation and not be perfectly competitive. A monopoly supplier of a commodity might charge a price above marginal cost, but if the buyers are well organised or the product is easily transported across markets, the supplier will not be capable of price discrimination. (Goldberg & Knetter 1997)

As discussed before, the price differences are used in order to explain not only protectionism but also the general welfare effect of integration. According to Lawrence and Bradford (2004) the effect of trade integration to the welfare is excessive. They studied the price differences between eight countries (Australia, Canada, Germany, Italy, Japan, the Netherlands, the United Kingdom and the United States) and came to the conclusion that integration among them would raise global gross domestic product (GDP) by more than US\$ 500 billion, or about 2 percent. Krugman (1990 cited in Feenstra 1992) investigated the issue of protectionism and its cost to the economy as well, with quite opposite results. He used a hypothetical model of the world, which was divided into 3 competing regions. The hypothesis assumed that all 3 regions restricted the trade with the other regions by one-half. As a conclusion of a simple triangle calculation he came to the conclusion that the global efficiency losses from this significant reduction of trade might be only 2.5 % of the world gross national product, GNP. This raises an important question, whether protectionism is actually as bad as it is claimed to be. However, these calculations have been widely criticised as too simplistic. Feenstra (1992) pointed out that Krugman's conclusions do not reflect the highly selective pattern of the current protection and that some industries are facing the protection on much higher level than others. Also an interesting issue is, whether this 2-2.5 % is seen as a dramatic change or as a minor alteration, since there is a clear disagreement between the academics and the effect of the phenomenon is not agreed upon. It also highlights the controversy over protectionism and how important it is to create deeper understanding of the phenomenon.

Steel industry is among the industries, which have been traditionally more protected. When aiming to reduce the trade restrictions across regions this selective protectionism means that some goods imported from outside the region face higher protection than others. This reduces the range of product varieties and can cause several times larger global losses than described in Krugman's (1990 cited in Feenstra 1992) estimate. (Feenstra 1992) The movement from old protectionist measures to the new protectionism has made it even more complicated to understand this effect. However, it is clear that protectionism has some drawbacks and irrespective to the approach, it does limit the free trade. Due to the different interests of different actors, it is hard to judge whether protectionism is good or bad. The opinion depends on whose point of view is being considered.

Free international trade is claimed to benefit all countries, firms and individuals who permit on an international basis, the specialisation that occurs in a free economy. Protectionism, on the contrary, overlooks the benefits of specialisation and comparative advantage. Trade barriers divert production from countries where productivity is higher to countries in which productivity is lower. The total economic wellbeing would be improved if each person, region, and country would specialise on providing those goods and services that it can produce, in relative terms, most efficiently. Trade barriers also place restrictions to individuals and companies right to choose the best and the cheapest option, by restricting imports. Naturally this also obstructs the foreign companies, who will make less profit. (Younkins 2002) To companies, for example, this might mean that they are forced to buy raw material from the second best source, consequently decreasing their productivity. This would naturally effect on their competitiveness on the international market and obstruct their exporting capability.

Younkins (2002) argues that protectionism benefits relatively small group with a special interest. For example in the case of the steel industry, he concluded that trade barriers might save jobs in that industry for a short period of time, but at the cost of destroying even more jobs elsewhere. The industries that use steel would pay more for the raw material and this

would lead to higher price of their products. This would eventually reduce sales and lead to layoffs of employees. However, he does admit that if tariff barriers are removed, some workers might lose their job or even industries to be forced to closed down because of the foreign competition. This emphasises the difficulty of protectionism: whose interest is at stake and how big power they have on their business network to influence on the decision makers?

3.6 Multinational Corporations in the Global Economy

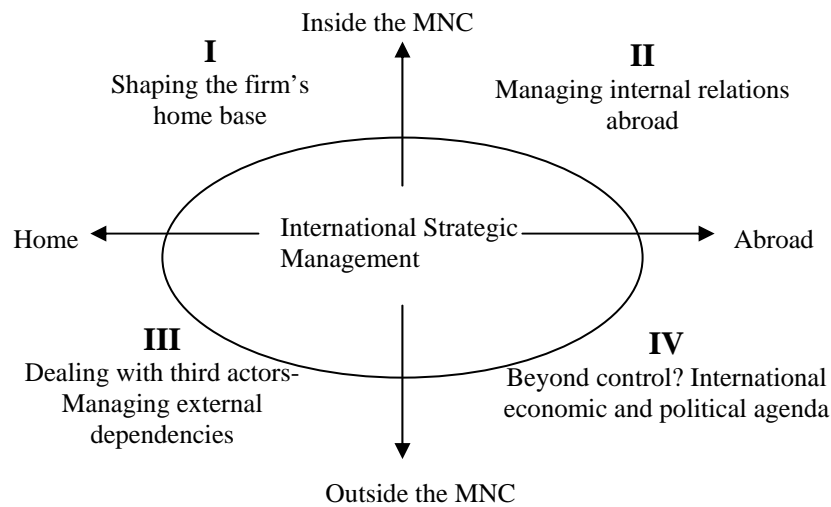
Multinational corporations have become major actors in the world economy. They account for a large part of the world's production and innovation capacity. MNCs occasionally even try to influence domestic and international policy making. (Ruigrok 2006, p. 197-210) As already discussed in the previous chapters, companies and government are undoubtedly interlinked and when considering these networks, influencing power over other actors becomes an important issue. Like no other institution, MNCs have become protagonists in shaping the contemporary global economy, and because of their influence and importance they are even claimed to cause a threat to a state's sovereignty (Dicken 2003, p. 198).

A MNC can be described as a company, which has the power to coordinate and control operations in more than one country, even if it does not own them. MNCs are characterised by their ability to control and coordinate various processes and transactions within production networks, both nationally and internationally. MNCs also have the ability to take advantage of the location in the different production factors as well as state policies. They can gain advantage on the geographical differences, for example in natural resources, labour, taxes, and trade barriers. In addition MNCs have the potential to switch and re-switch its resources and operations between different locations. (Dicken 2003, p. 198)

Regardless of the characteristics of a MNC, which allow it to move resources across geographical area, they are still obliged to take national borders into consideration. If the MNC wants to operate in a certain market, it is forced to operate under the jurisdiction of that nation-state. In this way, the governments are not completely powerless. They can still shape the surroundings of the environment in which the company wants to operate. Thus, as illustrated in the earlier chapter, there are ways in which the government is still able to influence MNCs. Since politics and business can not be separated, it is important to remember the arguments that while economics may be increasingly global, politics is still national (Cable 1999, p. 31).

The challenges a MNC is facing can be seen in the figure 6. The horizontal axis refers to the geographical boundaries of countries, i.e. whether a company is operating home or abroad. The vertical axis on refers to the company itself, the boundaries inside or outside the MNC. These four aspects represent the MNC management challenges. A MNCs influence is greatest at the first quadrant and lowest in the fourth. (Ruigrok 2006, p. 197-210)

Figure 6 Four types of MNC management challenges



Source: Modified from Ruigrok 2006, p. 198.

Firms may have several reasons to set up foreign activities, i.e., to move to the second quadrant in figure 6. MNCs set up foreign activities, for example, to gain market share or tap into specialised knowledge. (Ruigrok 2006, p. 197-210) These different types of transnational production can be classified into two broad categories, market-oriented production and asset-oriented production. Most foreign direct investment (FDI) is designed to serve a specific geographical market, by locating inside that market. Goods produced abroad might be nearly identical to the ones produces in the company's home country but the market size and structure make it an attractive target for FDI. Asset-oriented production aims to take advantage of the uneven distribution of the production assets, such as knowledge and skills, labour costs, and raw material. (Dicken 2003, p. 208-212)

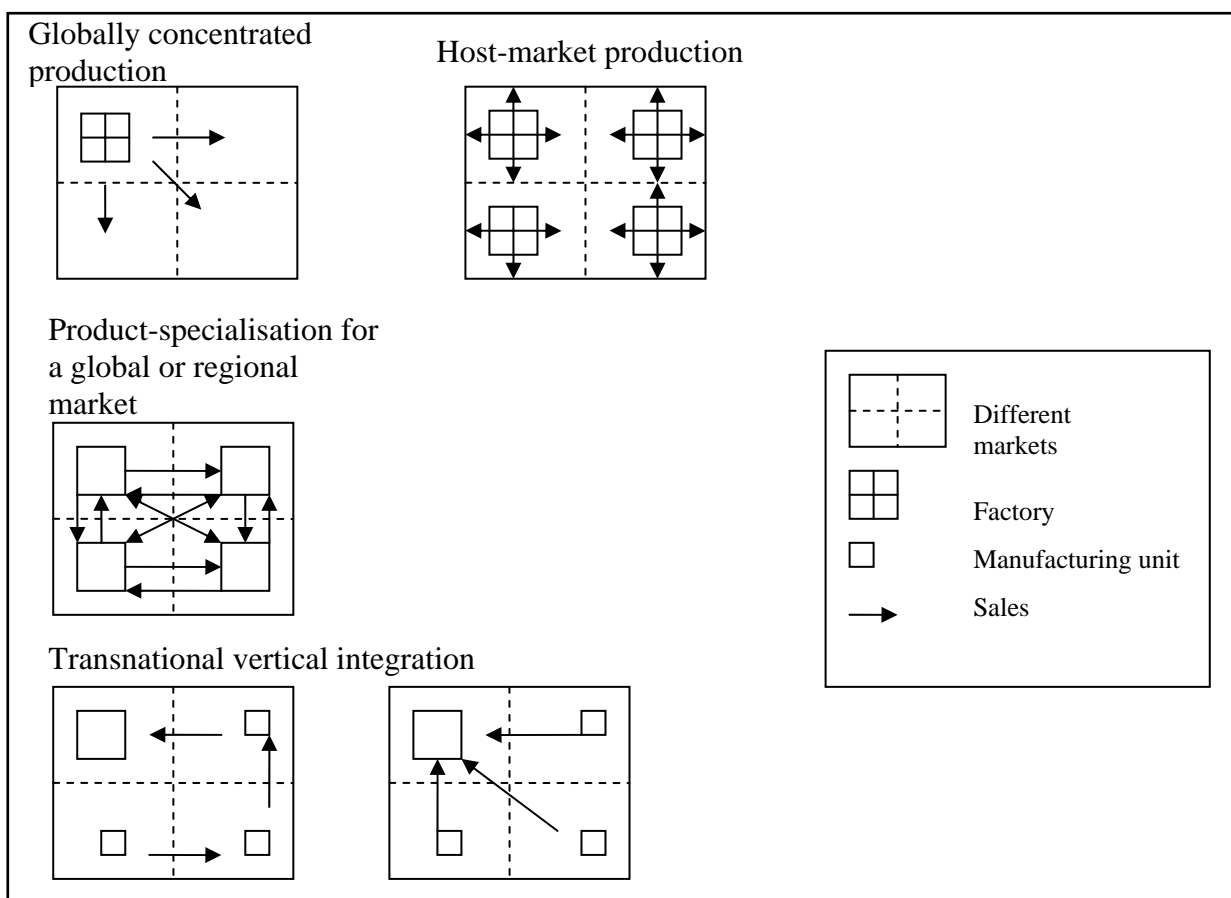
Over the years, several attempts have been made to explain the phenomenon of international production. These have sought to provide a theoretical framework to support several aspects of international investment and production. Most known theories date back all the way to the 1960's when Hymer aimed to explain the international production with industrial organisation approach. This explanation was improved by Kindleberger in 1969 by adding the aspect of host country financing. Another known theory was developed by Raymond Vernon in 1966. This became known as the international product life cycle, and was based on international difference in innovation in technology. The key elements of his theory were based on the origin of ideas for innovation, the initial location of the production of new products based on innovations, the motivation for subsequent foreign production and the effect of this motivation on the FDI and international trade. In 1970 Aliber investigated the customs area phenomenon (also known as currency area phenomenon) arguing that the key factors explaining the pattern of FDI involve capital market relationships, exchange risk, and market preferences to keep the assets in a selected country. The core of this theory was based on the idea that the acquisition of a production facility in another customs area (i.e foreign country) reflects the movement across boundaries between customs areas, and in the absence of these boundaries the distinction between FDI and domestic investment would disappear. (Sylvester 1997)

In addition to the previous, one of the most known theories explaining international production is the eclectic paradigm of Dunning from 1977. He identified three conditions that motivate a company to engage in international production. First of all a company should have

ownership specific advantages, which are unique compared to the competition. Secondly, it should be more useful for the company to internalise these advantages and use them themselves instead of selling such advantages. There must also be location specific advantages, which make it more profitable to exploit these advantages abroad, rather than in the home country. (Sylvester 1997, Dicken 2003)

Production units of MNCs have become more geographically dispersed than, for example, research and development functions. The location requirements of a production facility differ considerably according to the specific organisational and technological role, which it has within the enterprise and also according to the geographical distribution of relevant location-specific factors. Figure 7 illustrates four types of geographical orientation which a MNC might adopt for its production units. (Dicken 2003)

Figure 7 Different ways of organising the geography of MNC production units



Source: Modified from Dicken 2003, p. 246.

Globally concentrated production is a simple model, and it describes a situation when all production is done in the same location and sold through a network worldwide. This production model is mostly used in a case of asset-oriented production and when the advantages of economies of scale are important. Host market production is used especially in a case of market-oriented production. Host-market production plants can be set up because of the size and sophistication of the market, structure and demand of consumer tastes, cost-related advantages of locating directly in the market or government imposed barriers to the market entry. This kind of production is also called import substituting. Despite the developments in the global economy and the liberalisation of trade, companies still might

prefer host-market production in order to be closer to the market and the customers, and thus more sensitive to the demand, or because of the existence of tariff and non-tariff barriers to trade. (Dicken 2003)

Product specialisation for a global or regional market means that each production unit produces only one product for sale throughout a regional market of several countries. The economies of scale are important and therefore the production sites are very large. Transnational vertical integration production involves geographical specialisation by process or by semi-finished product, and different parts of the firm's production system are located in different parts of the world. In transnational vertical integration the output of one manufacturing plant in one country can become the input for a plant belonging to the same firm located in another country. This can happen in a 'chain-like' sequence, or to have one final assembly plant, which receives production output from all other units. (Dicken 2003) The four models presented here, give a good understanding of ways a MNC can organise the geography of its production units. However, in reality the situation can be more complex and a MNC production strategy can have characteristics of several of these models.

4 TRADE ENVIRONMENT

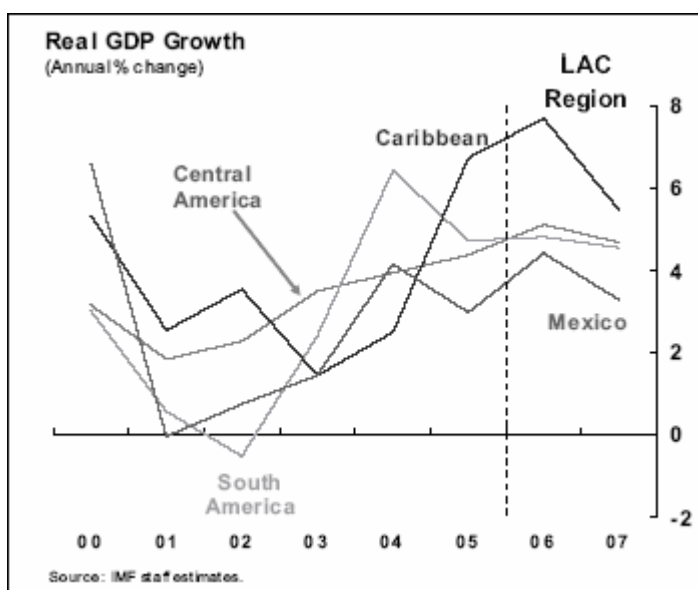
This chapter will offer a description of the Latin American region and the regional trade agreements, which Brazil is a part of. It is important to understand the international commitments of Brazil, since the government is an important actor in creation of the trade policies. After this, the chapter will describe the Brazilian economy, the most essential trade policies within the context of trade liberalisation and how these are related to antidumping measures. Finally, this chapter will focus on a specific industry, the stainless steel industry. It will describe the characteristics of the industry in the world and especially in Brazil, and discuss what influences the price of the SS.

4.1 Economy of Latin America

Latin America is an important region in the world economy. The fast growth and the trends towards economic and political stability have made it an increasingly important business focus (Jones 2004). Emerging markets are facing the ‘best economic prospects in decades’ due to the strong market growth, sustainable fiscal performance and improved creditworthiness (Fittipaldi 2004). Many regions are growing faster than Latin America. These are, for example, the emerging Asia with China and India, and the Central and Eastern Europe. However, Latin America is growing more than for example in USA, Japan and the Euro-area. (IMF 2006)

The Latin America and Caribbean region (LAC) is growing above its historical average (figure 8). In 2006, the real GDP growth was approximately 4.75 %, making the ongoing expansion the strongest three-year period since the 1970s. GDP growth has increase from last year about 0.5 %. This is mainly explained by the higher growth in Brazil, Mexico, and the most of the Central American and the Caribbean countries. (Clements et al. 2006, p. 5)

Figure 8 Real GDP growth in the LAC-region (Annual % change)



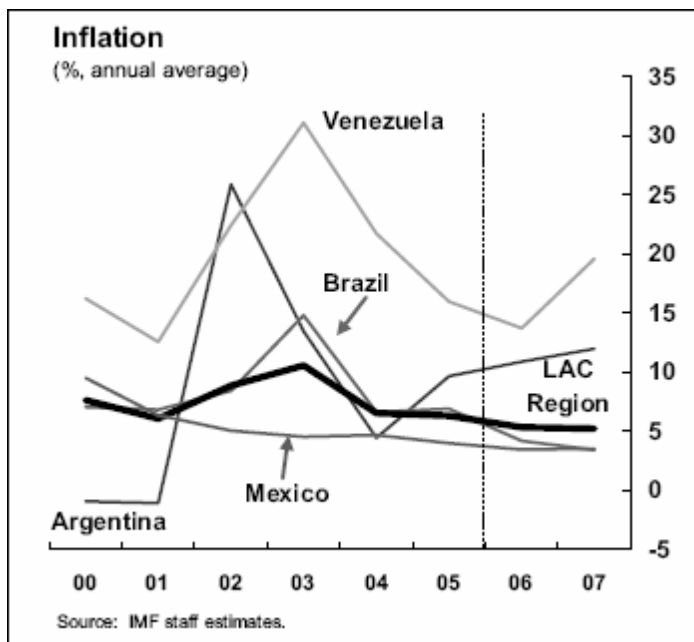
Source: Clements et al. 2006, p. 5.

This growth can be explained by several factors and the strong global demand of commodities is one of them. Between 2002 and 2006, fuel and non-fuel commodity prices grew 150 and 80 per cent, respectively. However, the impact of these increases has been uneven in the region. The higher benefits have been for South America and Mexico, leaving Central America and the Caribbean out of it. In 2007, high oil prices will continue to benefit countries such as Colombia, Ecuador, Mexico, Trinidad and Tobago, and Venezuela. In contrast, non-fuel commodity prices will benefit the metal exporters such as Chile and Peru. (Clements et al. 2006, p. 6)

Even though the global demand of commodities is a very important factor, the main driver of the expansion is the domestic demand. Private consumption is expected to account for more than two-thirds of economic growth in 2006 and 2007. The contribution of investments is expected to almost double from the recent years. This reflects a solid private investment growth in some countries, particularly in Brazil and Mexico. Domestic demand has also been stimulated by significant increases on the government spending. (Clements et al. 2006, p. 6)

Despite the increase of commodity prices in recent years, inflation has generally remained controlled, and it is expected to decline even further. The annual average inflation in the LAC-region is estimated to reach approximately 5.25 percent (figure 9). This illustrates the credibility of the monetary framework in most of the countries, which have maintained inflationary pressures and expectations under control. (Clements et al. 2006, p. 6)

Figure 9 Inflation in the LAC-region (% , annual average)



Source: Clements et al. 2006, p. 6.

The Latin American region has also increased the employment and improved other social indicators. In many countries, such as Argentina, Brazil, Chile, Mexico, and Venezuela, the employment growth has accelerated in the last few years. Also poverty has been declining. According to the preliminary estimates of the Economic Commission for Latin America and the Caribbean (ECLAC), the share of the population in the region living in poverty, measured in terms of purchasing capacity of a basket of basic consumption goods, has fallen about 4 % in two years. (Clements et al. 2006, p. 7)

These encouraging figures show that Latin America is developing at a good rate and the region is becoming more important player in the international trade arena. The market potential, economic growth and the demographic indicators support this standpoint. Mexico and Brazil are the two most impressive individual countries based on the size of their economies and populations (Jones 2004). Despite that fact that many of the Latin American countries (e.g. Brazil, Venezuela, Argentina, and Chile) have elected leftists presidents, there has not been a rejection of market economies (Phillips 2006). There have also been several attempts to boost the economy of the region through trade liberalisation and regional integration. The integration efforts that have included Brazil, the biggest country, are the Latin American Free Trade Association (LAFTA), the Latin American Integration Association (ALADI), the Southern Common Market (Mercosur), and the Free Trade Area of the Americas (FTAA). These regional integration attempts and their outcome will be discussed more closely in the following chapter.

