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Transfer of Export Process from Customer to Supplier
-The Case of Volvo do Brasil-

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Abstract

This thesis explores the issues around the export process transfer from customer to supplier, namely Volvo do Brasil and local suppliers. The purpose has been to generate an understanding of the factors that enable the transfer of the process in a matter where mutual gain can be obtained.

The theoretical framework of the study is based on a behaviouristic view to the process transfer issue. The theoretical discussion focuses on the relational aspects in process transfer. The section is concluded with a model that summarises the factors affecting process transfer in an emerging market context.

The empirical section of the study includes findings where all perspectives of the parties involved are presented. The findings indicate that the relational aspects form a basis to the process transfer and subsequent strategy implementation. However, these factors alone do not grant that the target supplier is able to implement direct exporting.

In conclusion, it has been found that the transfer of the export process requires communication routines and clear role division between the affiliate and headquarters (HQ). Moreover, it has been found that ability depends on the willingness and the capability of the supplier.

Key Words: Customer-supplier relationships, emerging market sourcing, export process transfer.

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Anna Linder Ulla Martínez Majander

Glossary

Delins-system	An EDI system for delivering scheduling and material management
Direct exporting	When the supplier delivers directly to the hub from where the end user pulls the goods
Emballage	Package designed by Volvo for suppliers' use
Emerging market	A market characterised by increased growth resulting from reduction in trade barriers, liberalisation of capital control and privatisation
End user	Volvo plants (in some cases also external clients) using parts and components supplied from Brazil in their production.
Export process	Total export process including the documentation and delivery
Export process implementation	A step by step process whereby the export process is transferred from customer to supplier
Foreign affiliate	Volvo do Brasil in Curitiba, Brazil
Headquarters (HQ)	Volvo Truck Corporation in Gothenburg, Sweden
Host buyer	Local buyer in Volvo do Brasil
Hub/Pick-up point	Volvo Logistics in Arendal, Sweden
Indirect exporting	When the supplier uses an intermediary in delivering to the hub (for example trading company)
Kit factories	Assembly plants where imported CKD's are assembled
Long-distance supplier	A supplier that is more than 3 days transportation distance from the end user or when a transportation via rush mode (air freight) is more 24 hours
Safety/Buffer stock	A stock of the supplier's goods stored at the hub and corresponding end user's 4 weeks demand
Sourcing	A process starting from industrial buying and ending in the delivery
Target supplier	Supplier that is target to export process implementation
Technology transfer	=knowledge/competence/skills transfer
3P	Organisation driving for synergies in the operations of Volvo Global Trucks
Volvo Group	Includes Volvo Trucks, Volvo Buses, Volvo Construction Equipment, Volvo Penta, Volvo Aero, Volvo Logistics
Volvo Trucks Corporation	Volvo Trucks headquarters in Gothenburg, Sweden
Volvo Global Trucks	New business unit including the separate brands Volvo Trucks, Renault V.I and Mack, Inc.
Volvo units	Includes Volvo Truck Corporation, Volvo Truck North America, Volvo India and Volvo do Brasil

Abbreviations

CBU	Completely Built Units
CKD	Completely Knocked Down Unit
EDI	Electronic Data Interchange system
EMS	Emerging Market Sourcing
HDV	Heavy Duty Vehicles
GSC	Global Sourcing Committee
GSP	Global Sourcing Process
LSP	Logistical Service Provider
NG	New Generation
OEM	Original Equipment Manufacturer
OLE	Odette Logistical Evaluation
SSEM	Short Supplier Evaluation Manual
SEM	Supplier Evaluation Manual
TNC	Transnational Corporation
VTC	Volvo Trucks Corporation
VdB	Volvo do Brasil
VLC	Volvo Logistics Corporation
VLdB	Volvo Logistics Do Brasil

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1 Introduction

This chapter will introduce the topic area of our thesis. This section aims at building an understanding of the challenges faced by Volvo Trucks when sourcing from the Brazilian emerging market through its affiliate. The case company Volvo do Brasil, is also introduced.

1.1 Sourcing from emerging markets

Recent developments in the automotive and transportation industry have succumbed to the general trends of increased global competition, the accelerating technical development, the deregulation of markets and harmonisation of legal requirements. This has driven vehicle manufacturers to look for synergies, streamline operations and seek economies of scale in production and R&D and ultimately reaching new potential markets and customer groups.[1] The vehicle manufacturers have started to move production to low cost, developing countries where new potential markets are opening.