4.2 Regional Integration

4.2.1 LAFTA-ALADI

Latin America, throughout its history, has gone through several attempts to accomplish regional integration. However, this process has not been easy due to the lack of strong common basis. There have also been several border disputes, protectionist policies and strong political attitude that have obstructed the integration attempts. These obstacles do not only hinder but endanger the earliest initiatives for regional integration in the area. (Da Notta Veiga 1999, p. 7-21)

The first attempt for regional integration in Latin America was the Latin American Free Trade Association (LAFTA), which was created in 1960 by Argentina, Brazil, Chile, Mexico, Paraguay, Peru, and Uruguay. The aim of this association was to accomplish free trade within the region and its goal was to expand the internal market and gain economies of scale. However, this attempt collapsed because of the collision of the free trade ideology and the protectionism, especially the policy of import substitution. (Da Notta Veiga 1999, p. 7-21)

Another attempt for the regional integration was the creation of the Latin American Integration Association (ALADI). The association was created in 1980, when the countries of Argentina, Bolivia, Brazil, Cuba, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay and Venezuela signed the Montevideo Treaty. The aims were to pursue the economic and social development in the region and eventually establish a common market. Even though ALADI was a simple arrangement for preferential tariffs among some countries, and did not establish time lines to create an instrument that would eliminate the existing barriers, it managed to cause some progress in the region. The creation of ALADI led to the improvement of the diplomatic relationship between Brazil and Argentina and to the settlement of the problems that these two parties had over water resources and national borders. However, the improvement of the diplomatic relation did not lead to a deeper economic integration. The macroeconomic problems of Brazil and Argentina and different approaches taken to solve them, undermined any efforts to deepen the integration. Also the debt crisis in the Latin America during 1982 led to the rise of new protectionist barriers making the economic integration in the region nearly impossible. (Da Notta Veiga 1999, p. 7-21)

The movements in the world and the growing trend of regionalism, in which Latin America was not a part of, made the countries realise the need for closer integration. They felt left out from the regional development, which was moving more towards East Asia. This led to Argentina and Brazil to sign an agreement expanding the bilateral trade among the two countries. This, with some other agreements signed in the region in the end of the 1980s, anticipated the creation of a common market later on. (Da Notta Veiga 1999, p. 7-21)

4.2.2 Mercosur

Finally, in March 1991, Uruguay and Paraguay joined Brazil and Argentina to the integration front and the countries signed the Treaty Asunción, thus creating the Common Market of the Southern Cone (Mercosur). (Da Notta Veiga 1999, p. 7-21) The aim of the treaty was to establish a common market by December 1994. This common market should involve the free movement of goods, services and factors of productions through the elimination of custom duties and non-tariff restrictions. It also aimed at the establishment of a common external tariff, the adoption of a common trade policy and the coordination of macroeconomic and sectoral policies between the member states. (Van Dijck & Wiesebron 2002, p. 1-19)

The transition period between the Treaty Asunción and the establishment of the common market was not an easy period and it involved a lot of negotiations. The biggest countries, Argentina and Brazil, were experiencing very different financial conditions at that time. Argentinean economy was growing fast while the Brazilian economy was either negative or growing very slow. In addition, the exchange rate policies between both countries were different, thus creating great friction in the negotiations. In several occasions Argentina had to call for safeguard clauses and start antidumping cases. (Da Notta Veiga 1999, p. 7-21)

The transition period was closed with the Treaty of Ouro Preto in 1994, thus setting the Mercosur in motion. The treaty of Ouro Preto led to the creation of the international juridical personality and to the creation of the commission of trade, which implements and monitors the instruments for the common trade policy. It also created the joint-parliamentary commission and the Advisory Forum on Economic and Social Matters with representatives from the business and labour world. (Da Notta Veiga 1999, p. 7-21)

The establishment of the common market by 1995 was not achieved as successfully as it was wished in 1991, but nevertheless some of the programs were considered very successful. The program of automatic tariffs reduction was accompanied with the elimination of the NTBs among member states. The trade liberalisation among the member states was reached to cover most of the product categories. However, the member countries were able to add exceptions to these rules for a limited time period. The external trade liberalisation program was successful and it covered nearly 90 % of all the products imported from the third countries. Also the common external tariff was set to 0-20 %. (Van Dijck & Wiesebron 2002, p. 1-19)

However, full implementation of the Treaty of Asunción involves not only the free movement of goods and services in an integrated market with a common external tariff, but it also involves the free movement of capital and labour, macroeconomic coordination and harmonisation of legislation. (Van Dijck & Wiesebron 2002, p. 1-19) Even though the present situation of the Mercosur is not as bright as it could be, it is an important development in the region and it is trying to develop further. For example, in July 2006 Venezuela became the fifth member of Mercosur.

Mercosur is an intergovernmental arrangement that neither Brazil nor Argentina, are willing to abandon. However, its structure is small and weak and it has hardly any bureaucracy on its own. The strong reliance on the diplomacy between the presidents of the member states and the limited institutional framework may become its major weaknesses in dealing with the complex future agenda. (Van Dijck & Wiesebron 2002, p. 1-19)

4.2.3 FTAA

Another recent integration attempt in the region is the Free Trade Area of the Americas (FTAA). It is a proposed agreement to eliminate or reduce trade barriers among all nations in the American continents, except Cuba. The FTAA was initiated by the USA in 1994, when the heads of the states met during a hemispheric meeting in Miami. The aim was to free the trade between the member countries by 2005. According to the FTAA draft agreement signed in Quebec in 2001, the negotiations should have been terminated by 2005 in order to have the FTAA functioning at the end of that year. (Van Dijck & Wiesebron 2002, p. 1-19) This has clearly not been the case.

At the beginning of the century the FTAA was at a dead point, mainly because of the internal pressure of the domestic industries, especially in South America. The recent economic problems have created political crisis in some of the Latin American countries, making the advance of the FTAA unfavourable. Despite the good intentions, the FTAA and the Mercosur are at crossroads, and have become a focus of intensive diplomatic manoeuvres between the governments. Especially Brazil and the USA are having conflicts regarding to the leadership of the region. The key difference between the strategies of these two countries is that Brazil wants to construct the FTAA block by block and the USA country by country. Brazil believes that negotiating as a Mercosur towards USA, will give the South America stronger negotiating power, instead of each countries negotiating by themselves. (Costa Lima 2002, p. 123-149)

In the meeting of the trade ministries in Brazil in 1997, the countries took a decision to that the FTAA could co-exist with bilateral and sub-regional PTAs. This decision was taken in order to maintain the Mercosur as a negotiating block. This was a diplomatic victory to Brazil. However, the attempts of Brazil and Argentina to shape the FTAA through the Mercosur as mechanism against USA's leadership created several problems in the negotiations. (Van Dijck & Wiesebron 2002, p. 1-19)

Currently, especially after the summit of Mar del Plata in November 2005, the Mercosur leaders openly rejected the FTAA. Also the entry of Venezuela into the Mercosur and the ideological spin, which has been created, has led to the confrontation of the pro-free trade policies coming from Washington. This has basically caused the FTAA to reach a dead-end. (Trigona 2006) Under this scenario a further analysis of the FTAA referring to this research seems to be pointless. However, it does show the magnitude of ideological, political and economic issues, which affect the region.

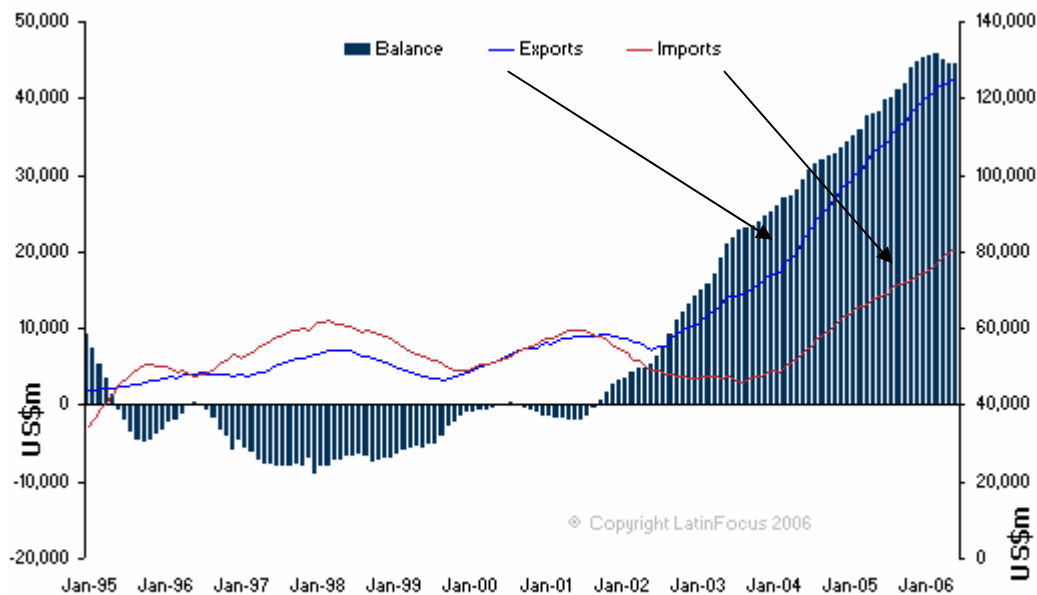
4.3 Brazil

4.3.1 Economy and Regulatory Agencies

Brazil is the largest economy in the Latin America and it accounts for half of the South American population (Jones 2004). The economic growth has increased again after few years of modest growth. The slower GDP growth during that period was an outcome of several unfavourable international and domestic events, for example, the contribution of the domestic demand growth was negative. This was reflected especially by the tight macroeconomic policies, and in particular the high interest rate. However, even during this period, the growth of exports was approximately 11 % annually. After 2003 the GDP growth was resumed and in 2004 it exceeded 3 %. This was supported especially by the exports and the strengthening of the domestic demand. (WTO 2004a)

The Brazilian economy is exceptional in Latin America for the extent of its industrial base and a high proportion of manufactured exports (Phillips 2006). In 1999-2003 the exports increased in total over 50 %. Exports of manufactured goods increased 45 % in this period, while exports of mining products almost doubled. However, the total imports did not face as dramatic growth. Especially the imports of manufactured good decreased. (WTO 2004a) Figure 10 shows the balance of payments in Brazil during 1995-2006. This illustrates the changes in exports and imports. These changes are closely linked with the currency rate (figure 11). When the currency is strong the exports are very likely to go down and vice versa. Thus devaluation of a currency will make the domestic industry more competitive.

Figure 10 Balance of payments, Brazil 1995-2006



Source: MDIC 2006, calculations by LatinFocus.

Figure 11 Exchange rate, Brazilian real/US\$



Nota: Tasa representativa del mercado, fin de mes.

Source: BACEN 2006, calculations by LatinFocus.

The Brazilian economy has some severe problems. According to the annual report of the Transparency International (2005), Brazil is on the 62nd place on the least corrupted countries (out of 158). The perception of the business people and the country analysts is that the degree of corruption is 3.7 on a scale of 10-0 (highly clean-highly corrupted). Another serious issue is the informal economy, which accounts for about 40 % of the Brazilian gross national income. This is much bigger than in for example in China and India. The informal economy consists of companies that operate partially or wholly outside the law by avoiding taxes, ignoring product-quality, and safety regulations etc. Even though these companies have a lower productivity than their law-abiding counterparts, they are able to compete successfully due to the cost advantages they gain. This means that the formal companies lose on profits and market share and thus lack the means and incentives to invest in productivity enhancing measures, such as expanding the capacity, installing new technologies, and improving the organisation. These problems can handicap the economic development process. (Capp et al. 2005)

Other barriers that have a great effect in Brazil are the extremely high interest rate (appendix 2) and the fiscal regime, meaning both the level of taxes (income, excise, value-added, labour, and social security) and the administrative cost of complying with them. Normally the tax level in developing countries is about 25 % of the GDP compared to the 30 % in the developed countries. Also in developing countries this tax burden is mostly paid by companies. In general, formal companies pay about 80 % of all taxes in developing countries compared to the 50 % in developed countries. The situation in Brazil, however, is different. Brazil has a high overall tax level, like a developed country, yet its tax system, which is targeted at companies, resembles that of a developing country. The result is that Brazil has one of the world's heaviest corporate tax burdens. According to the International Institute for Management Development, the overall tax burden in Brazil has increased from 26 % to 36 % of GDP in 1992-2002 and 2/3 of this was paid by formal companies. (Capp et al. 2005)

The main regulatory agencies concerned with business activities in Brazil are the Central Bank, the Administrative Council for Economic Defence, the Industrial Development Council, and the Secretary of Foreign Trade (table 2). (Friedlich 2001, MDIC 2006, Kume & Piani 2004)

Table 2 Main regulatory agencies concerned with business activities in Brazil

Name of the Agency	Regulatory Influence	
Central Bank, BACEN	Execution of monetary policy and exchange controls	
Administrative Council for Economic Defence, CADE	To control the abuse of economic power (investigate and punish trusts, cartels and monopolies)	
Industrial Development Council, CDI	To promote industrial development through fiscal incentives	
Secretary of Foreign Trade, SECEX	DECEX	Control imports and exports
	DEINT	Develop foreign trade activities and negotiate Brazil's trade agreements
	DECOM	Investigate and implement antidumping measures
	DEPLA	Conduct studies, uphold statistics, and plan and implement SME -supporting programs

Source: Author's elaboration, based on Friedlich 2001, MDIC 2006, Kume & Piani 2004.

The Central Bank is responsible for the execution of monetary policy and exchange controls. The Administrative Council for Economic Defence, which operates under the Ministry of Justice, is a government agency responsible for the control of the abuse of economic power. It may investigate and punish trusts, cartels and monopolies, either on its own initiative or at the request of third parties. The Antitrust law (Law 8884/94) contains extensive regulations in defence of free-market competition and the National Economic Law Secretariat is responsible for the enforcement of these regulations. The Industrial Development Council is responsible for the industrial development and has the right to grant fiscal incentives for certain industrial projects. The Secretary of Foreign Trade (SECEX) operates under The Ministry of Development, Industry and Foreign Trade (MDIC). SECEX has four different departments operating under it: DECEX, DEINT, DECOM, and DEPLA. (Friedlich 2001, MDIC 2006, Kume & Piani 2004)

All imports and exports are controlled by Foreign Trade Department (DECEX). Department of International Negotiations (DEINT) develops foreign trade activities and negotiates Brazil's multilateral and regional trade agreements. The Department of Commercial Defence (DECOM) is concerned with the dumping issues. It has the power to investigate dumping charges and also implement antidumping proceedings. The Department of Development and Planning of Foreign Trade (DEPLA) operates as an information provider. It conducts several studies and upholds statistics for the decision makers. It also plans and implements programs, which aim to increase the small and medium sized enterprises (SMEs) abilities for foreign trade. (Friedlich 2001, MDIC 2006, Kume & Piani 2004)

4.3.2 Trade Policies and Trade Liberalisation

Brazil's overall goal is to use trade policy to foster sustainable economic growth and to reduce the country's vulnerability of global financial markets. Brazil considers regional economic integration as well as export promotion and diversification as important objectives for its trade policy. It is also seeking to strengthen bilateral relations with countries in the region and with other major trading partners, such as the NAFTA countries, the European Union, India, Russia, China, and South Africa. Brazil strongly supports enhancing regional trade, while recognizing the need for more flexible rules for developing countries on the multilateral level. (Lula da Silva 2004)

Brazilian foreign trade has expanded significantly in recent years. This has been reflected in stronger flows of good and services, as well as in financial flows. (Bonelli 2000, p. 73) The average openness ratio (exports plus imports of goods and services divided by GDP) has risen up to 27.3 % and the economy has attained the highest degree of openness in its post-war history. Both exports and imports of goods and services have risen and they are on their highest level in history in relation to GDP. (WTO 2004b, p.10)

However, for decades the policies of import substitution and intense industry protection were a part of the broader development strategy in Brazil. Until the early nineties, the competitive pressure on domestic industries was reduced by high tariffs, exchange rate controls and interventions, and especially prohibitive non-tariff barriers. For example, if a company wanted to import to Brazil it had to go through an examination too see whether their products were similar to domestic products and if they were, their imports were banned. Thus, the Brazilian domestic market remained essentially closed for a broad range of foreign goods. In 1988, the federal government finally initiated a process of trade liberalisation that reduced both the level and the dispersion of tariffs between industries. By 1990 the redundant tariffs were eliminated from Brazil's tariff act, but the binding non-tariff barriers remained largely untouched. (Muendler 2002, p. 43-48)

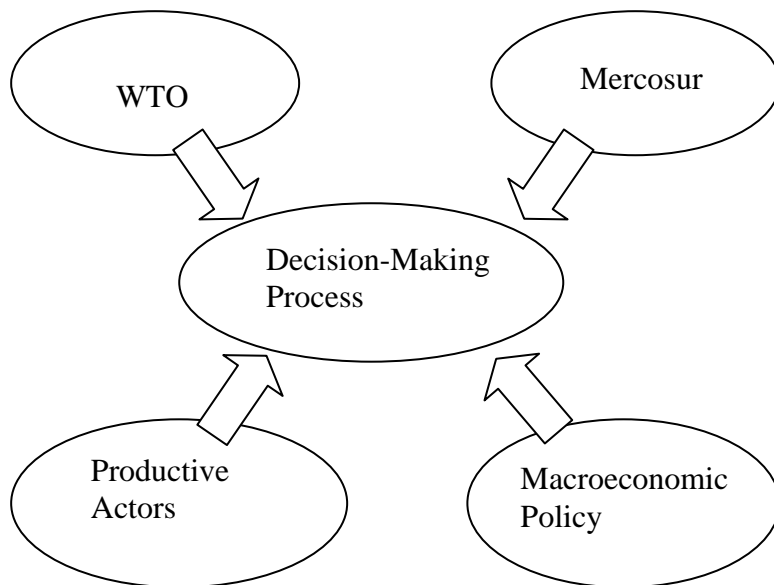
In 1990, the new president Collor de Melo and his administration initiated a huge liberalisation programme, which shocked the domestic manufacturing sector. Only in 3 years period the earlier policies of import substitution and industrial targeting were demolished. For instance, tariffs on equipment not produced in Brazil, were immediately reduced to zero and non-tariff barriers were eliminated. However, on the other extreme, some tariffs were remained as high as 40 % in order to protect Brazil's developing industries, such as the computer industry. Also when the president Cardoso took office in 1995, some of the earlier liberalisation efforts were reversed. (Muendler 2002, p. 43-48)

Some researchers argue that the effective rate of protection created by both tariffs and non-tariff barrier was, on average, about 80 % of the import price in 1985. This effective protection has been calculated to have fallen down to 21 % by 1997. (Muendler 2002, p. 43-48) Generally Brazil has continued to liberalise, and enhance the transparency of its trade regime, although some barriers to market access persist in specific areas. Tariffs hinder the access of domestic producers and consumers to some of the world's most competitive products, which Brazil has tried to compensate through a variety of tariff concessions. Also antidumping measures are used actively to protect domestic producers against imports, which are considered unfair. (WTO 2004a)

Trade policies in Brazil are influenced by several variables, which all carry their own interest considering the liberalisation programs. Most important ones can be seen in the figure 12. On

a multilateral level the WTO is the strongest guideline affecting the Brazilian trade policies. It aims to liberalise the trade on a global level. Regionally the most important is the Mercosur, which also aims to liberalise trade within the region. The collision of the multilateral and regional integration has already been discussed in chapter 3.4. Productive actors, such as companies, business associations, unions, etc. have an important part on the decision making process of the Brazilian trade policies. Productive actors can lobby the government to support their own interest and to achieve more favourable trade policies. Another very important variable is the macroeconomic policy. In many cases the macroeconomic policies have led to the use of trade barriers to control the balance of payments and inflation.

Figure 12 Actors influencing the decision making process of the trade policies



Source: Author's elaboration.

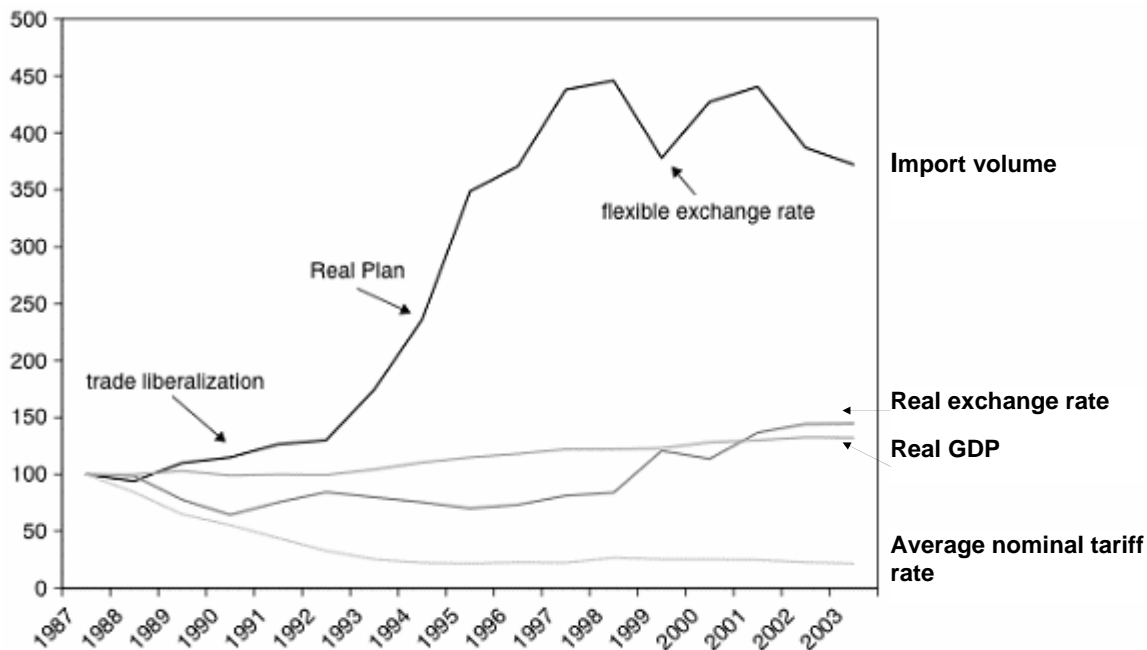
The influence of the macroeconomic policies on the trade policies can be clarified through the recent history of the trade policies. In 1990-1993 the exchange rate (figure 13) became flexible and the process of liberalisation of imports went further. In July 1994, the government took new measures and the Real Plan (Plano Real) was launched. The Real Plan was a set of measures taken to stabilise the Brazilian economy and to control the inflation by preventing the rise of the consumer goods prices. One of the actions taken to accomplish this was to lower the trade barriers and let the cheap imports enter the country. At the same time the Brazilian government had to implement the new rules of the WTO as well as the Asunción Treaty of the Mercosur. (Kume & Piani 2004, p. 79)

As a result of the measures adopted in 1994, there was an increase in the foreign capital flow into the economy through FDI, which led to currency appreciation, and eventually making the domestic industry less competitive. In the macroeconomic point of view the results were accomplished: the prices were stabilised and therefore the inflation was under control. Yet, the trade unbalances and the pressure of the foreign competition on the domestic industries made things very complicated for the government. This situation and also the Mexican financial crisis in 1994 made evident the risk of having a high currency under an intense internal pressure. In order to achieve more balanced trade, in 1995, the Brazilian government adopted a higher level of protectionism. Since the Brazilian government had lost its autonomy to adopt tariffs because of the membership in the Mercosur, the Brazilian

government had to, once again, employ administrative measure to restrict imports. It also adopted safeguards for many imports, such as textile and toys. (Kume & Piani 2004, p. 79-108)

In the 1999 after the strong attack in the Brazilian currency and the attempt for a controlled devaluation the government adopted a floating exchange currency. The devaluation of the currency reached as high as 43.6 % that year (see figure 11). The devaluation made the domestic industry once again more competitive, thus making it possible the employ more stable and less protective trade policies. (Kume & Piani 2004, p. 79-108)

Figure 13 Indexes of import volumes, real exchange rate, real GDP, and average nominal tariff rate for the 1987— 2003 period (base year 1987 • 100)



Source: Kume, H. & Piani, G. 2004, p. 84.

However, the stabilisation has been set as the top priority of the Brazilian economic policy making, and this should be emphasised also when considering the direction of competitiveness policies. With regards to industrial and foreign trade policies, the Brazilian government has justified several exceptional protectionist measures recently taken by pointing out the need to stabilise the trade balance and support employment in industries, which were hardest hit by trade liberalisation. In addition, any trade liberalisation program has a long term-term goal of reducing protection. In order to be able to reduce protectionism, the government seeks to bring the domestic prices in line with international ones, and eventually shift the allocation of resources toward those tradables that can be produced most efficiently. (Bonelli 2000, p. 81-83)

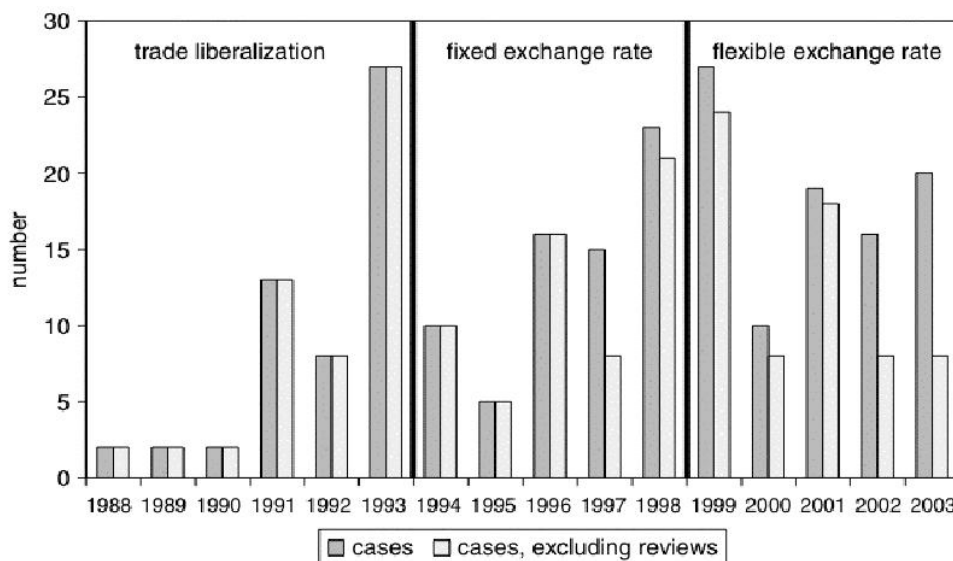
4.3.3 Antidumping

In Brazil the antidumping measures are set by Law 9019/95 and Decree 1602/95. Dumping is defined as the entry of a product into the local market at a price which is less than its normal price. If this entry is considered a cause a threat to the local market, antidumping measures can be deployed. (Friedlich 2001, p. 93)

In 1995, Brazil implemented the Antidumping Agreement of the Uruguay Round. The national legislation was aligned with the WTO agreements. The government set the maximum terms for the decision-making process of the antidumping measures, in order to get rid of the delays in the analysis process and improve the credibility to the trade defence instruments. The maximum time to determine whether the request for a procedure included all the relevant information was set for 20 days. The decision, whether to initiate the investigation, should be done within 30 days and the final determination should be reached within 360 days. (Kume & Piani 2004)

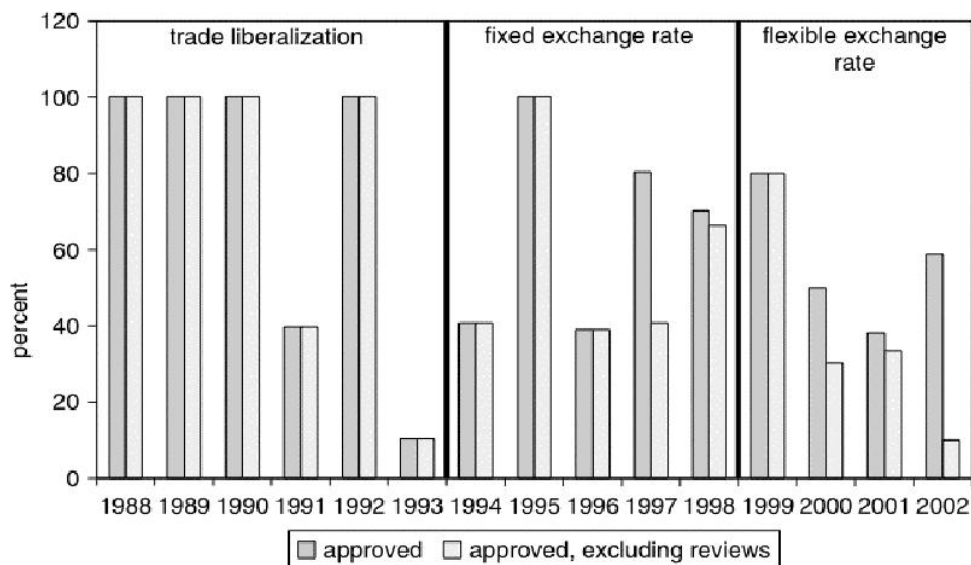
Figure 14 and 15 show the number of the antidumping cases in Brazil during 1988-2003, and the share of approved antidumping cases in Brazil during 1988-2002. Trade liberalisation was a reason, which initiated the government to take protective actions. These actions were taken to assist more sensitive industries, which otherwise would not have had a chance to survive. With the help of antidumping measures Brazilian government secured an adaptation period for these industries. During the period of fixed exchange rate the main goal of the government was to control the inflation. Therefore, it did not want to add barriers against the cheap foreign products, which of course helped to maintain low prices. At the end of this period, however, the currency was too high in relative terms, making Brazil to loose its competitiveness worldwide. For this reason, at the end of this period, the government started yet again to increase the antidumping measures. After the currency became flexible again, Brazil increased its competitiveness and there was no need to protect these industries and the number of cases dropped considerably. These figures (14 and 15) show that there is a strong correlation between the antidumping measures and the macroeconomic conditions. (Kume & Piani 2004)

Figure 14 Number of antidumping cases in Brazil, 1988-2003



Source: Kume & Piani 2004, p. 94.

Figure 15 Share of approved antidumping cases in Brazil, 1988-2002



Source: Kume & Piani 2004, p. 94.

According to the WTO, Brazil ranked among the eighth countries with the most antidumping measures. The production sector most affected internationally by the antidumping measures during 1995-2002 was the metal industry. 31.6 % of all the antidumping measures in the world were targeted to the metal sector. In comparison, the second most influenced industry was chemical products, which caused 18.6 % of the total antidumping measures. Brazil is not an exception to this trend. Together the ‘top tree’ industries affected (metals, chemicals and plastics) accounted for 73.4 % of the total antidumping measures during 1995-2002. Even though Brazil had the legislation to use the antidumping duties since 1987, there was no need to use them at that time because of the protection created by high tariffs and NTBs. However, after the currency appreciation and the abolishment of many tariffs and NTBs Brazil began to use these measures. Later on, due to the currency devaluations the number of antidumping cases dropped substantially. (Kume & Piani 2004, p. 79-108)

When looking especially the sector of base metals and other articles such as steel and metal products the antidumping practices stand out. In this case it is common practice to sell abroad at lower prices than those charged in the domestic market, which is protected by tariffs. The countries most affected by the antidumping investigations initiated by Brazil are, the United States with 29 cases, followed by China with 25 cases and India with 11 cases. (Kume & Piani 2004, p. 79-108)

When the market structure is highly concentrated, the use of antidumping measures has been argued to support monopoly and oligopoly actions (Kume & Piani 2004, p. 79-108). This is illustrated in the table 3. Over 40 % of all the antidumping duties imposed in Brazil in 1996-2003 were set to protect an industry with only one company. Correspondingly 41.2 % of all the antidumping duties were imposed to protect an industry with 2-5 firms. Only less than 18 % of these measures were in an industry with 6 or more companies. This proves the strong correlation between concentrated industries and the antidumping measure taken, thus, also the support of the government to monopoly and oligopoly situations.

Table 3 Brazil: distribution of antidumping cases with final determination, by number of domestic firms in 1996-2003

Determinations	1 firm		2 to 5 firms		6 or more firms		Total N° of cases
	N° of cases	Percentage of total n°	N° of cases	Percentage of total n°	N° of cases	Percentage of total n°	
Antidumping duty imposed	42	41.2	42	41.2	18	17.6	102
Price undertaking	2	40.0	0	0.0	3	60.0	5
Not restrictive outcome	49	57.0	27	31.4	10	11.6	86
Total	93	48.2	69	35.8	31	16.1	193

Source: Kume & Piani 2004, p. 100.

The antidumping measures in Brazil concerning the SS industry all involve Acesita, because it is the only SS producer in the country. The company also has an important role in initiating these investigations and measures. In 2000 Acesita initiated several antidumping allegations against the importation of cold laminated stainless steel plates (Junqueira Schmidt et al. 2001). This resulted as the initiation of seven dumping investigations, which in turn led to the implementation of tree definitive measures. Countries which suffered the antidumping duties were South-Africa with 6 %-16.4 %, Spain with 78.2 %, France with 30.9 %, Japan with 48.7 %, and México with 44.4 %. (Junqueira Schmidt et al. 2001)

The antidumping law is extremely complicated and its inner functions are known only to a handful of users, targets, bureaucrats and lawyers. Normally antidumping law is concerned with the international price discrimination. In a typical case, a foreign producer is said to be dumping when it charges lower prices at the foreign market than at home. This kind of discrimination hypothetically reveals the existence of unfair market distortion, and especially the existence of closed home market for the foreign producer. In this kind of closed 'sanctuary' market, trade barriers or other restrictions on competition allow the foreign producer to charge artificially high prices and earn artificially high profits. With these profits it can then cross-subsidise artificially low prices abroad. And since the competition in the home market is restricted, the profit sanctuary cannot be revoked by re-importation of dumped exports or retaliatory dumping by injured foreign competitors. However, the assumption that international price differences must be the result of an underlying distortion in the home marker has been questioned and claimed that such price differences can be the result of many other things than just 'unfair trade'. Thus, the antidumping law is said to measure poorly the international price discrimination. (Lindsey & Ikenson 2002)

Younkins (2002) has a very positive view on this possible price discrimination and he even criticised the use of term dumping in a negative sense. Costs can be computed in many ways and thus a single cost does not exist. According to him, dumped products should be welcomed to a country, because lower prices are in the interest of the consumers. Dumping can even be a strategy to gain market share. However, dumping will force the domestic firms to compete with the foreign dumper and in order to answer the challenge they would have to cut costs, differentiate their products or even shift their production to other goods. (Younkins 2002)

Even though real costs can be debated, it is the main reason used when governments impose antidumping duties. These antidumping measures have a direct effect on companies. The ideal situation would naturally be that they create a fair competition ground to all players, but often

they are also seen as protecting a certain industry. In this case they decrease the international competitiveness of an exporter (Tavares & Miranda 2002) as already discussed in the chapter 3.5. Eventually antidumping duties might even lead to a decrease in productivity, by discouraging investment and innovativeness (Younkins 2002).

4.4 Stainless Steel Industry

Stainless steel is a speciality steel and thus a specific part of the steel industry. This chapter will describe the stainless steel industry in the world, then explain how the industry developed in Brazil and finally discuss, on what aspects the stainless steel price is based on. In order to understand how the Brazilian SS industry has developed as it is today, the privatisation process of the steel industry will be described. This also describes to role of the government in the restructuring of the industry. As Acesita is and has been the only SS producer in the whole South America, it is responsible for the whole national production of SS in Brazil.

4.4.1 Stainless Steel Industry in the World

Asia is the by far the largest stainless steel producing area in the world, with Japan and China being the biggest producers. The biggest SS producer companies can be seen in figure 16. Asia was also the only major area with an increased (5 %) stainless steel production in 2005 and the International Stainless Steel Forum experts anticipated that the growth will continue. The second largest stainless steel producing area is Western Europe/Africa, which suffered from a decreased demand in 2005 and was forced to cut back its production. However, a strong recovery in the region is also expected. The Americas produced about 2.7 million metric tonnes of stainless steel in 2005, and this is expected to increase. Also Central and Eastern Europe will see a recovery to their 2004 production levels. In general, together the high raw material prices and the current high volatility of the nickel price have created concerns for substitution, but for some applications this has created a potential for application of low/no-nickel grades. (ISSF 2006a) Despite the small fluctuations, the trend of global demand of SS is clear as the figure 17 shows.

Figure 16 Biggest stainless steel producers in the world



Source: Cintra 2006b, interview.

Figure 17 Global stainless steel demand index, all SS products



Source: ISSF 2006c.

Table 4 shows the foreign trade flow of stainless steel products in 2005. Since Brazil is the only SS producer in Latin America, it is responsible for almost the total of 240.9 tons. Interesting is that the export from Latin America to the rest of the world has increased approximately 60 % since 2002. On the contrary the imports of SS have decreased approximately 5 %. (ISSF 2006b)

Table 4 Foreign trade flow of SS products in 2005 (exports including feedstock material for further processing, 1000 metric tons)

Origin	Destination								
	NAFTA	Latin America ¹	Western Europe	Eastern Europe	Middle East	Africa	Asia	Others	Total
NAFTA	316.1	11.6	39.9	3.1	1.4	0.8	136.6	0.7	510.2
Latin America ¹	29.3	47.6	56.6	10.4	5.2	12.6	79.0	0.2	240.9
Western Europe	757.4	88.5	6,855.1	204.1	74.9	84.4	949.2	46.3	9,060.0
Eastern Europe	6.7	0.3	157.2	53.6	1.6	0.1	8.0	0.2	227.6
Near/Middle East	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Africa	28.9	5.5	141.0	0.5	18.6	10.6	175.6	4.8	385.4
Asia	267.1	21.4	288.1	23.8	74.9	25.1	4,510.4	83.5	5,294.4
Others	0.2	0.1	0.4	-	0.0	0.0	10.2	1.6	12.6
Total	1,405.7	175.0	7,538.2	295.5	176.6	133.6	5,869.0	137.3	15,731.0

Source: ISSF 2006b.

4.4.2 Stainless Steel Industry in Brazil

4.4.2.1 Developments since Privatisation till Today

The Brazilian steel industry was born in 1925 as a joint venture between the Luxembourg group and a local investment. Until 1946 this company, Belgo-Mineira, was responsible for the 70 % of the Brazilian steel production. In the same year also another company initiated its operation, Companhia Siderúrgica Nacional (CSN). CSN was a state owned company and a part of the strong nationalist policy, which aimed to reduce the dependence of foreign influence. During the 1960s the steel industry was chosen as a strategic industry by the government and many government funds were spent on the development of the industry. In 1968 the first National Steel Plan was issued and as a consequence 6 years after, a state-owned holding Siderbrás, was initiated. This decade was considered the golden age of the Brazilian steel industry. (Amann 2004)

The 1980's was called 'the lost decade' of Brazil and Latin America due to the internal crisis and a non-existing economic growth. The domestic demand of steel declined and respectively the external demand grew. This initiated the export era of the Brazilian steel industry. In the end of the 1980's and the beginning of the 1990's the privatisation process of the industry started. (Amann 2004)

Privatisation is often simplified as a total withdrawal of the government from economic activity. It is a result of commitment to neoliberal policies and in case of developing states it is often seen as the only option of the bankrupt developmentalist state. The steel privatisation in Brazil is often used as an evidence of the successful development in the enterprises when the 'nanny' state steps out. Of the eight major Brazilian steel enterprises, seven turned into exponentially more productive, financially sound, and competitive after the privatisation

¹ Excluding Mexico.

period in 1990-94. However, the state interest always intervenes to construct the reform process into something more than mere withdrawal of the state from the market. There are always development goals that the privatisation process is meant to serve and these goals are not determined exclusively by the economic demand but also shaped by politicians, policy makers and social agents. This was also in the case of the Brazilian steel industry. (Montero 1998, pp. 27-62)

The privatisation process in Brazil was initiated during the Fernando Collor administration in 1990-92, when in 1990 the National Program of Denationalisation (PND) was initiated. Collors government saw privatisation as a part of a longer plan to reorient Brazil's industrial policy along more efficient and sustainable lines. However, instead of embracing neoliberal ideas, key policy statements during the Collor administration expressed support for new forms of 'sustainable' industrial policies. In early 1991, the Collor administration launched the Industrial Competitiveness Program (PCI) as a mix of federal tax incentives, subsidised credit, and tariff adjustment that would reduce the price of investment in selected group of agroindustrial, manufacturing and high technology sectors. This active industrial policy was aimed to catalyse market forces. (Montero 1998, p. 27-62)

Privatisation of the steel industry in Brazil was implemented in ways that made the competitive restructuring of the steel mills policy priorities. Privatisation policy in Brazil was not governed by a weak state, which was forced to sell off decaying industries because of fiscal and political pressure. Instead the process was a part of larger, very active restructuring of the public steel firms before, during and after they were sold. Far from consenting to private interests, public policy makers actively moulded the financial capacities of potential buyers and facilitated purchases and further productive restructuring. (Montero 1998, p. 27-62)

The technocrats, who conceived the privatisation policy, came from the ranks of the Brazilian Development Bank, BNDES. BNDES was the state agency, which was most responsible for Brazil's developmentalist policies from the 1950s through the 1980s. These policy leaders promoted strategic forms of public sector intervention that would enhance rather than replace market forces. (Montero 1998, p. 27-62)

Privatisation became the focus of the new thinking at BNDES. Quite opposite from the neoliberal ideas, they saw privatisation as a mechanism for making state interventions more efficient. In the case of public steel firms, BNDES leaders saw privatisation as essential for making mills more competitive. Although Brazilian steel had achieved some export growth during the late 1980s, productivity was low, and the sector was too specialised in low end steel. Unlike the world's leading steel producers, most steel manufacturing in Brazil used old-fashioned methods with low productivity. As the supplier of only 3 % of the world steel, Brazil would have to advance several costly restructuring programs at its major enterprises to compete in the global market. These proposed investments exceeded the investment capacity of the state or the firms themselves. (Montero 1998, p. 27-62)

Strategic forms of state intervention combined with the private capital, were able to provide the resources the Brazilian steel industry needed. The sector's major business association, the Brazilian Steel Institute (IBS), embraced such a mixed approach. The coalitions among the steel firm managers, BNDES technocrats, and the financial and industrial elites created an emerging constituency for using privatisation policy as a mechanism for industrial policy. This contradicted the widely held assumption that the sell-offs were intended to solve the state's fiscal problems. Instead, the process relied on strategic state expenditures directed by

the new industrial policy. Among the steel firms that went to sale (appendix 3), Usiminas, Cosipa, Acominas, CSN, Piratini, and Acesita all underwent significant restructuring before privatisation, all paid by the public sector expenditures. (Montero 1998, p. 27-62)