Sourcing locally from suppliers was initially a response to local content requirements, protectionist measures that restrict the import of parts and components so as to benefit the local economy. Local sourcing has since become a means by which vehicle manufacturers gain cost advantages and increase competitiveness through the establishment of partnerships with parts and component suppliers. The pressures for increasing supply chain efficiency have encouraged trans-national corporation's (TNC's) to develop their supply base in the emerging markets where they have presence, enabling sourcing from the emerging market to other markets worldwide. This has contributed to the development of a more strategic role for purchasing, especially in terms of developing relationships with the suppliers. Emerging market purchasing enables the movement of strategically significant parts to the use of the whole worldwide operations. This is called emerging market sourcing and vehicle manufacturers have special emerging market strategies (EMS).

[1] Volvo Annual Report 2002

However, sourcing from emerging markets generates further challenges, mainly in the areas of logistics and exportation. In sourcing from emerging markets there are two alternatives for export. These are the direct and the indirect exporting options. Direct exportation is when a supplier exports independently to the TNC's plants worldwide. Indirect export includes the TNC's foreign affiliate as a channel for the goods to the TNC's plants.

Volvo Truck Corporation's global purchasing includes sourcing from emerging markets. Volvo Trucks has production facilities in Brazil and India. The plant in Volvo do Brasil is a main factory, sourcing locally a substantial amount of parts needed in the production, and also independently responsible for its customer-supplier relations.

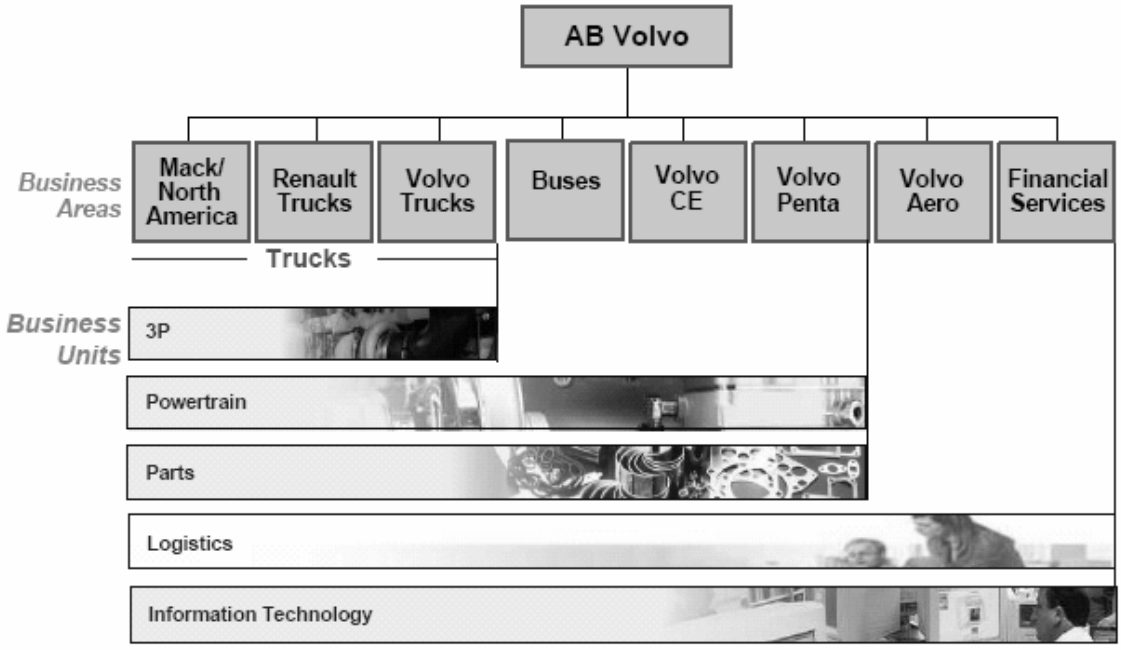
1.2 Volvo Trucks Corporation

1.2.1 Position within the Volvo Group

Volvo Truck Corporation (VTC) is part of AB Volvo, founded in 1927. The group is today one of the world's leading manufacturers of heavy commercial vehicles. As seen in the figure below, the Volvo Group is organised in business areas that span Volvo Global Trucks, Buses, Construction Equipment, Penta, Financial Services and Aero. Within the group is also included the business unit 3P, whose main function is to provide support to Volvo Global Trucks and Volvo Logistics, providing group-wide support. Volvo Group companies operate in more than 180 markets and have 5, 000 employees worldwide.[2]