Acesita is a good example of the restructuring done before the privatisation. Acesita started as a private, non-flat steel plate firm in 1944 but in 1950 it was bought by the Banco do Brasil, a national public bank. In 1974, the military government of General Ernesto Geisel imported Japanese technology and employed Banco do Brasil resources to transform Acesita into a specialised producer of rustproof steel plate, making it the only Latin American producer of this product. However, as a result of its transformation Acesita assumed heavy debts with the Banco do Brasil, totalling US\$ 1.1 billion by 1982. (Montero 1998, p. 27-62)

Like other public steel firms before the privatisation, Acesita went through an extensive program. Its production, inventory systems, payroll, and external debt were restructured in the anticipation of being sold off. In July 1991 the company initiated a plan of demobilisation that sold more than 880,000 square meters of the company land to the municipality of Timóteo (Minas Gerais) as a payment for local taxes and the use of other municipal services and properties. Also more than 10 % of the work force was laid off. These changes created a total of US \$30 million in cost savings. On the financial side Acesita restructured its debt with Banco do Brasil, which held 97 % of the firm's stock. The bank used a complex international transaction to swap Acesita's foreign debt of US\$ 220 million for Brazilian debt at a discounted price. This operation effectively reduced the firm's total debt with the Banco do Brasil to US\$ 90 million. As a result of the firm's restructuring and simply its placement on the privatisation block, its stock value rose strikingly. (Montero 1998, p. 27-62)

President Collor was forced from office in 1992 under an escalating evidence of corrupted political practices. He was replaced by his vice president Itamar Franco who had strong ties to the opponents of privatisation. Even though Itamar Franco was more sceptical to the privatisation process, the privatisation process was not completely stopped when he came to power. This was because of the continued activities of the proponents of the privatisation in the BNDES, the state firms, the private investors, and key members of Itamar Franco's cabinet. (Montero 1998, p. 27-62)

The privatisation of the Brazilian steel industry aimed to make the industry more productive and competitive. When considering the effect of the privatisation to the economy of the state, the fiscal gain from the privatisation was marginal. Privatisation did reduce the short term debt, but adding the cost of restructuring of the firms and employing subsidised purchasing modalities and placing these in the context of an expanding internal and external debt in 1990s, the economic gain was restricted. The fiscal impact was too modest and came too late to improve the public accounts. Privatisation of steel in Brazil was driven by much more than fiscal pressure. It was actively guided by the state interest in restructuring the steel mills. The prior financial restructuring of debt and production at the steel firms, the subsidised purchases, and the use of public finance after the sales sought to diminish perceptions of risk in investment among prospective buyers and maximise the competitive potential of the public enterprises. (Montero 1998, p. 27-62)

It is interesting why such an obvious collusion among the Brazilian political and economic elite did not inspire resistance to the government's privatisation policy. This is because the true nature of the purchasing modalities was hidden through secret negotiations and the trick of holding the auctions 'in public'. The use of stock market to organise the sales helped refute

claims by those opposed to privatisation that the process lacked transparency. (Montero 1998, p. 27-62)

Today all the major steel companies in Brazil are private. They are owned by several different parties, however mostly by other international steel companies, banks and pension funds. (Amann 2004) Acesita was acquired in 1998 by one of the biggest steel companies in the world, Arcelor. 'The world reference in steel', as they self call themselves, has chosen Brazil as one of its main growth regions outside the Europe. Several numbers illustrate their focus on Brazil. It is the number one steel producer in Brazil with 15 000 employees, 13 sites producing the entire steel product range, and investments amounting to US\$ 4 billion over the course of five years. (Arcelor 2006)

Regardless of the privatisation, the link with the government is still strong and Acesita remains the sole producer of the flat stainless steel in Latin America. The linkage with the government was highlighted in the interview with an industry expert João Assad (2006, interview). He has been in the business for over 30 years and knows the Brazilian SS industry extremely well. He is also completely independent from Acesita, thus able to provide a valuable insight to the industry. Assad (2006, interview) confirmed that there are several problems that the businesses in Brazil must overcome. Companies are forced to constantly balance their operations among the influence of bigger companies, government regulations, 'closed door negotiations' and wide corruption. This is a peculiar to the Brazilian SS industry, which according to Assad (2006, interview), lacks transparency.

4.4.2.2 Price of Stainless Steel

In general, it is argued that the quality of the raw material and the plant location are the key sources of international competitiveness in the steel industry, and the Brazilian firms are privileged in both aspects. (Tavares & Miranda 2002) However, in order to understand how the price of the stainless steel in Brazil is formulated it is important first to take a look at the general influences affecting the stainless steel price world wide, since the Brazilian industry is highly connected to the international SS industry. There has been plenty of research done on the price of the commodities on the international level. It has been argued that speculative actions have been one major contributor to the recent surge in metal prices and may have even caused a bubble. Another view is that the increase in commodity prices has happened rather due to the increased investor activity. In general the commodity prices have gone up rapidly, and this is also in the case of stainless steel. (IMF 2006)

Production costs vary considerably over time, mainly reflecting energy prices, exchange rate changes, and cyclical factors such as availability of skilled personnel and hardware. During 2002-2005 production costs of all reported metals have escalated approximately 20-50 %, with rising energy costs playing a significant part. It is evident, however, that the doubling or tripling of market prices over the past few years cannot be fully explained by the cost structure of the industry. Since demand for metals seems to be rising due to higher global growth and rapidly increasing income and industrial production, in large countries such as China, the speed and costs of supply additions will determine whether metal prices go down from the current high levels in a medium term. There have even been suggestions that the current high price might not be sustained in a medium term and metal prices will fall by 45 % from current level (appendix 4). (IMF 2006)

When it comes to stainless steel, material costs are an important part of the total costs. One noteworthy issue is the price of nickel, since it's approximately 10 % of the composition of the most commonly used SS 304. The international price of the nickel has been growing rapidly as can be seen from the appendix 5. There are different assumptions on how the price will develop in the future. 1-2 new nickel mines has been found in Africa, and if they start their production in the next year as speculated, the price of nickel will go down. This has been said to also explain the current high price, since the nickel producers are trying to maximise the current profits due to the expected decline in prices. Other speculations suggest, that the production will not be initialised, in order to keep the price level under control. (Acherman 2006a, interview; La Femina Netto et al. 2006, interview)

What comes to the production of the different kinds of stainless steel (SS 304 and SS 430), the process is the same. The only difference in the production, and thus in the cost, is the different level of nickel. Both SS 304 and SS 430 contain some nickel, however in the production process more nickel is added to the 304 so that it reaches the level of 8-10 %. (Acesita 2006)

There are, however, other factors, which influence the price as well. Political actions, trade policies and state protectionism, can affect the price to be artificially higher (Feenstra 1992). Also price is always dependent on the productivity and volume. The used technology gives a general layout of the productivity and the economies of scale are known to lower costs and thus price. For example, if the factory is very old-fashioned and operating in a small market which offers no economies of scale the price can be argued to be higher.

Steel industry, including stainless steel, is especially sensitive to the economies of scale, and there is generally room for only limited number of producers in these market segments. (UN 2002, p. 6-7) Due to this, concentration happens easily and monopoly or oligopoly situations are relatively common. When there is limited number of players, also cartels are more easily formed, as happened, for example, in the case of three steel manufacturers in Brazil in 1996. (UN 2002, p. 6-7)

Comparing the pre-tax cost of cold-rolled coils (appendix 6) helps to create a picture of the price structure of the steel products in Brazil and compare the cost structure in different regions in the world. For example labour cost in Brazil is not as cheap as in the former Soviet Republics (CIS countries) or China, but still much cheaper than in USA, Western Europe, Japan, and even South Korea. The most important note, however, when it comes to Brazil is the issue of financial expenses. (UN 2005b, p 12) Due to the high interest rate, the cost of capital is the highest among the countries examined. This of course influences the price of the stainless steel in Brazil. The relation between the international price and the local price in Brazil will be further discussed in numbers in the empirical part (see chapter 5.2.4).

5 NETWORK OF ACTORS

This chapter will describe the network of the main actors influencing the possibilities of DeLaval to operate and source raw material within the SS industry in Brazil. The chapter gathers together the empirical data collected through the interviews. First a short presentation of all the interviewed parties will be provided. Then DeLaval, Acesita and Amorim will be discussed more in detail. Also an industry expert João Assad was interviewed. The information he provided will be discussed in the context, in which it is most relevant. The other important actors in the network, such as the government, which have not been directly interviewed, will also be discussed in the relevant context. This is done in order to make it easier for the reader to understand the different position and the different viewpoints of these three interviewed actors.

5.1 Complexity of the Network

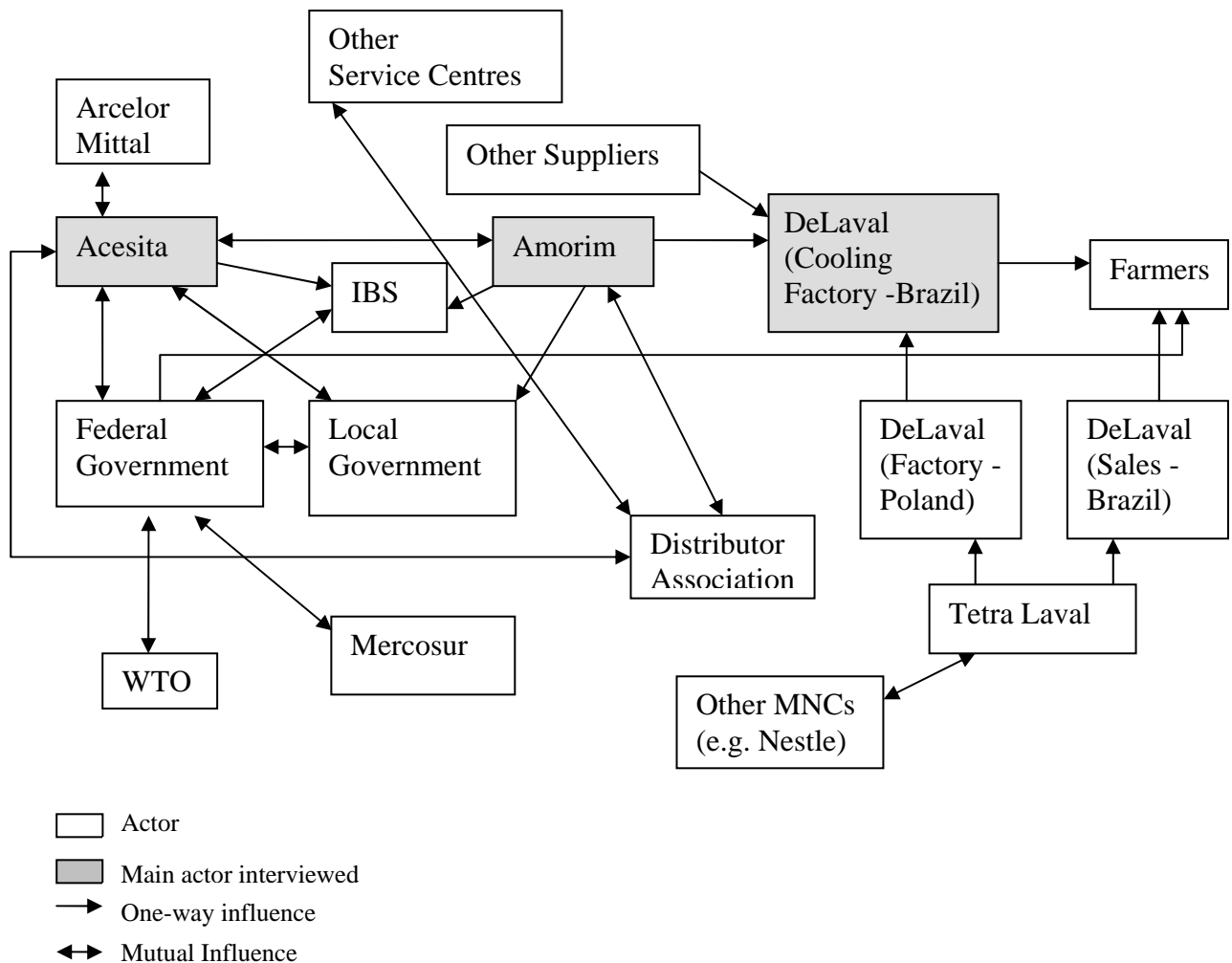
The figure 18 illustrates the principal actors involved in this trade environment. The relationship between different actors is pointed out with an arrow. The arrows also describe the direction of the influence, i.e. whether the influence is one-way or mutual. The figure is not all-inclusive, but it describes the main actors which have an influence on the DeLaval cooling factory. Some of these have already been described earlier, such as the international actors and the role of the Brazilian government. Since these actors have not been interviewed directly, their impact is discussed within the context of the other interviewees.

The actors interviewed were DeLaval, Acesita, and Amorim (these 3 are shaded in the figure 18) and as well as an industry expert João Assad. The case company DeLaval has already been shortly presented in the chapter 1.2 and it will be described more closely in the following chapter. The two influencing actors Acesita and Amorim, who directly affect the price of the raw material, will be presented more closely, further on in this chapter. However, to give an overall understanding of the interviewed parties, they will be presented shortly here as well.

Acesita is the only SS producer in the South America, and it has the 90 % market share in Brazil. It is also the main SS supplier of DeLaval. However, for several reasons DeLaval cannot buy SS directly from Acesita, but they have to buy it through a service centre. The service centre, which DeLaval uses, is called Amorim, and it is a wholly owned subsidiary of Acesita. Amorim operates as an intermediary between DeLaval and Acesita, adding value to the raw material. The industry expert João Assad was interviewed because of his independent status of Acesita. Because of his independent status, he was able to provide a different point of view to the trade environment.

The figure 18 does not take into consideration all possible relationships. For example other suppliers might belong to an association, or have an influence on local government, etc. but in order to emphasise the environment of DeLaval and to avoid confusion, only the most essential relationships, and the ones that were highlighted during the interviews, are being illustrated in the figure.

Figure 18 Actor network affecting DeLaval



Source: Author's elaboration.

5.2 DeLaval

5.2.1 Organisation

DeLaval International is a multinational company with a presence in 100 markets worldwide. The company has its headquarters in Sweden, but the production is spread internationally. It has 19 production units, for all its product range. This includes all aspect of a dairy farming solution from milking equipment to the milk cooling. (Tetra Laval 2006, p. 33-44)

DeLaval cooling factory in Brazil is one of the 3 manufacturing units of DeLaval International producing milk cooling tanks. There are 30 workers in the cooling factory and in 2005 it was rewarded as the best manufacturing unit within the whole DeLaval International group. The organization unit can be seen in appendix 7. DeLaval Brazil produces milk cooling tanks for the Brazilian and American markets. At the moment 80 % of its production is sold nationally while only 20 % is being exported. The main countries DeLaval Brazil exports milk cooling tanks are Colombia, Ecuador, Venezuela, Mexico, Peru, Central American countries, USA, and Canada. (Acherman 2006a, interview)

The cooling tank factory in Campinas is closely tied to the headquarters and the unit in Poland. The factory is able to make strategic suggestions and source some of the material independently but the main decisions are taken in Sweden or Poland. Also when it comes to production routines, the factory is tied to the standards. One good example is the balance scorecard, which comes mostly filled from Sweden. The headquarters of the cooling tanks has been in Groningen Netherlands but there are lot of organisational changes made and it seems that in the future the whole unit will be shifted to Wroclaw Poland. The unit in Poland begun to grow in 2003 and the main factory has already been moved there from the Netherlands. (Costa 2006, interview)

The production strategy of DeLaval Brazil is market oriented (see chapter 3.6). The main reason for the location of the manufacturing unit is the size of the market and the importance of being present at the region. Geographically described, the production unit strategy is a mix of several options. It is mostly host-market production but has also features of product specialisation for a regional market as well as transnational vertical integration. DeLaval Brazil is manufacturing one product of the wide product line of DeLaval International and it is aimed eventually to cover the regional demand. However, DeLaval Brazil receives some parts from the factory in Poland, which makes the strategy also transnational vertical integration.

Interesting in the internal structure of the DeLaval, is the strong division of the commercial side and the manufacturing unit (appendix 1). All the factories are managed by one vice-president of the company and the whole sales organisation is managed by another vice-president of the company, thus the organisation structure is not horizontal. The sales department reports to Argentina and the manufacturing units to Poland. Since both units want to make profit for their organisation, there is no synergy between these units and the manufacturing and the sales unit in Campinas are completely separate from each other. (Neves 2006, interview)

DeLaval Brazil is a too weak player in the international, national or even regional area, to have an influence or lobbying power to the decision makers. It is not a member of any organisations, which would aim to influence the government trade policies, either. (Neves 2006, interview)

5.2.2 Product

The DeLaval factory in Campinas produces cooling tanks for milk. The cooling tank is made of two different kinds of stainless steel (SS): 304 and 430. SS 304 has a higher level of anti-corrosion and anti-bacteria qualities. This kind of steel is mostly used in food industry, and since it is more sophisticated it is also more expensive than SS 430. The cheaper SS is used in outside parts of the tank, which are not in direct contact with the milk. The price of SS 430 is about 60 % lower than SS 304. (Costa 2006, interview)

Despite the price difference, until the end of 2001 the whole tank was still made solely out of SS 304. A competitor of DeLaval, however, started using the cheaper material for the outer parts of the tank, thus being able to radically cut the price of the tank. In 2002 DeLaval made a cost decision and started producing the tanks with SS 430 on the outer level. The suggestion came from DeLaval Brazil, inspired by the actions of their local competitors. The suggestion was then taken to Groningen Netherlands, where the cooling tank management team approved

the decision. (Costa 2006, interview) The rest of the DeLaval production units soon followed this trend and now the more economic composition is used in all DeLaval factories in the world. (Codato Mendes 2006, interview)

There are several different models and sizes of the milk cooling tanks (appendix 8). DeLaval Brazil produces tanks between 300-8000 litres. Most popular are the open vertical ones (appendix 9), due to the price and the size. If there is any special request from the customer for a bigger tank which is not in a Brazilian production, it will be imported from Europe. Their main product however is the 1000 litres tank. Only 10 pieces of the biggest 8000 litres tanks are produced in a year of the total production of 2000 tanks per year. Compared, for example, to Poland the difference is huge. The Polish factory produces daily 4-6 pieces of 8000 litres milk cooling tank, which are mostly exported to North Europe. The size and capacity of the factory is different and also the market demand is different. (Costa 2006, interview)

The competitive advantage of DeLaval is the quality but also dealer networks and other relationships. DeLaval is the most expensive on the market and about 20-25 % more expensive than the next producer. However, depending on the competitor, the price difference can be much higher. For example the price of the 1000 litres cooling tank at DeLaval is R\$ 16000 (US\$ 7385)² when you can get the same size tank from a certain local competitor with as low as R\$ 5000 (US\$ 2308)². (Neves 2006, interview) Thus, quality is the cornerstone of the company and DeLaval's milk tanks are considered premium products in the market. All steps in the production aim to maximise the quality. The cooling tank is tested in each production phase and the results are reported and conserved. The quality control starts already at the purchase and DeLaval demands premium quality SS from its supplier. Therefore they require the SS to be transported within a protecting wooden frame. Their present service centre Amorim is the only possible supplier in Brazil at the moment, which agrees to deliver the SS in a way that DeLaval wants. (Acherman 2006a, interview)

The cooling factory is actively developing better solutions and product modifications to suit the local market demand. Their product, the cooling tank, is specialised to fit the Brazilian market demand and regulations. The same tanks with same special features, however, are then sold in all American markets. One specific feature in the Brazilian market is the demand for a lightning protection system, which was designed because of Brazil's climate situation. Brazil has the most thunderbolts in the world and for safety reasons there is a special regulation, which requires this protection system. This system is built-in on every tank regardless whether it is exported out of Brazil or sold locally. (Acherman 2006a, interview)

5.2.3 Market

The milk production is estimated to grow over 10 % in South America in 2003-2007. This is higher than the total milk production in the world, which estimated to increase 8 %, and significantly higher than, for example, in Western Europe (1 %) or North America (4 %). (DeLaval 2006b)

DeLaval has the biggest market share, 35 %, in Brazil compared to its competitors. The main competitors are Etscheid, Westfalia and Kepler Weber. Of these three, German Westfalia is the toughest competitor. It is a well known international company, which has 11 % of market

² In the currency convert GCI Financial Ltd. online service was used. See reference GCI Financial Ltd. 2006.

share in Brazil. They have made some mistakes in the Brazilian market, but they have a lot of potential to grow as well. The other two competitors are local companies. Etscheid competes mainly on price. Their prices are very low but so is the product quality. For this reason DeLaval does not really see them as a threat. The third company, Kepler Weber started to grow, but they made many mistakes in investments and the growth has now more or less stopped. Kepler Weber has also had problems with quality standards and especially the milk cooling time. (Acherman 2006a, interview)

The market in Brazil is quite different to the one in Europe, and the size of the farms is smaller. At the moment the average size of the farms is relatively small, and therefore there is no demand for the bigger tanks. In Brazil there are only 10 big producers, who produce more than 10 000 litres of milk a day, and only one milk producer with a tank size of 20 000 litres. However, the market in Brazil is changing and following the general trend across the world. The farm size is growing due to the concentration and economies of scale. DeLaval estimates that approximately in 4 years they will start producing the bigger tanks in Brazil as well. (Costa 2006, interview)

DeLaval sells mostly in Brazil but also exports to almost whole Latin America. They have also started to export to Canada (8 tanks) and USA (2 tanks). Some markets, especially Cuba, buy used tanks and then repair them for use. Colombia used to do the same but the market has developed since and now quality issues are more emphasised. (Codato Mendes 2006, interview) Argentina and Chile, on the contrary, have local suppliers and also due to the different market structure and cost issues, they import DeLaval tanks from the factory in Poland. (Neves 2006, interview)

The customers of DeLaval are not only individual farms but also other multinational companies. These relationships are considered extremely important. Quite often DeLaval sells milk cooling tanks via big multinational companies, which buy milk from local producers. For example Dales and Nestle sometimes demand their suppliers to use DeLaval tanks. Thus DeLaval sells straight to milk producers but also straight to multinational companies who use milk in their production, such as Nestle. In some cases the multinational company also acts as a financier. It buys the tank from DeLaval and then the local producers pay them back with milk. (Codato Mendes 2006, interview) These relationships can also come all the way from the conglomerate level and, for example, the relationship between Tetra Laval and Nestle is managed also globally. In addition the 'field people' meet regularly, always building the relationship. In order to make things happen, there needs to be a strong local relationship. (Neves 2006, interview)

The Brazilian market has one special characteristic compared to the rest of the Latin America. Brazilian government, particularly the Ministry of Development, Industry and Foreign Trade (MDIC), offers financing aid to small and medium sized enterprises to support investments. This government credit program is called FINAME and it is governed by the Brazilian Development Bank, BNDES. (BNDES 2006) The importance of this financing program is huge, since 90-95 % of the sales are made through it. (Acherman 2006b, interview) However, to be able to sell products through this program 60 % of the final price of the product must be generated in Brazil. This creates a commercial problem to the sales department in DeLaval because they cannot source freely. (Neves 2006, interview)

The financing aid program, and the barriers created by it, is one reason why the factory is located in Brazil. Another reason is the size of the market. The number of tanks sold in Brazil in a month is approximately the same amount that could be sold, for example, in Argentina in

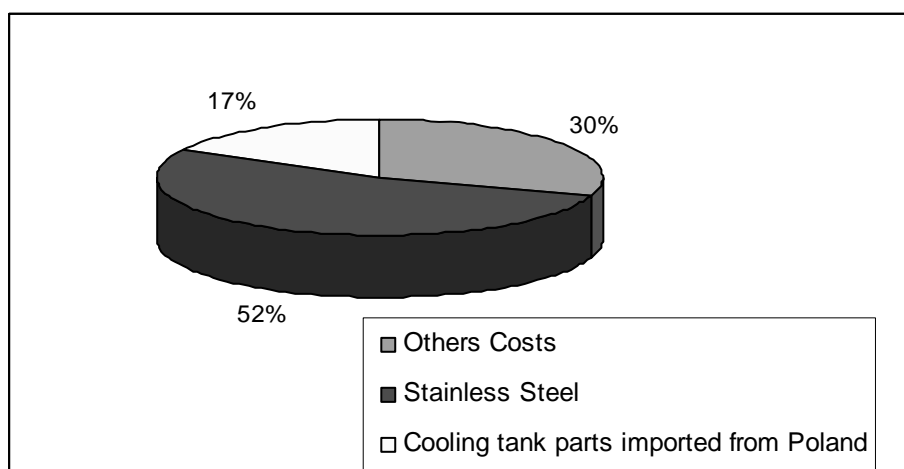
a year. In addition, the Brazilian market still holds a huge market potential. (Neves 2006, interview) Of all the milk consumed in Brazil 40-45 % is still completely unprocessed and this leaves a lot of room to grow in the national market. (Acherman 2006b, interview) In other words, there's no better place to put the factory in South America. The growth opportunities outside the national borders are quite limited at the moment, due to the cost issues. Also the protective environment is not expected to change in the near future. However, DeLaval has a strong faith in the future, that in the long run they will become competitive to sell to countries such as Argentina as well. (Neves 2006, interview)

5.2.4 Sourcing and the Price of the Product

In the case of DeLaval, sourcing of raw material and components is a complex issue, which has a huge impact on the price of the final product. The main problem is that, due to the costing, the cooling tank factory in Campinas is neither internationally nor regionally competitive. Considering the same cooling tank produced in Brazil or in Poland, it is cheaper to import the tank from Poland to, for example, Argentina than to buy it from Brazil. This of course creates a problem when the unit in Brazil wants to export and grow internationally.

The raw materials account for 70 % of the total costs of production (figure 19). The raw material used by DeLaval comes mainly from two different sources. The most elaborated parts come from the factory in Poland or the Netherlands, while the other parts come from different suppliers in Brazil, mainly from Acesita. When DeLaval buys SS from Acesita, it must buy it from the service centre of Acesita, Amorim. They cannot buy straight from Acesita due to several reasons. DeLaval does not have the capacity to cut the stainless steel themselves, to grind it or add the protecting PVC layer. These are the main tasks that the service centre Amorim takes care of. Acesita also offers merely bulk amounts of material. By sourcing directly from Acesita, DeLaval would have to buy 9 tons of any type of stainless steel at the time. DeLaval uses normally 4 different thicknesses of SS 304. An amount of 9 tons of the most commonly used one is not a problem, but when it comes to more rarely used ones, the amount of 9 tons would take several years to use, and during this time the storage would be a problem. (Acherman 2006a, interview)

Figure 19 Cost of production, DeLaval cooling tank



Source: Author's elaboration, based on DeLaval 2006a.

The prices of the components bought from Poland have stayed unchanged for a year. The price of the condensing unit, which comes from the US, is a problem. If the supplier decides to raise the price, there's nothing DeLaval can do about it. Also the price of the SS has been increasing. DeLaval has tried to control the rising costs and yet, instead of transferring the increased cost straight to the final customer DeLaval has decreased its own margin. Thus the price to the final customer has gone up only 4.5 % during the last year. (Acherman 2006a, interview)

The more sophisticated parts of the tanks explain approximately 17 % of the total costs. The factory is forced to buy these parts from Poland due to the overcapacity of the production in the new factory. Also the Brazilian factory does not have the technology to produce them all. Even though, they are able to buy the parts with the cost price added with 10 % marginal, they still need to pay the costs of importing such as the taxes and transportation. (Table 5) This makes these parts more expensive to DeLaval Brazil and increases their total costs compared to the Poland factory. (DeLaval 2006a)

Table 5 Main cooling tank parts imported

Part	Suppliers margin	Cost of taxes and transportation	Percentage of the final cost
Evaporator	10 %	12 % (no import tax)	9 %
Top Ring	10 %	26 %	3 %
Lid	10 %	26 %	5 %
Total			17 %

Source: Author's elaboration, based on DeLaval 2006a.

The main issue of the raw material sourcing is the price of the SS, since it accounts for 52 % of the total cost, more specifically SS 304 which accounts for the 43 % of the total cost of a cooling tank (table 6).

Table 6 Effect of the different SS on the final cost

Type of SS	Percentage of quantity use	Percentage of the final cost
430	50 %	9 %
304	50 %	43 %
Total	100 %	52 %

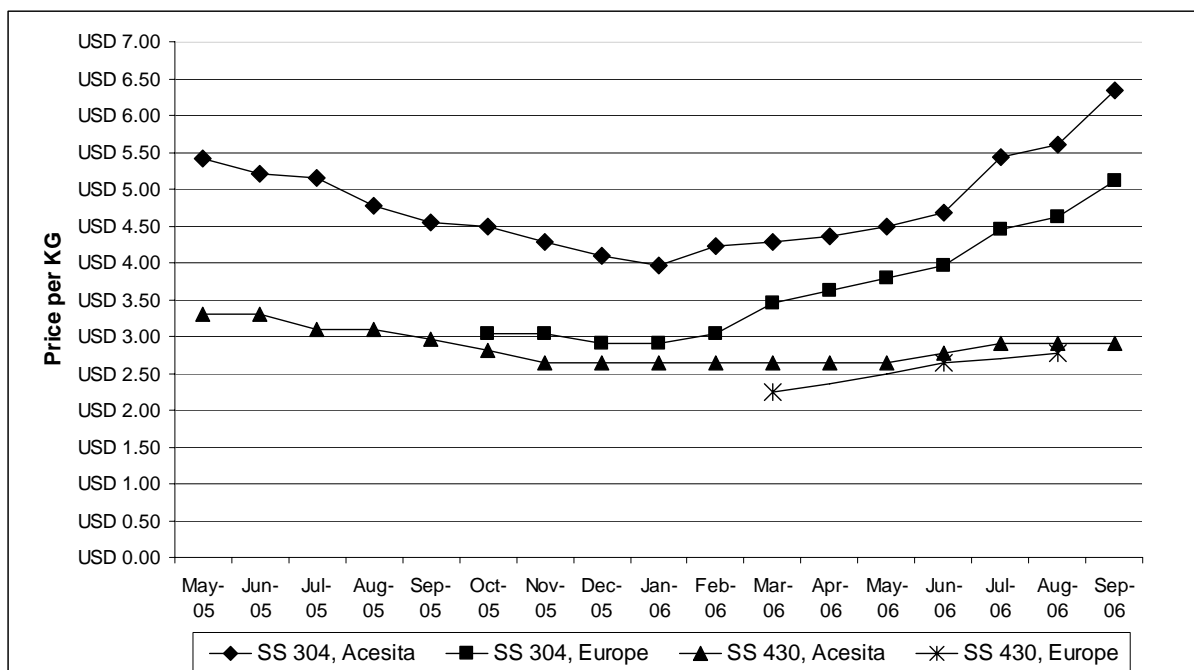
Source: Author's elaboration, based on DeLaval 2006a.

There are many concerns that DeLaval needs to consider when sourcing its components, from the price of the raw material to the commercial issues. The sourcing strategy is restricted by several issues. For example the financing program FINAME is hindering the sourcing possibilities and thus of the 240 tons of SS used in 2005 only 11 % was imported. (Acherman 2006b, interview) But restrictions are also created by the DeLaval headquarters. Not only are they forced to buy some components from the other factory in Poland, but they also need other possible suppliers to be quality certified by the headquarters. Because of this, changing to a new supplier would be a long process. In practice this means that when the factory is considering other suppliers, the choice comes down to already established suppliers of DeLaval International. (Schulz 2006, interview) This is not of course only a negative thing.

Using the same suppliers guarantees the quality and decreases the amount of problems, but it also limits the factory's independence of sourcing material.

However, the biggest restriction that DeLaval faces with its SS sourcing strategy is based on the segmentation of the market. The main problem is the price of the SS in Brazil (the national price of Acesita), which is on the average 29 % higher than the international price in Europe. (figure 20) The price difference has been explained with different actors involved in the industry and also with the different market structures in Brazil and abroad. (Cintra 2006, interview) The market, however, is highly protected allowing Acesita to charge higher prices. The situation was clearly illustrated when DeLaval imported SS from Argentina. The price was cheaper because Argentina bought it with the international price. However, interestingly the SS which DeLaval imported was actually originally exported to Argentina by Acesita. (Acherman 2006a, interview)

Figure 20 Price development of SS (304 and 430)



Source: Author's elaboration, based on DeLaval 2006a.

The import tax of SS is 14 %. The total import costs including taxes, transportation and so on constitute 26.5 % of the price. Due to the currency fluctuations, it is not profitable to import the SS in all circumstances. For example if the imported price is only 5 % lower than that of Acesita, it is not worth the currency risk. (Acherman 2006a, interview)

The import tax of 14 % on SS is not very high, but it should not encourage to underestimate the policy of the Brazilian government. The import taxes are tied to the tariff codes of the products and for example if a certain product is not produced in Brazil, the company does not have to pay the import tax. This is for example the case of the evaporator, which is not produced locally (table 5). Brazilian government is protecting the monopoly situation of Acesita not only with taxes and antidumping measures against some countries, but also with practical barriers. One of these instruments is the import license. In the case of SS, the import license needs to be obtained from the Department of Foreign Commerce (SECEX). (Schulz

2006, interview) SECEX is operating under MDIC (Schulz 2006, interview), which is the same government agency offering the credit program FINAME.

An import license to buy SS parts, even within Mercosur, has to be approved before the shipment. In theory the government can refuse to give the license but in practice this does not happen very often. More often the process is delayed and additional documents are demanded. So in a way, considering the protective actions of the government, the tariff is not seen as a main problem, but the bureaucracy is. DeLaval needs to know when they will receive the goods and if the process is delayed at the customs, it can have a big effect on the production. (Schulz 2006, interview)

Another situation that DeLaval is facing is the oligopoly of the service centres. The role of Amorim and other service centres will be discussed more in detail further on, but it's noteworthy in the context of the price to recognise that this actor adds approximately 15-18 % to the final price. (La Femina Netto et al. 2006, interview)

There are others factors which partially explain the higher costs in Brazil and these have a little to do with the sourcing strategy. (Table 7) Already the labour cost is almost 45 % higher in Brazil than in Poland. The factory in Poland is also technologically better equipped, which makes it more efficient and allows it to take better advantage of economy of scale. (Acherman 2006b, interview) The price gap between the international price and the national price, however, remains as the most interesting aspect in understanding the future possibilities of the cooling factory in Brazil.

Table 7 Other costs of production

Other Costs
Labour
Others Materials
Others Factory costs
30 %

Source: Author's elaboration, based on DeLaval 2006a.

Even with all these issues affecting, DeLaval is not actively looking for different suppliers. Normally when the price of the SS goes up, the company starts to investigate whether it is possible to buy it with any cheaper price from elsewhere. (Schulz 2006, interview) If it was not for the price issues, DeLaval would prefer to source its material from Brazil. Having a close connection to the supplier, both physically and culturally, creates fewer problems and monitoring the quality is easier. (Costa 2006, interview)

5.3 Acesita

5.3.1 Organisation

Acesita S.A. is the only producer of flat stainless steel in Latin America. It has a 90 % market share in Brazil. The factory is located in the municipality of Timóteo, Steel Valley region, in the state of Minas Gerais. It has a capacity of 900 000 tons steel per year of which 50-60 % is stainless steel. In addition they also produce silicon steel and carbon steel. Acesita has about

4000 workers at the moment and the constructed production area in Timóteo spans over 100 hectares. (Acesita 2006)

Acesita exports to 57 countries. This was boosted by the integration with the distribution network of Arcelor, one of the world's largest steelmaking groups. Arcelor has the headquarters in Luxembourg and it is Acesita's major shareholder with over 90 % of the voting capital. (IBS 2006) Internationally Acesita is a part of the Arcelor Mittal group, the biggest steel company in the world. Acesita exports 60 % of its production. 35 % of the exports are sold in the Americas, 20 % in Europe and the rest in Asia and Africa. (Cintra 2006, interview)

Acesita focuses on the American market. In this and the next year the company is seeking to gain more market share in Latin America. However, their overall target is to grow in the whole Americas, not only in the Mercosur or Latin America. After the Americas the target is to grow in Europe and then in Asia. They want to expand in this order because the group is already very strong in Europe and has a good established logistics, and also the price is better in Europe than in Asia. Even though Acesita belongs to the Arcelor Mittal group, they compete with the other units. They have not agreed on a partitioning of the market, but even though the units compete with each others, they are still integrated. (Cintra 2006, interview)

Acesita has a clear strategy and it is beginning to open service centres at strategic points in order to grow. They see that the Mercosur has facilitated their possibilities to grow in the area, likewise the location near customers. The rules and legislation are known and even customers prefer to have the supplier next door. Thus location is Acesita's main advantage. (Cintra 2006, interview)

Acesita invests a lot in new technology. The investments since the company's privatisation, in 1994-2004, have reached R\$ 1.03 billion (US\$ 461.6 millions)³, out of which US\$ 100 million were used in the modernisation and restructuring program of the Timóteo plant. (IBS 2006) The cold laminating machine needed for the production of SS and silicon steel is one of the most advanced in the world. Acesita is also currently spending great amount for the cleaning unit to make the production more environment friendly. This investment is done in the anticipation of future changes, which will make this kind of cleaning system compulsory. (Acesita 2006)

5.3.2 Pricing Policy

Acesita does not deny the gap between the national and the international price (figure 20), actually they even justify it. They have a different price internationally and nationally because of the market structure. Each market develops in a different way and has its strengths and threats, which influence the price. In order to sell SS to China, Acesita needs to have a price that can give them strength in the market. However, the Brazilian market is different and therefore they manage it differently. (Cintra 2006, interview)

In theory the pricing policy of Acesita is public. (La Femina Netto et al. 2006, interview) However, as in all the businesses, they grant discounts to their bigger clients (Acherman 2006a, interview) and these are not specified publicly. The price is divided into two parts. The first part is calculated based on the international cost and Acesita's cost of production and the

³ In the currency convert GCI Financial Ltd. online service was used. See reference GCI Financial Ltd. 2006.

second part is calculated based on the currency rates and the price of nickel and other components. The second half changes every month because these numbers are international and are derived from the market price of the international commodity. The first part of the price, on the contrary, is something Acesita can control. The price structure of the SS depends on the specific type of SS. For SS 316, for example, the second part is more important, while being negligible for SS 430. This is because the amount of nickel in SS 430 is practically nonexistent. In the price of SS 304 parts have equal importance. The composition of the first part is based on Acesita's costs and also on their forecasts on how the stainless steel market is going to develop (which they basically control). They make calculations on how the price in Brazil should be, in order to sell internationally. (Cintra 2006, interview)

The cost of SS production is cheaper in Brazil than in many other places due to the closeness of the different production phases. In other countries the product has to be shipped around while in Brazil the production can be done in line. Also energy is cheap in Brazil and the fundamental raw material is available on-site. However, Acesita does not have enough volume and thus economies of scale to be able to compete with the big producers in the world. For this reason Acesita secures the satisfactory level of profit with the national price and then sells the rest abroad. At the moment Acesita is making approximately US\$ 400 millions investment to double the production. This investment is one reason given for the protectionist measures. (La Femina Netto et al. 2006, interview)

5.3.3 Influencing Power

5.3.3.1 Relationship with the Government

Acesita claims to be very independent from the government and vice-versa. It might seem, especially when seen from another country's point of view, that Acesita and the government are very united and the relationship is tight. However, Acesita stated that this is not the case. Nevertheless the company has constructed the line of communication with the government and in order to defend its strategy and interest. 'Of course we have our ways of telling the government that we need some efforts from them to help us to grow etc.' (Cintra 2006, interview)

This influence is exemplified by the import efforts of the SS buyers. In Brazil there is an association of SS buyers which aims to begin importing SS from abroad. The association was established, in order to face the oligopoly situation in the market that was hindering their possibilities to source. When the group started to import SS from abroad, the situation became unpleasant to Acesita. Acesita asked the government for an intervention and the establishment of barriers for importing SS. The result was that the non-tariff barriers were increased and the only thing that remained easy to import, were the products that Acesita did not produce itself. João Assad (2006, interview) told that he got bored with the association of SS importers, arguing that it was a waste of time because of its small influence. However, the association still exists. They are still trying to make exportation smoother but they do not have the adequate resources to do lobbying in the government. (Assad 2006, interview)

Acesita, together with other steel producers, is a member of the Brazilian Steel Institute (IBS), a steel producer organisation. Even though their products are very different and some measures and rules are taken differently, they still act united. Everything that the government does to help the steel market and other steel companies in Brazil might help Acesita as well.

Also within the antidumping process of the SS Acesita's role is very important, because it is the only SS producer. (Cintra 2006, interview)

5.3.3.2 Antidumping

The antidumping barriers are very important to Acesita and they do see an advantage to have supportive contact with the government. (Cintra 2006, interview) The Brazilian government has initiated several antidumping duties against companies, for example, in Korea, Mexico, and Japan. Also there are some countries that do not face any antidumping duties such as India, Hong Kong and China. The products from these countries are beginning to enter the Brazilian market, especially tubes and bars of SS with a 30 % lower price than the one of local products, including all taxes. (La Femina Netto et al. 2006, interview)

Amorim, the service centre owned by Acesita, mentioned an example of how antidumping measures in Brazil were initiated. A foreign company made a strategic mistake when entering the Brazilian market. Instead of selling to the distributors (service centres), they sold straight to the small customers, thus making the life of the distributors and eventually Acesita more difficult. This happened at the time of recession in the steel industry and when there was overcapacity in the world production. The international price of SS was very low and this started making Acesita's business unviable. At this point Acesita initiated the antidumping process against several companies. One of these companies complained about the antidumping duties in Brazil and eventually won the case. (La Femina Netto et al. 2006, interview) This would suggest that the antidumping measures were not fully justified.

After 5 years of the initiation of the antidumping duties, the Brazilian government extended the antidumping duties with one more year. According to Amorim, in May 2007 the antidumping process will expire. Since already one extension was made, they do not believe that the government will review this procedure again. (La Femina Netto et al. 2006, interview)

When the antidumping duties are taken down and the aggressive companies from abroad can enter the market in Brazil, Acesita will have to change its commercial policy and lower their price. Concerning the justification of the antidumping practice, Amorim sees that Acesita is not doing anything wrong. Acesita can have higher prices in Brazil and lower prices abroad. There is no law against that, moreover, it's a common practice around the world, and for example the USA is doing the same thing. Amorim argues that exportation is surplus of the production that can and should be sold at any price possible. Amorim also believes that the antidumping measure taken by the government of Brazil were justified, mainly because the investment that Acesita has done. On the contrary, Amorim does not believe that the antidumping measures against Brazil are fair. They support the way of doing business in Brazil. (La Femina Netto et al. 2006, interview)

The antidumping duties are put to protect the national industry and Acesita. 'Of course these barriers are very important to us and we gain from it. That's very clear and we cannot say differently' (Cintra 2006, interview). Every country has its barriers and comparing national industries and policies worldwide, the situation is quite the same. The reasons are known and the arguments are the same but nevertheless, they are there to protect the industry. According to Acesita, at the moment they still have approximately 3 more years left of the protection created by the antidumping duties. Acesita naturally wishes that the antidumping measures

would not expire, but in the case they do, the consequences are unknown. There are no studies on how the market will behave in that case. (Cintra 2006, interview)

The antidumping measures taken internationally against Acesita are obviously not good for the company. They create a barrier for Acesita, just like the barriers in Brazil are not good for the other companies who want to import to Brazil. It is quite obvious that everyone wants to change this, but in the other country - not in the own. Acesita considers this as a part of the game and normal in every market. The US, for example, is a very closed market and the antidumping barriers are strong. Evidently every single company, that is not present in the US, wants to break these barriers. (Cintra 2006, interview)

5.4 Amorim

5.4.1 Organisation

Amorim is the official service centre and a wholly owned subsidiary of Acesita. Service centre acts as an intermediary between Acesita and smaller customers, which cannot buy material in bulk. It adds value to the material by cutting and adding the protective PVC layer. DeLaval buys most of its material through Amorim. (Costa 2006, interview)

Amorim is the biggest service centre in Brazil at the moment. It holds 30 % of the market and sells approximately 2000 tons of SS monthly. The second largest service centre is only about half of the size of Amorim. In general there are 5 other service centres in Brazil that can be compared with Amorim. They are smaller but have more or less the same equipments than Amorim. (La Femina Netto et al. 2006, interview) The other service centres in the market are also tied to Acesita but with commercial bonds. (Costa 2006, interview) They buy their SS mainly from Acesita.

Amorim only sells within Brazil and it mainly sources nationally as well, from Acesita. They import very little, and only products that Acesita cannot provide them. Exportation is impossible because they are forced to buy the SS with an internal price that is 25 % higher than the international price. In the internal market this doesn't matter because if somebody else wants to import from abroad they would also have to pay the import taxes and other costs. This is the reason why Acesita can keep selling with a higher price. (La Femina Netto et al. 2006, interview)

SS constructs 85 % of the cost of Amorim and the labour 5 %. Amorim does not have a public price list of the products, but the price is negotiated individually with each customer and kept confidential. An important part of Amorim's business is the credit provided to its customers, with an interest of 3.16 % for 45 days. This interest rate is defined by Acesita. Amorim considers the interest rate as an important part of their business. (La Femina Netto et al. 2006, interview)

The margin of the distributor before costs is between 15-18 %. After taxes Amorim claims to have only 1.5-2 % of profit margin. However, Amorim is able to buy the raw material from Acesita with roughly 1-4 % cheaper price than the other service centres. (La Femina Netto et al. 2006, interview) This supports Amorim's position as the biggest service centre. According to Acesita, there are different prices for the different distributors, but Amorim pays only 'a bit less' than the competitors. They argue that the price difference has nothing to do with the

ownership issues but is related with the pricing policy, and the pricing policy aims to keep the market competitive and avoid monopoly behaviour. (Acesita 2006)

5.4.2 Market Environment

From the Amorim's point of view, Brazil is behind the global trend in the globalisation process and not taking a full advantage of the possibilities, as countries like Argentina, China and India are doing. The policies in Brazil are not supporting the growth sufficiently and also the taxation level is too high. Amorim blames the politicians for the low GDP growth. (La Femina Netto et al. 2006, interview)

There is only 1 competitor with the technology comparable to Amorim's, which shows the oligopoly situation in the market. According to Amorim, it does not utilise the oligopoly status when negotiating the prices. They also state that, even though they do meet with the rest of the distributors, they do not discuss prices. However, an interesting comment was that according to Amorim, the 3 distributors in Argentina, who have oligopoly in their market, do talk about prices. (La Femina Netto et al. 2006, interview) Whereby the other actors in the network are of the opinion that the service centres have a strong oligopoly and they also misuse this position, as well as that the service centres split the market and do discuss the prices. (Costa 2006, interview)

Amorim was acquired by Acesita, because it was the strongest player in the service centre business and had a strategic location in the centre of the industrial zone of São Paulo. When an industry expert was asked about the possible oligopoly in the service centre market at the moment, the answer was 'if you say that I said so, I will deny' but in fact there are only two distributors who run the markets. These two are from Acesita and they obviously talk about prices. (Assad 2006, interview)

Acesita considers that, in addition to Amorim, there are about 9 service centres, which they call their service centres. These companies have the same relationship with Acesita as Amorim does, except that they are independent companies, not owned by Acesita. They are very important to Acesita and have helped to develop the market. Acesita does not give any preference to Amorim over the associated service centres. However, Acesita made it clear that Amorim will grow fast in the service centre market. The market of the distribution is extremely important and with an own service centre at the location, the presence of the company is much stronger to the clients. Acesita is also planning to set up service centres in other countries in Latin America and also change the name of Amorim for a stronger association to Acesita, such as Acesita Service Centre. One new service centre has already been established in Colombia. (La Femina Netto et al. 2006, interview)

Amorim says that there are no longer any subsidies from the government to the SS industry. However, when the industry wants to invest, they do speak first with the local government and later on with the federal government, in case there are any kind of help in interest rate or 'something' to support the company. When it comes to the policy issues, the distributors are lobbying the government. The main channel to do this is through Acesita. The distributors join together and speak to Acesita for help in the lobbying issues. Amorim also belongs to the IBS, which aims to lobby the government. (La Femina Netto et al. 2006, interview)

6 ANALYSIS

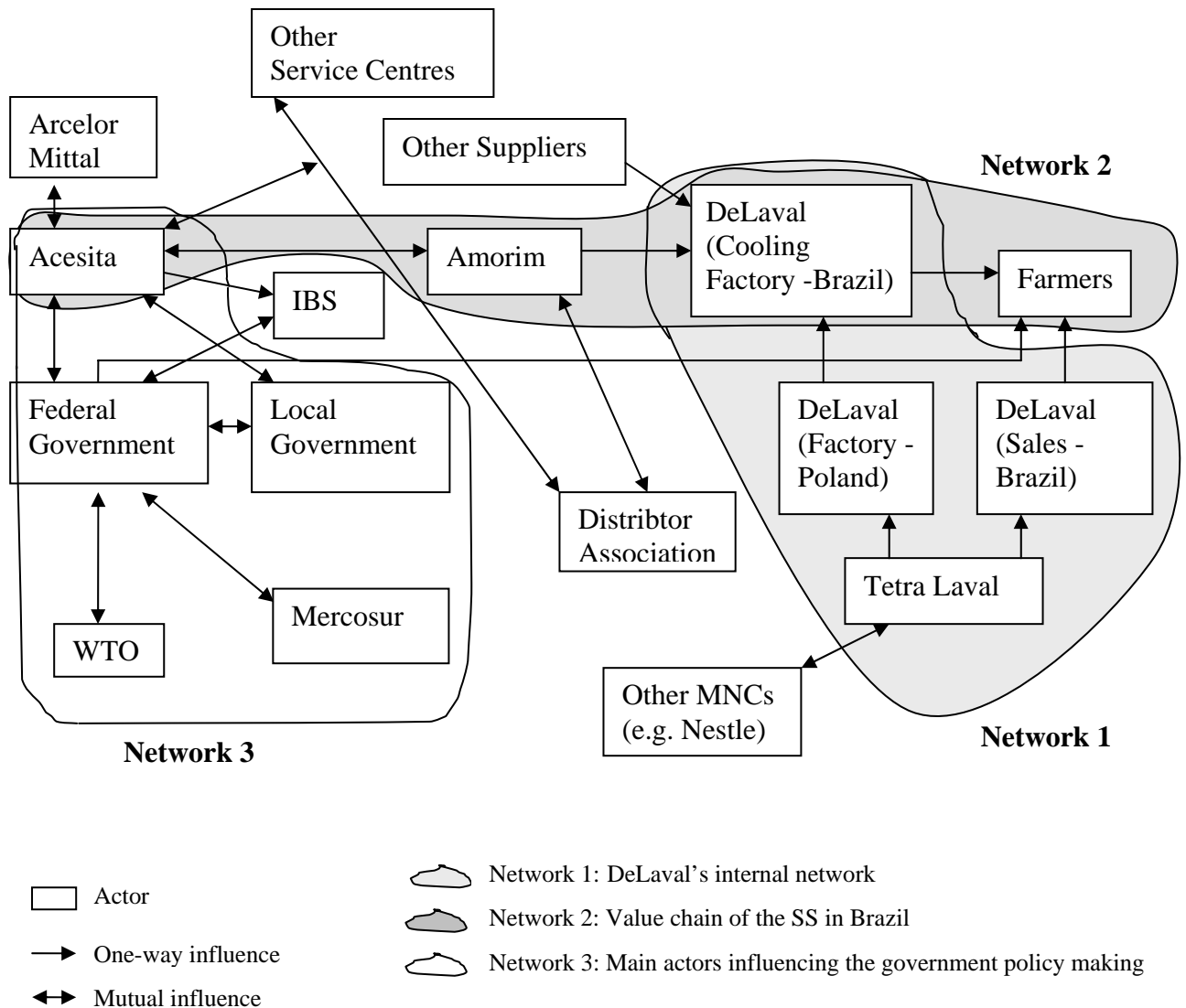
This chapter will combine the conceptual framework with the empirical findings. This chapter will discuss and analyse the different characteristics of the trade environment, and how these influence DeLaval's possibilities to operate and source raw material within the SS industry in Brazil. It will explain how the network functions on different levels starting from the company level to a more international level. This chapter discusses DeLaval's internal network, the value chain of the SS in Brazil, and the network of the main actors influencing the government policy making. The chapter also describes how the protectionism appears within these networks.

6.1 Networks

6.1.1 Actors in the Network

Analysing networks is a complex task, because of each actor can be understood separately and also as a part of several other networks. For example DeLaval has their own internal network, but they are also a part of the surrounding network, which includes all the actors in their business network. In order to simplify the analysis, different levels of networks will be discussed separately. These boundaries of networks (figure 21) have thus been created artificially and they are not all-inclusive. They are created to clarify the complexity, starting from the company level to a more international level. The first network (lightly shaded) describes the internal network of DeLaval. The second network (dark shaded) concentrates on the value chain of the SS in Brazil. The third one (non-shaded) describes the network of the main actors influencing the government policy making. The actors, which are left outside from these boundaries are not considered as the main actors. Their influence is acknowledged, but not considered as the most essential with regards to the purpose of the study.

Figure 21 Different actor networks



Source: Author's elaboration.

6.1.2 DeLaval's Internal Network

DeLaval cooling factory is a part of the internal network of DeLaval International. From DeLaval Brazil's point of view this relationship is mainly an involuntary relationship. Most of the decisions, rules and standards are given from the headquarters level. This relationship increases bureaucracy and slows down their local decision making process. However, they do also gain from the relationship. DeLaval International provides them financial security, technical support, strong brand and all the possible gains from their external network.

DeLaval Brazil has a problem with its internal networking. This is mainly because of the given organisation structure and because of this, the relationship between the sales department and the manufacturing unit is nonexistent. The company structure creates no synergy either in the market or in the region. An example of this problem is the backyard of the DeLaval Brazil. They have a big deposit of returned cooling tanks, brought back because of unpaid

bills or other issues. According to the factory, these are problems of the sales department. If there was synergy, the factory could get involved in order to reduce the losses and, for example, re-use the old tanks to build new ones. This would of course reduce the costs of the DeLaval Brazil as a whole.

However, the organisation structure is understandable because the cooling tanks are only one piece of the whole range of products that DeLaval Brazil sells. Analysing this, more synergy could be created by building a positive relationship between the sales department and the manufacturing unit. The initiative for this would have to come from the headquarters level.

When talking about the internal network of DeLaval it is also important to understand the relationship between the other cooling tank manufacturing units, especially the one in Poland. There seems to be some kind of agreement to produce different tanks, in order to avoid competition with each others in the same market. DeLaval cooling factory in Brazil produces small tanks, while the factory in Poland produces the big ones. In case that a big tank is needed in Brazil it will be imported from Poland. However, the factory in Brazil is forced to buy some parts from the other unit, and since the factory in Brazil is responsible to Poland, it creates an unfair situation. The cooling tank units' management being located in Poland creates paternalism towards the local factory. Since the factory in Brazil is clearly planning to begin producing bigger tanks in the future, the power relation might become even more crucial. This would create more competition and could eventually turn the relationship negative.

DeLaval is a part of Tetra Laval group. Together with Sidel and TetraPak, they are able to create a unique line of products and services. They create synergy through their common network and are able to create customer relationships on a completely different level, as already demonstrated by the close connection with another multinational company, Nestle. Because the group operating in the same value chain of milk production, they gain advantage of each others customer relationships and have a significantly greater negotiating power.

6.1.3 Value Chain of the SS in Brazil

Sourcing is a problem that is very current for DeLaval cooling factory. It increases the costs and eventually the cost for the customers. To better understand the network affecting DeLaval, it is important to look at the main actors in the raw material sourcing. This would be the SS supplier network, Amorim and Acesita.

The SS industry has been characterised to be highly influenced by external factors and SS is considered as an international commodity. Generally commodities are influenced by natural resources in the world, the universal production, demand and growth of international economy, speculations on the market, and other big actors such as multinational corporations. For example the growth of China has been described as one important reason for the increased demand of SS. This has caused the international price to increase, along with the fact that raw material is always scarce resource. Even though Brazil has great natural resources, Acesita is also required to source some material from abroad, such as nickel. There has been lot of speculations about the future international trade of nickel and whether the newly found mines in Africa will be harvested or not. This can cause the price to go down or as in more likely scenario, the world nickel producers will hold back for opening the mines until other nickel resources have been consumed in the world, in order to keep control of the price. This illustrates the dependency of Acesita on the external actors. They are a part of a

bigger network. However, the changes in this environment, will affect all the players in the international SS industry. Thus, if the international price goes up, all the actors in the industry will suffer the same effect. The problem of this research is not about the international price of the SS, but the difference to the national price in Brazil. The international SS price changes cannot be seen as the main reason for the price *gap* between the international and national price of SS, which DeLaval needs to pay, and therefore it will not be considered further.

National price of the SS in Brazil is significantly higher than the international price. This makes the market strategic to Acesita. They have strengthened the network to keep control of the prices. For example by acquiring the biggest player in the service centre market, Amorim, Acesita was able to limit the possibilities of competing service centres. In theory, service centres are free to buy their material from anywhere and also to import it. However, they are all tied to Acesita with either ownership structure of commercial bonds. And since Amorim holds the biggest market share, there is not too much room for errors made by the other service centres.

Considering a hypothetical situation, where an independent service centre would begin to import its entire SS from abroad and sell it cheaper in the home market, gives a good impression of the situation. The scenario could be possible, since even with the higher prices and additional costs of taxes and transportation, the price has been lower from the international market. It would probably not take long until Acesita would take actions. They have a close communication with the government, and this could lead to changes in the import policies. Moreover Acesita could strengthen their market power through Amorim, and negotiate new agreements with the essential customers. Because of Acesita's position in the market, it would not take long to drive the independent service centre into difficulties. If the importing of the SS would become unprofitable, for example, due to the changes in the trade policies, the service centre would be forced to buy its material from Acesita, in order to maintain a steady supply to its customers. It would be interesting see what kind of a business contract Acesita and the service centre would negotiate behind the closed doors. Probably it would not take long until the independent service centre would either be out of business or back in the 'loyal group' of service centres.

The profit margin of Amorim is extremely low, even a bank deposit would easily give the same percentage. This is probably a strategic decision in order to keep the highest market share and growth. Not only is Amorim able to buy the SS cheaper than the competitors, because it's owned by Acesita, rather it can operate practically without profit. Operating with low profit also makes the actions of Amorim to seem less unfair. All their competitors, however, are trying to make business with a normal profit margin. Therefore it seems that the strategy of Acesita is to strengthen the network through the service centres within the Brazilian market, and avoid open competition with possible importers. Acesita is opening own service centres in Brazil and also abroad. This will expand their network and it seems that Acesita wants to have a more direct relationship with its customers. This strategy could eventually give them an equally strong monopoly market position also in the rest of Latin America, where the importation of international SS is not obstructed as in Brazil.

Every time the price of the SS goes up, DeLaval begins to search for alternative suppliers. As already discussed earlier, this is somewhat constrained by the internal network and the supplier standards of DeLaval International, but also by the social network with the current suppliers. The way of doing business in Brazil highlights personal relationships. They appreciate that the supplier knows them by the first name and is physically close in case of a need. The same cultural background and values create security and is considered extremely

valuable. Despite all this, if the price took off, they would be ready to consider other options, even China. With this perspective, DeLaval has an involuntary relationship with Acesita and Amorim. At the moment they have no better options for sourcing and they are forced to pay the set price. This is also linked with the protectionism at the market, which will be discussed further on.

So far the price of the cooling tanks has not risen significantly. Instead of transferring all the increased costs to the customer, DeLaval has decreased its profit margin. This situation might not stay stable forever. If the cost increases too much, it will eventually be transferred to the customer, i.e. the farmers. However, DeLaval operates in the high end of the market. Their main competitive advantage is not price and they are not even aiming for that. They sell brand with the best quality in the market. With this strategy the customer relationships are extremely important. DeLaval also recognises this and they are actively working on improving their customer relationships. This also highlights the importance of the Tetra Laval network. DeLaval cooling factory in Brazil enjoys the existing relationships of the Tetra Laval group and it gives them easier access to other multinational companies in Brazil.

6.1.4 Main Actors Influencing the Government Policy Making

Normally, during the privatisation of a company, the government withdraws from the influencing role, but as is obvious, this has not been the case for the SS industry in Brazil. Not only has the government set barriers to protect the industry, it has been allowing company actions that can be questioned. There are several forces in the international economy that put pressure onto Brazil to liberalise the trade. Trade liberalisation is also the official opinion of the Brazilian trade policy. Brazil is a leading country in the Latin America promoting free trade and also the founding member of the free trade area, Mercosur. They have joined this network voluntarily and signed the contracts aiming to open the trade. However, when considering the SS industry, there seems to be more talk than actions. For this reason it is interesting to examine the linkage between the Brazilian government and Acesita.

Acesita is not an inactive party in the relationship with the Brazilian government. Its business activities are interlinked with political activities. A trade liberalisation of the economy would remove the trade barriers, which have made Acesita competitive in the market. To maintain this competitive advantage in Brazil, Acesita must act politically, in order to convince the federal government that these barriers are necessary for the common good.

The steel industry brings a lot of income to the country and has a positive influence on the balance of payments. The importance of the steel industry especially in certain regions is striking. The state of Minas Gerais is a good example containing the city of Timóteo, with the factory of Acesita and in the neighbouring city, Ipatinga, the factory of Usiminas. The whole city of Timóteo practically lives of the factory. When the company was privatised and the labour force was cut down from 12 000 to 4000, it caused a shock in the economy of the area. Only now, ten years after the privatisation, the economy has been able to fix itself. However, still most of these new industries in the area work with stainless steel products. So in a way they still get their income from the same material, just not directly from Acesita. When visiting the city of Timóteo it is easier to understand the protectionism of the industry. Everybody admits that without the steel industry in the area, the economy of the cities would practically die. Acesita is also giving back to the community. They have for example the cultural centre of the Acesita foundation and a huge nature reserve just outside the town. The

role of Acesita in the community can be seen both socially responsible and politically decisive. It is not hard to imagine the strong influence of Acesita on the local government.

Acesita and the other steel producers belong to the IBS, which has an office in the capital Brasilia. One of the main functions of the organisation is to lobby the federal government in favour of the industry. This is just one of the ways that the company goes to make their voice heard. Due to the sensitivity of the issue, these practices are not public information. However, discussing with several actors from the network, it became obvious that Acesita has its ways of telling the government that they need some efforts from them.

In the actor network affecting DeLaval, Acesita has the closest relationship with the government. They act by themselves and also through IBS and local government. Amorim has obviously less effect on the government than Acesita itself. Amorim is a part of Acesita but it also belongs to a business association, which aims to support the interest of the distributors. In this association it has at least a theoretically different interest than Acesita. However, Amorim also cooperates with Acesita and IBS or local government in order to lobby the federal government. Important in this network is to understand the relationship between DeLaval and the government, which is non-existent. DeLaval does not lobby the local or the federal government in any way. They also do not belong to any association that would defend its interest. The reasons for the lack of effort can be various. First of all, lobbying is not cheap and DeLaval as a small local actor does not have the resources to do so. However, this does not explain why they don't belong to any association. There is a general perception of corruption in the country, especially towards the government institutions. This creates an illusion that influencing is impossible, at least without a lot of money and power.

Even though there is a general view that lobbying is bad and corrupted, in theory, it just emphasises the democracy. In democracy everybody has the right to state an opinion and support it, lobbying is just a way of doing this. Problems arise when some of the participants do not have the equal possibilities to express their point of view. Smaller actors, such as DeLaval, are in this situation mainly due to two reasons. First of all, they do not want to take part in this process. In the case of LaserJob, for example, João Assad stated that the participation in the association was a waste of time because of the corrupted system, which didn't allow them to really influence and thus all they could do was to talk about the problem among themselves. Another reason is the institutional obstruct, which allows the biggest players to be the loudest, even though the small and middle sized companies create 43 % of the total employment and 20 % of the total industrial production. It would be the obligation of the government to create these institutions which would help the SMEs to be heard by the decision makers. This would create a healthy democracy and a fair business environment. At the moment this institutional network is obviously missing in Brazil. However, it needs to be remembered that the companies first need to have the will to influence. If they don't believe in the system, they will not participate. Another issue then is, whether the government really wants to hear these opinions, or not.

6.2 Protectionism

There are many views on the government interventions within the business system. However, trade policies are actively used to create a desired trade environment and to guide the business actions. Multilateral and regional agreements as well as the productive actors and the macroeconomic policy, influence the decision making process of the trade policies in Brazil. At the international arena there is a widely accepted consensus that the free trade is good for

the economy as a whole. Countries have agreed to limit their sovereignty in this matter and created free trade agreements with other members. When looking at the case of Brazil, the most important ones are the WTO and the Mercosur. This is an attempt to bring politics from the country level to more international level, and to create common rules for trade. However, at the moment these agreements give too much political power to the individual governments to make exceptions in their foreign trade policies. A good example in Brazil and Mercosur is the steel industry, which has been a government goal since its tight relation to the biggest economy engine, the car industry.

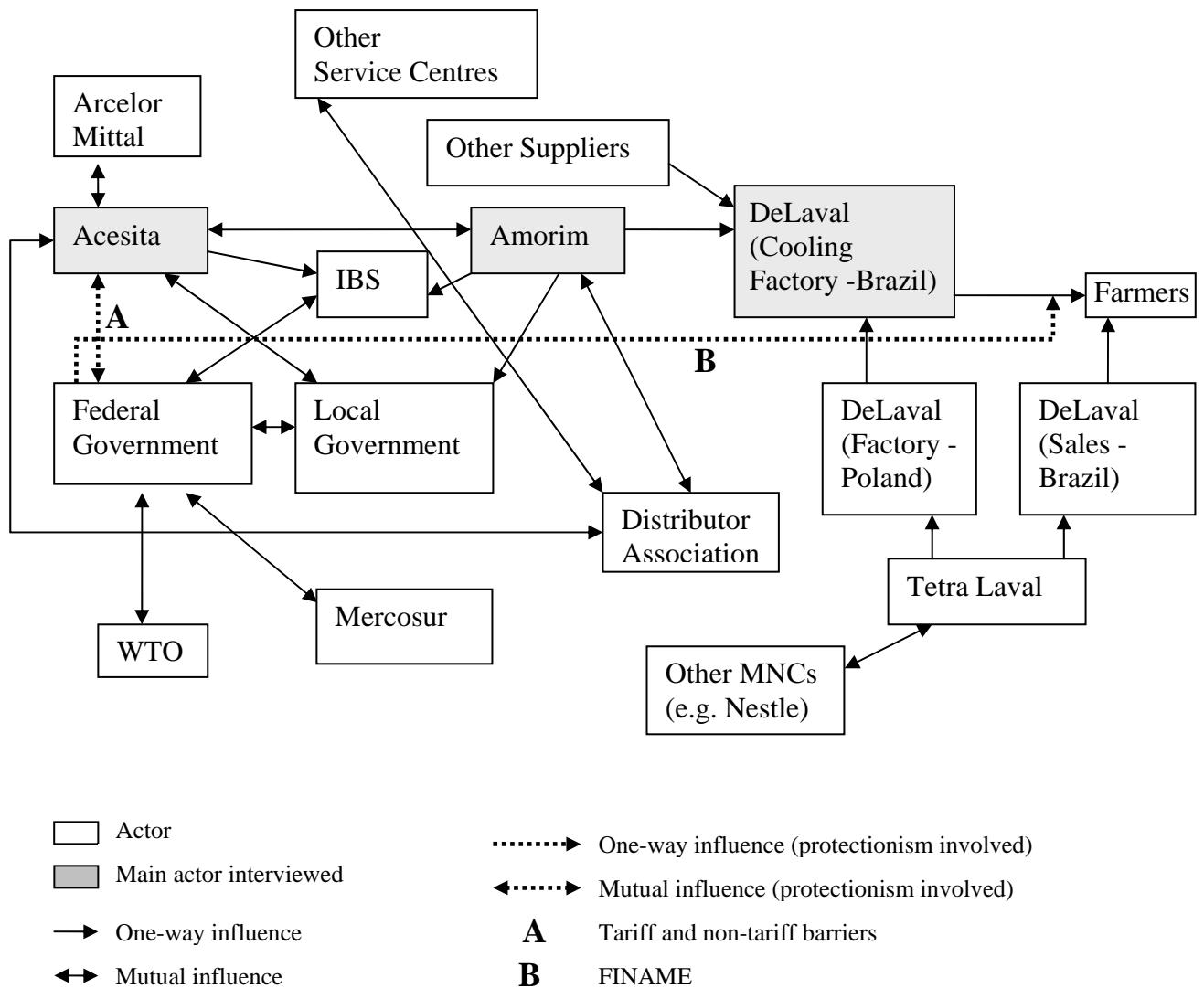
The government goals and thus trade policies are tightly related to the macroeconomic conditions and it makes them dynamic. This is illustrated by the changes that took place in the past. The historical developments of the trade policies are discussed more closely in the chapters 3.5 and 4.3. Some indicators, such as the exchange rate (figure 11), have an especially great importance to the trade policies. The exchange rate determines the cost of production in a certain country in comparison to the international level. For example, if the Brazilian real is stronger in comparison with the international currency, such as the US dollar or euro, the cost of production in Brazil is higher. The value of the currency can be affected by the worldwide speculations and the amount of international currency entering into the country.

At the moment the Brazilian industry is suffering because of the strong currency. Since January 2003 the exchange rate has gone from 3.9 real per dollar to 2.2 real per dollar today (see figure 11). This is mainly explained by the risen price of raw material, where Brazil is an important producer. Consequently a large amount of foreign currency is entering into the Brazilian economy and affecting the exchange rate. This has a strong impact on the exporters and on the local companies, which compete with the foreign products. Their cost of production has risen 43 % compared to the international one.

Historically, when the Brazilian manufacturers faced these kinds of competitive problems, the government often took measures to secure the internal market for the companies operating in Brazil by implementing protectionist measures. However, the international situation is different now than 10 years ago. Because of its international commitments and agreements Brazil is more restricted to implement measures that only support the national interest. Nevertheless, these regional and multilateral agreements leave plenty of room for national exceptions and thus it cannot be said with a certainty that more protectionist measures won't be implemented in the future.

Today the protectionism affects DeLaval cooling factory in two different phases, as can be seen from the figure 22. These are presented as influence arrows A and B. What directly affects price of the SS for DeLaval are the import tariff and the antidumping measures imposed by the government. These are clearly protectionism and are described by the arrow A. Also import licenses and the overall policy towards the actions of Acesita belong to this group. Arrow B illustrates the government credit program FINAME, which can be seen as a type of subsidy protecting DeLaval from foreign manufacturers.

Figure 22 Protectionism in the actor network



Source: Author's elaboration.

The protectionism of arrow A is the one that makes the price gap between the national and international SS possible. The import tax of 14 % is not very high but it has a straight effect on the importation. The import tax and the cost of transportation are nearly equal to the price gap. This is also what Acesita can charge more in the national market. If the import tax would go down, Acesita would also be forced to decrease its price. In a way it is understandable that Acesita charges the highest price possible, but because of their monopoly situation and obvious impact on the government, they are misusing their position.

The price gap has a direct effect on the competitiveness of DeLaval and also other SS manufacturing companies. This effect is partially compensated by FINAME. Because of the local content demand, it is impossible for the foreign manufacturers to import the ready tank. The government is protecting both Acesita and DeLaval. Acesita is able to charge higher prices, but the national market of DeLaval is also protected from foreign competition. However, the local content demand also limits DeLaval's possibilities to source the material from abroad, which again secures the sales of Acesita.

In addition, the antidumping duties and the non-tariff barriers make importing raw material more difficult. Bureaucracy and the import licences keep the companies from importing. This effect is even stronger on smaller companies who do not have sufficient resources to deal with the bureaucracy.

All these protectionist measures started for a reason and the initiation can be explained by the phases in the industry and economy. During a time before the devaluation, the Brazilian currency was very high and the SS industry was going through a recession period. These two factors together put Acesita in a very difficult situation. The international competitors with overcapacity and possibility for lower prices started to enter to the Brazilian market with very aggressive strategies. Because of the currency situation in Brazil, Acesita had no way to compete. In order to 'save' Acesita, the Brazilian government initiated antidumping measures against these companies. Now the situation has changed. After the devaluation and many investments Acesita gained competitiveness. The industry is booming with growing demand and high price of SS. However, the protectionist measures have been maintained and there seems to be very little will to change the situation.

Antidumping measures are tricky to judge. Difference in the national price and international price, has traditionally been considered as dumping. Following that definition also Acesita itself would be guilty of dumping. However, different market structures are used to justify the price gap. The main reason for charging a higher national price of SS is that Acesita *can* do it. The situation in the SS industry in Brazil is not illegal, but it can be seen having an unfair influence on other smaller actors, which are forced to pay the set price.

Several times during the interviews, accusations were heard: 'The government just keeps its eyes closed and allows Acesita to do as it wishes.' It is justified to believe that this is at least partially true. But the general attitude, of blaming government for everything that is wrong in the country, cannot be disregarded. However, the government has not been completely blind to the situation. By offering the credit program to support the SMEs in investments and by tying credit to the country of origin rule, they have created a very safe internal market for companies such as DeLaval. Since everything in Brazil is practically purchased with credit this program has a huge effect. It is maintained and supported by the extremely high interest rate in the country.

The protectionist measures seem to have delicate equilibrium. It seems that the ones getting harmed most at the moment are the milk consumers, who will eventually pay the price difference. The ethics of this can of course be questioned, but the harm is actually affecting a wider arena. In a modern world no country or company can be seen as an independent unit. Everything is connected also on the international level. In order to grow, companies must look beyond their national borders. At the moment the Brazilian government is hindering the growth opportunities of the SS manufacturing companies by limiting their export possibilities. They are not able to compete in the export market with their full potential because of the protectionist measures. This strategy in Brazil is not very long-sighted and can have several consequences in the future.

As has been mentioned earlier, Brazil is a very active member in the multilateral and regional organisations aiming for free trade. Free trade is a tricky issue and several exceptions in the international agreements still allow the countries to take measures to protect their own interest. Especially in the Mercosur, different macroeconomic policies have encouraged the countries to use these measures. However, the official political opinion of Brazil is pro free trade. Therefore, unless the country changes its trade policy orientation, it can be anticipated

that in the future Brazil will have free trade. If this happens successfully, Brazil will have to take down these protectionist measures.

Truly integrating the market in Brazil would have different impact on different actors in the network. Acesita has been investing to improve its competitiveness, and they have managed it well. They would be forced to decrease the gap between the national and international SS price to the level of bare transportation costs. This would of course affect the profit since they still sell 40 % of the production in the national market. It also probably would lead to emphasise the service centre strategy. In the case of DeLaval these consequences are more unclear. If the rule of the origin in FINAME stays intact and the SS importing became free, it would enhance DeLaval's possibilities to source cheaper raw material within the limit of rule of origin. This would give them clear cost benefits. If the opposite would happen, it would mean extremely difficult times for the cooling factory in Brazil. The competition would increase radically and there would be no bounding reason to keep the factory in Brazil. Since the cost of production is higher than in many other countries this might initiate the relocation of the unit. However, it needs to be remembered that DeLaval is in a better situation than many other small actors in Brazil, since it's a part of a multinational company. They have access to better financing base, which might be essential in a case of abolishment of FINAME and the rule of origin. Also since their competitive advantage is not built on price, they have more room for adjustments when it comes to the costs.

In order to be prepared for the possible changes, DeLaval needs to keep investing to improve their productivity and actively aim for lowering the costs. They also must maintain the high brand and strengthen their networks. It seems crucial that they take action to influence their environment and change the reactive strategy to proactive. Uniting with other manufacturers could be an important step. They must become more active and follow the changes and not be lulled into a false sense of security.

7 CONCLUSIONS

This chapter will present the conclusions of the thesis. In order to fulfil the purpose of the study, this part refers back to the research questions presented in the chapter 1.3. In the end of the chapter, recommendations will be given considering the DeLaval's point of view. Also possible future research topics will be suggested.

7.1 Research Question 1

What are the main characteristics of the trade environment in the stainless steel industry in Brazil and how do the different actors influence this environment?

The trade environment in Brazil is based on a complex network where different actors intend to modify the environment to fulfil their own needs. The power to influence differs greatly between different actors and because of this, some actors have a stronger role in the network than others. This is very clear in the SS industry, which is affected by monopoly and oligopoly players. The power distribution is clearly a win-lose situation. When one actor has a bigger influencing power, this leaves fewer options for the others.

The principal actors have been presented in the actor network affecting DeLaval (figure 19). The strongest actor in this industry is Acesita, which is the only SS producer in Brazil. Because of its history, Acesita has a strong linkage with the government and they can be seen as partners. Acesita has a strategic importance to the government. Before the privatisation, the government spent an important amount of money on the modernisation, ensuring that the company would continue to grow. Acesita also has an important role in the local economy through employment and in the national economy through tax income and by supporting the balance of payments.

The government has provided Acesita the possibility to operate as a monopoly, in the beginning by directly forbidding the importation and competition, and currently by allowing Acesita to reinforce its monopoly position through vertical integration. This has increased Acesita's negotiating power in the network and decreased the power of the other members. In theory, the service centres have an oligopoly in their market and the possibility to import SS. They have a big impact on the smaller members in the network, such as DeLaval. The service centres have even been considered to misuse the oligopoly situation by discussing the prices. They also have an association lobbying their interest towards Acesita and the government. However, because of the vertical integration and the service centre strategy of Acesita, their negotiating power at the moment is an illusion.

The relationship between the different actors is mainly created behind closed doors and the importance of informal relationships is overwhelming. This is typical to the business culture of Brazil. However, the lack of transparency stimulates the circle of mistrust. Therefore, the perception of corruption is strong and hard to change. The lack of trust in the institutions influences the willingness of the actors to participate and endangers the democracy of the society.

Certain mistrust can also be noticed on the international level. States do not fully trust each others when it comes to the liberalisation of trade. This is shown as a difficulty of settling

international and even regional trade agreements, despite the widely accepted consensus that the free trade is for the common good. Especially in the case of the SS industry, there seems to be a strong interest of the national government to protect the industry. The government has taken many actions in order to protect the SS industry but also to offer special advantage to the local manufacturing companies. The most important one is the credit program FINAME, which is tied to a local content demand. This protects the local manufacturers from foreign competition and minimises the effect of the protectionism of the raw materials, when a company is operating in the national market. The protectionist measures are justified by the protectionist actions taken elsewhere in the world. There seems to be a vision that since everybody is doing it, it is acceptable and even necessary. This attitude represents also the failure of the international institutions and agreements to solve the problem and to break the vicious circle.

The Brazilian government has set antidumping duties against several other SS producers around the world. In addition to the import tax, importing companies are required to apply import licenses before shipping, which increases costs and slows down the process with bureaucracy. During the time of recession, these actions were taken to save the internationally uncompetitive SS industry in Brazil, but the actions are not as justified any longer. The strong ties with the government have allowed one actor to emphasise its interest at the expense of other actors. The import barriers created by the government and the fact that they are allowing the strongest actor to use obvious monopoly actions, have created the situation where Acesita can set the national price of the SS to a higher level than the international price. They are charging approximately 29 % higher price in the case of SS 304. This clearly equals to the transportation costs and the import tax combined, added with the possible currency risk. This creates a very comfortable situation to Acesita, where it can control 90 % of the national SS market.

It seems that, in the current segmented market, Acesita has no intention of decreasing the price gap between the national and the international price. This has been the tendency so far, as can be seen from figure 20. The local price has been following the development of the international price. Therefore in the internal market, Acesita is making more money.

When it comes to the ethics of Acesita's business behaviour, it is clear that there are many doubts. Companies all over aim to maximise their profit, and it is not seen as immoral behaviour. But in the case of SS industry in Brazil the problem is more complicated. The biggest player is obviously controlling the market, and also misusing their monopoly situation. Acesita does not only control the SS production but it has also acquired the strongest position in the service centre market. This could possibly allow them to keep control of the market even if the import barriers would be taken down completely.

Reasons, for the government to allow Acesita to continue its actions, can vary. There is an obvious connection to the history, when Acesita was not yet privatised. Since Acesita is earning more money, they are also paying more taxes. In addition the importance of the network and the influencing power of the actors have a part in the process. Acesita has its ways of telling to the government if they need something, but since the small manufacturing companies have no influencing power in the network, their interest is not a priority. However, they do have a great importance to the employment of Brazil and thus this might have a more negative effect to Brazilian economy in the future.

7.2 Research Question 2

How does the protected trade environment influence DeLaval's possibilities to operate and source its raw material within the stainless steel industry in Brazil?

The protected trade environment has several effects on a company using SS as a raw material. The influencing power of different actors varies enormously, and companies such as DeLaval, have practically no influencing power on government or other big actors. Many of the relationships in this trade environment are thus involuntary for DeLaval. If they want to have location advantage and operate in Brazil they need to participate in this network. A way to have some influence would be to unite with other actors with similar interest. However, because of the lack of institutional infrastructure, mistrust in public organisations, and the perception of corruption they are not united with other manufacturers, and alone they do not have sufficient resources to influence. Thus, they have no way of promoting their interest and are rather forced to operate in the pre-determined trade environment.

The protected monopoly power of one major actor, Acesita, has made the trade environment less favourable for SS manufacturing companies. Since the international price of SS has been increasing and the national price has followed the same trend in percentage, DeLaval and other SS manufacturers in Brazil are paying a higher amount in monetary terms. DeLaval has been losing its competitiveness mainly due to the rising raw material costs. This has not been so devastating in the national market, because all the competitors are suffering the same effect. However, DeLaval has already the highest price in the market. On the one hand this is a good thing. Because DeLaval does not compete with price, they have more room to adjust the rising prices of raw material. They have also been able to cut the profit margin in order to avoid raising the price for the customers too much. On the other hand, they cannot keep reducing their profit endlessly. Also the price for the customers cannot be raised without consequences. It might happen that on a certain level the brand and quality value will not be worth the high price in the customer's perspective and they will change to a cheaper option.

Generally DeLaval is doing well in comparison to its competitors. Because of the brand value of DeLaval, their customers are not as price sensitive as the competitor's. However, because of its internal network, DeLaval has more challenges to overcome. It is obliged to buy some parts from abroad and to import them to a protected market, thus paying a price, which is higher than the price of domestically sourced parts. Of course it cannot be left unmentioned that belonging to a big multinational corporation has brought DeLaval important resources, technical support, brand value, and customer contacts.

In Brazil DeLaval does not have to worry about the external competition because their home market is protected by the government financing program FINAME. Furthermore, the Brazilian market still has a huge growth potential and because the credit program has a great importance to the customers, the only place to produce the tanks sold in Brazil, is in Brazil. The local content demand of the financing program is not only protecting the sales but it is also limiting the sourcing possibilities. Because 60 % of the final price to the customer needs to originate from the local production, and 50 % of the cost of DeLaval comes from the SS, it is not possible for DeLaval to import all the raw material. If they would import all the raw material, they would lose their strong competitive advantage in the local market, the access to the government credit program.

The importance of FINAME is strong because of the high interest rate in Brazil. If the commercial credit would be more reasonable, the credit program would reduce its significance. Considering the current decrease in the interest rate, it might become a possibility in the future to sell in the domestic market without using the FINAME but only private financing.

However, the factory wants to grow and gain market share also outside the Brazilian borders. DeLaval International has only 3 cooling manufacturing units worldwide and the factory in Brazil is intended to produce for the whole America. At the moment the high price of the raw material and the lack of possibilities to choose the SS supplier, have created a glass ceiling that is difficult to overcome. The protectionism is limiting the exporting possibilities of DeLaval. As long as DeLaval is not suffering too much of the slow growth in the international market, DeLaval is doing fine in the current trade environment. Because of the high quality and appreciated brand, they are able to export part of the production. This of course does not change the fact that the price gap maintained by Acesita, is making their operations more difficult and is definitely holding back their ability to grow.

At the moment the protectionist measures taken by the Brazilian government have a delicate equilibrium at the home market. They are in one way protecting the SS producer and in another way protecting the SS manufacturing companies. The main harm of these measures is that they hinder the international competitiveness of the manufacturing companies. If the international trade negotiations in the Mercosur and WTO succeed and manage to end these protectionist measures, it would cause Brazil to change its policies. Depending on the level of liberalisation (e.g. if it would include the FINAME as well or not) it would have a different effect on the SS manufacturing companies. At the moment the trade environment is supporting unproductiveness. The companies are not forced to compete internationally neither do they have the best possible tools to do so. If and when the production measures will end, DeLaval will have to adjust to the new situation extremely fast. They would have to face the increasing competition from abroad and also learn to develop their sourcing strategies to become more flexible.

7.3 Recommendations

Trade environment characteristics have several influences on the multinational company's possibilities to operate within the SS industry in Brazil. However, companies, such as DeLaval, have relatively little power to influence the trade environment characteristics. This does not mean that they can rely on reactive measures, but rather they should aim for more proactive attitude. One important step in achieving this could be to unite with other manufacturers in an efficient way, in order to make their opinion heard in the network. The low participation in the network not only hinders their possibilities to affect but also to detect and predict the future trends, because of the lack of the communication with other actors. This naturally obstructs their possibilities to be prepared for the possible changes.

At the moment the DeLaval cooling factory is doing fine at the local market regardless of the restricting trade environment. However, the trade environment is dynamic and it changes over time. Also the macroeconomic changes in Brazil are affecting the company's competitiveness in comparison with foreign competitors. In order to be prepared for the possible future changes, DeLaval needs to keep investing to improve their productivity and actively aim for lowering their costs. Specialisation of products to the market demand is an important asset.

Also by maintaining and strengthening their brand value, they can become more independent from the restricting trade policies and enhance the exportation.

In order to be prepared for the possible changes, it is crucial that DeLaval monitors actively the changes within its trade environment. Also a closer connection with other units of DeLaval is desirable in order to create synergy and to avoid internal conflicts that might harm the cooling factory. The small size of the factory, gives it an advantage to adjust to possible changes quickly. Also the support from the headquarters can help the cooling factory to overcome the problems in case of sudden changes in the trade environment. With this aspect in mind, DeLaval has better changes to develop and grow than purely local competitors. However, the dependence of the headquarters also makes the organisation more rigid and obstructs its possibilities to source the raw material freely.

At the moment DeLaval has difficulties to export because of the high cost of the product. This does not mean that they should concentrate on competing only at the local market. They need to create a more aggressive strategy to expand in America. Being present at the international arena is crucial in order to gather market knowledge and to strengthen the network with customers, in the anticipation of changes in their trade environment.

7.4 Suggestions for Future Research

During the research process, several interesting areas have risen that would provide a fruitful topic for future research.

- In order to understand more broadly how the internal network of DeLaval affects its possibilities, it would be interesting to study the corporate strategy and how the internal structure has developed to the point that it is today. This could be further extended by investigating the possibilities to create synergy between the units.
- When considering the changes in the trade environment in Brazil a more longitudinal study would be a point of interest. This could include more companies using SS, or even different industries, which face protectionism in Brazil.
- In the global context, investigating the situation between different countries or regions would be appropriate. This would provide excellent insight to the current dilemma of protectionism and nationalism as obstructs for free trade development.
- Considering DeLaval International's possibilities in the future, it would be important to understand how the trade environment is developing on a more global level and how multilateral trade agreements can affect this. For example, if the discussed changes in the agricultural policies and subsidies will take place and how these can affect the market demand and the manufacturing strategy.

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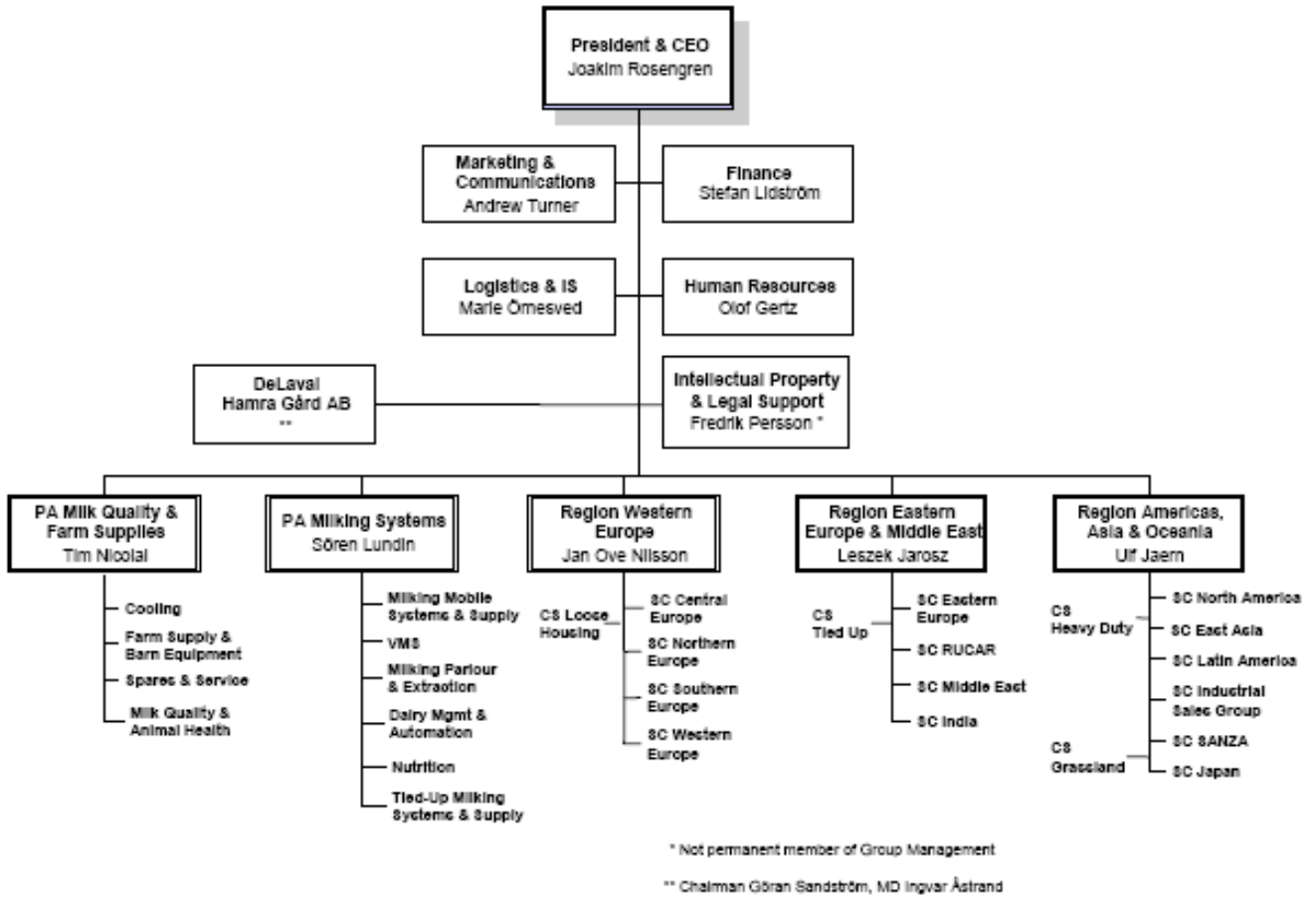
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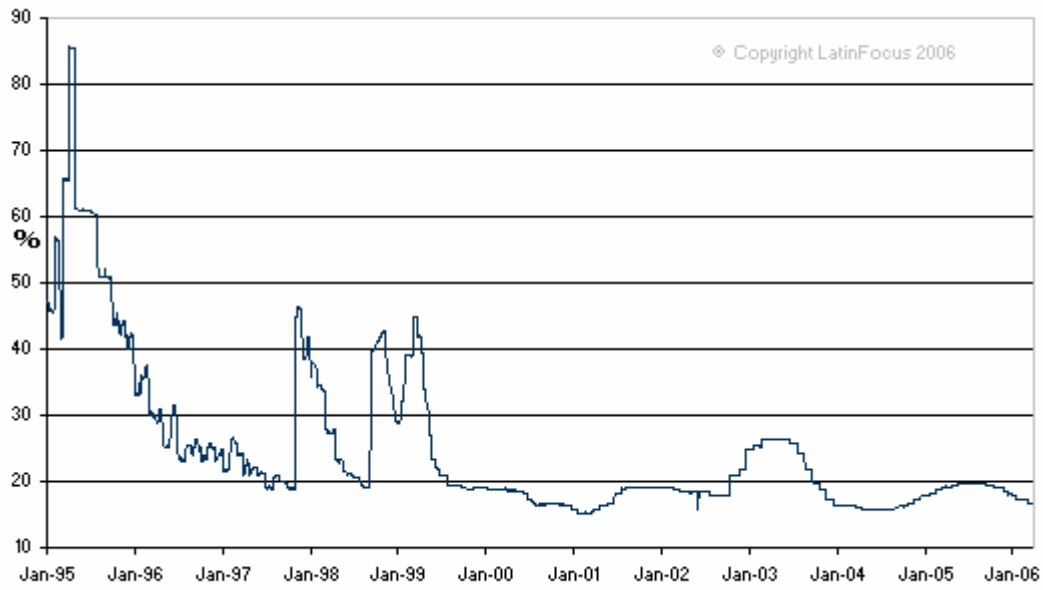
APPENDIX

Appendix 1: DeLaval Organisation Structure



Source: DeLaval 2006b.

Appendix 2: Interest rate in Brazil



Nota: Tasa representa Serviço Especial de Liquidação e Custódia—SELIC anualizada.

Source: BACEN 2006, calculations by LatinFocus.

Appendix 3: Privatisation of Brazilian Steel Sector, 1991-1993

Brazilian Steel Sector Privatizations, 1991–1993

Firm	Sale date	Sale price ^a	Former owner	Buyers	Percent of shares
Cosinor	Nov. 1991	13.6	Siderbrás	Gerdau Group	100.00
Usiminas	Oct. 1991	1,112.0	Siderbrás	Foundations	27.89
				Banks	15.83
				CVRD	10.00
				Nippon	13.84
				Workers	10.00
				Bozano Group	7.60
				Distrib. Aço	4.39
				Others	10.45
Piratini	Feb. 1992	106.0	Siderbrás	Gerdau Group	100.00
CST	July 1992	332.0	Siderbrás	Bozano Group	29.59
				Unibanco	21.82
				CVRD	19.05
				Workers	12.22
				Ilva Group	5.24
				KSC Group	5.24
				Others	6.84
Acesita	Oct. 1992	450.0	Banco do Brasil	Previ	15.00
				Banco do Brasil	5.94
				Ciga	9.89
				Sistel	9.16
				Albatroz	6.80
				Banco Real	5.56
				Bancesa	4.21
				Others	41.55
CSN	Apr. 1993	1,057.0	Siderbrás	Vicunha Group	9.20
				Bamerindus	9.20
				CVRD	9.40
				Workers	20.00
				Banco Nacional	4.00
				Banco Real	2.50
				Itaú	7.30
				Others	38.40
Cosipa	Aug. 1993	331.0	Siderbrás	Usiminas	48.78
				Brastubo	12.40
				Workers	20.00
				Distrib. Aço	8.90
				Others	8.92
Açominas	Sept. 1993	597.6	Siderbrás	Mendes Jr.	31.69
				Workers	20.00
				BCN	10.00
				Banco Econômico	10.00
				Villares Group	6.19
				CVRD	5.00
				Banco Real	6.46
				Bemge	4.19
				Others	6.47

^aIn millions of dollars.

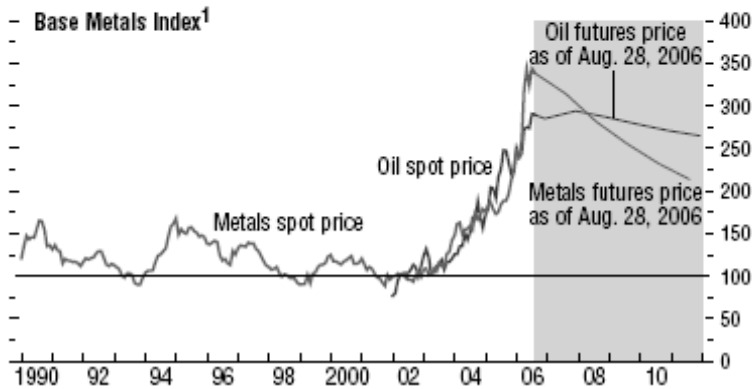
Source: Amarante de Andrade et al. 1994, 88–90.

Source: Montero 1998.

Appendix 4: Base Metal Prices on Futures Markets

(2002 = 100; monthly data in nominal terms)

At present, futures markets expect the price of metals to fall gradually to the middle of the range between the current prices and the trough of 2002 (in nominal terms). The expected price decline is smaller in the aluminum industry where the gap between market prices and production costs has been narrower than for the other metals.

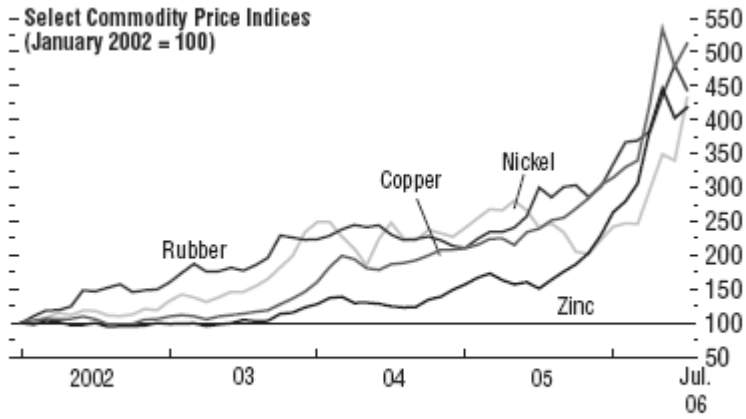


Sources: Barclays Capital (2006b); Bloomberg Financial Markets, LP; IMF, Commodity Price System database; and IMF staff calculations.

¹Weighted average of aluminum, copper, lead, nickel, tin, and zinc prices.

Source: IMF 2006.

Appendix 5: Price of Selected Non-energy Commodities



Source: IMF staff calculations.

Source: IMF 2006.

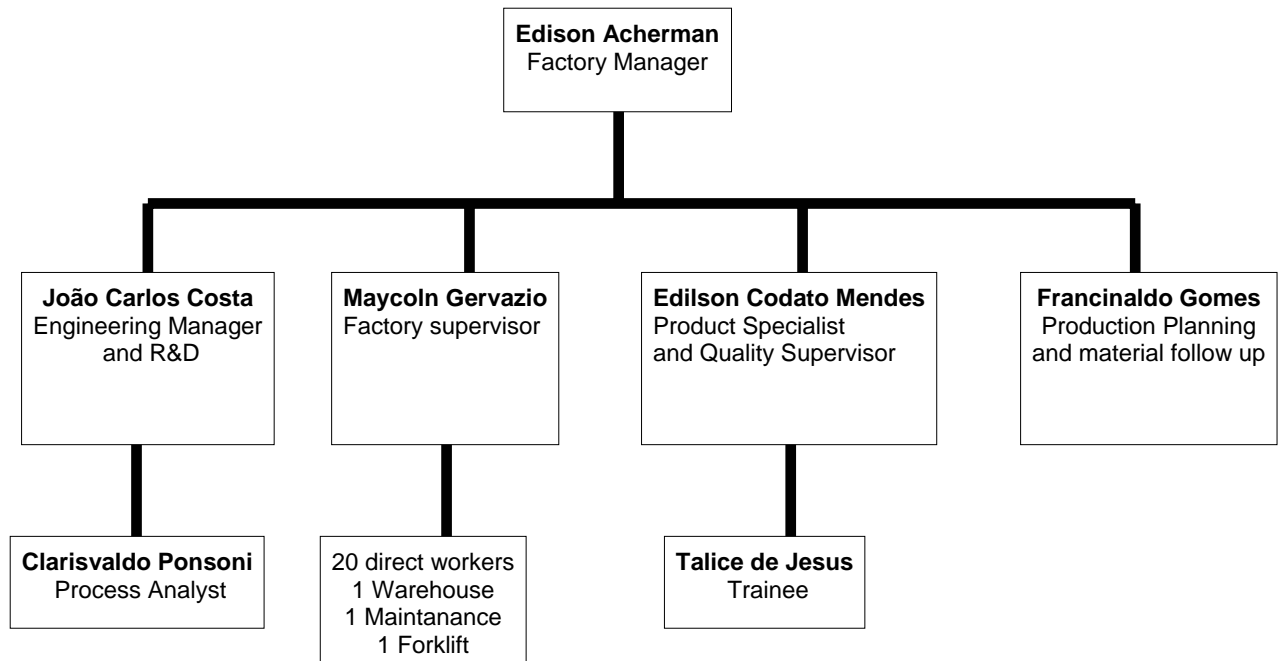
Appendix 6: Estimated Pre-tax Cost of Cold-rolled Coils (\$/ton)

	USA	Japan	Germany	Rep. of Korea	Brazil	CIS	China
Raw material cost	117	113	122	124	105	91	145
Other material costs	161	149	154	137	114	124	155
Total material cost	278	262	276	261	219	215	300
Employment cost/hour	39	37.5	44	15	10	1.5	1.75
Man-hour/tonne	3.5	3.1	3.1	3.9	4.4	9.5	12.7
Labour cost	137	116	136	59	44	14	22
Total operating cost	415	378	412	320	263	229	322
Total financial expenses	35	55	49	40	60	25	45
Total pre-tax cost (rounded)	452	432	460	360	325	255	368

Source: World Steel Dynamics, *Steel Strategist*, May 2003.

Source: UN 2005b, p. 12.

Appendix 7: Organisation Chart of the DeLaval Brazil Cooling Factory



Source: DeLaval 2006a.

Appendix 8: Products of DeLaval Brazil Cooling Factory*

DXOC and DXOCB tanks (OPEN VERTICAL TANKS)

DXOC LINE

DXOC 500

DXOC 700

DXOC 1000

DXOC 1600

DXOC 1950



DXOB LINE DeLaval/Bosio Brand

DXOCB 300

DXOCB 500

DXOCB 700

DXOCB 1000

DXOCB 1600

DXOCB 1900

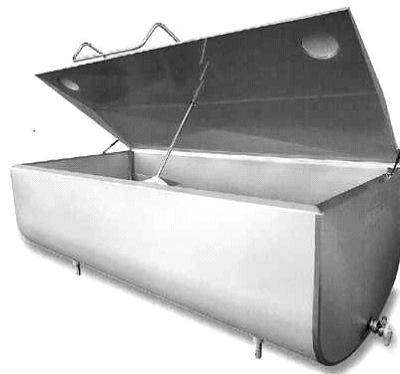


DXOS tanks (OPEN HORIZONTAL TANKS)

DXOS LINE

DXOS 3.000

DXOS 4.000



* All the cooling tanks are called DX. The two latter letters refer to the model of the tank; OC: open cylindrical, OB: open basic, OS: open squared, CR: closed round, CE: closed elliptical. The numbers refer to the size of the tank in litres.

Source: DeLaval 2006a.

DXCR and DXCE tanks (CLOSED HORIZONTAL TANKS)

DXCE LINE

DXCE 8.000 WITH T100 CCU



DXCR and DXCE tanks (CLOSED HORIZONTAL TANKS)

DXCR LINE

DXCR 4.001

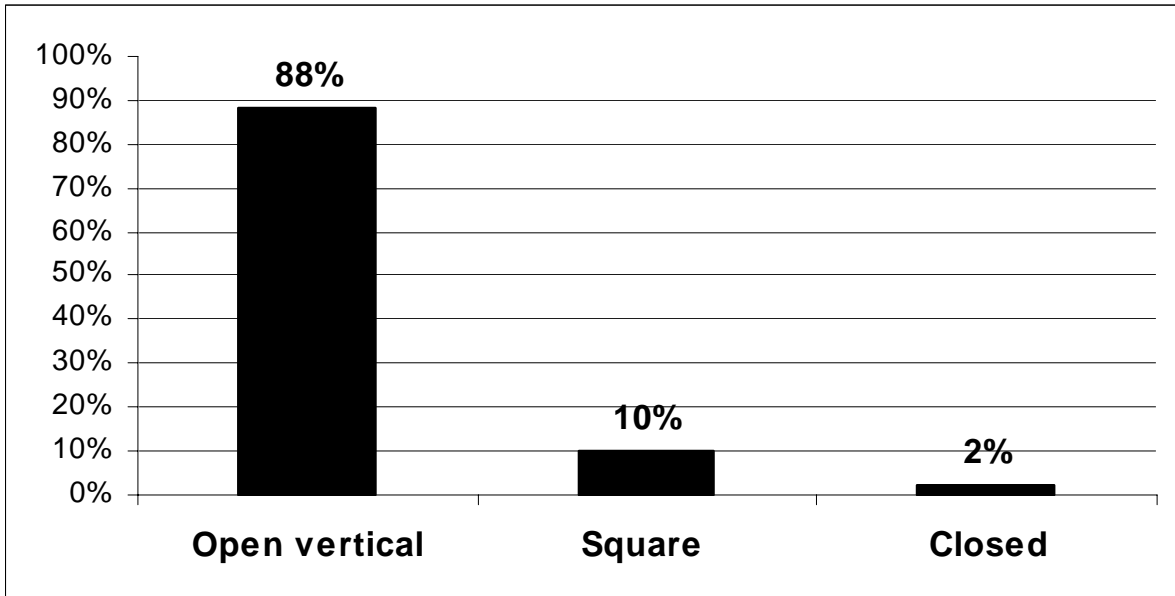
DXCR 5.000

DXCR 6.000



Source: DeLaval 2006a.

Appendix 9: Types of Tanks Manufactured, %



Source: DeLaval 2006a.