[2] Volvo Annual Report 2002

Figure 1. The Volvo Group



Source: Volvo 2003

Volvo Trucks, with its headquarters in Gothenburg, started its truck production in 1928. Today, the world's second largest producer of heavy trucks (>16 tons) and this category covers 90 percent of the total production.[3] The company produces and markets its products in over 130 countries.[4] Most of the company's production is located in Europe and in the U.S., but the company has also has production plants in other parts of the world such as India and Brazil. [5]

Volvo Truck Corporation acquired Renault Trucks in 2001, and through this also assumed the responsibility of the Renault Trucks subsidiary, Mack Trucks, Inc. The three brands remain individual identities and Volvo Global Trucks was established to combine the interests of all three brands. [6]

1.2.2 The 3P Organisation

In 2001, a separate worldwide organisation, Volvo 3P, was established responsible for the product planning, purchasing, product development and

[3] Volvo Annual Report 2002 and Volvo Trucks Q2-2003
[4] Truck and Bus Builder 2003
[5] Volvo Trucks Q2-2003
[6] World Market Analysis (2003)

program management for the three trucks companies; Mack Trucks, Inc., Renault Trucks and Volvo Trucks.[7] The purchasing strategy of Volvo is to "select competitive and innovative" global partners "who are ready to take part in developing the future platforms and securing continued growth."[8] The 3P unit aims to find synergies in the different truck companies' functions, but with the objective in maintaining thee separate brands.

1.2.3 Volvo in Brazil

Volvo do Brasil was established already in 1979 in Curitiba, the state of Paraná. It is a wholly-owned greenfield investment. In 2002, Volvo do Brasil achieved the position of market leader in the heavy duty trucks segment by having a market share of 31 percent.[9] In Brazil, Volvo had previously competed within the heavy duty segment but entered the medium-heavy segment in 2003 with the aim of seeking a position also in this market.[10]

In October 2003, Volvo do Brasil launched its first medium-heavy truck for the Brazilian market. There was demand for a new model, as Volvo customers already familiar with Volvo's heavy duty trucks also had a need for a lighter vehicle; many of these customers need both models in their businesses. The Volvo VM received a very good response and it was said to be the most modern truck in the medium-heavy segment not only in Brazil, but also in the whole of Latin-America.[11]

In 2002, Volvo Trucks became the market leader in Brazil in the heavy duty trucks segment. Currently, the markets for heavy duty and medium-heavy trucks in Brazil are about the same size; a total of around 16,000 trucks a year. In the rest of South America, an additional 3,000 and 4, 000 trucks are sold every year in the medium-heavy segment.[12] The demand of heavy-duty (HD) trucks in the Brazilian market continued favourably for Volvo Trucks even in January-June 2003, and compared with the year 2002, the deliveries increased by 26 percent.[13]

[7] Volvo Annual Report 2002
[8] Volvo Supplier Portal 2003 (1)
[9] Volvo Trucks Q2 2003
[10] Monteiro 2003
[11] Global Magazine, Jonilson and Sjöstedt 2003
[12] Global Magazine 2003 and Jonilson 2003
[13] Volvo Trucks Q2 2003

Volvo do Brasil (VdB) is Volvo's first foreign affiliate established in an emerging market. VdB's responsibilities include production and export sales of completely built up units (CBUs) (mainly in the South American market), responsibility for its own supplier system and the establishment of new supplier relationships. Additionally, the responsibilities span the identifying and developing of potential global suppliers for the whole of Volvo Global Trucks.[14]

Volvo's plant in Brazil is a "main factory" when compared to the other factories outside Europe and the United States (US), which are 'kit factories'. A kit factory refers to assemblers of imported completely knocked-down units (CKDs). A main factory produces (CBUs), including chassis, engines, transmissions and truck cabins, and Volvo do Brasil also has its own design and engineering departments. However, the design of the major models is centralised; global design and development takes place in Sweden.[15] The Curitiba plant is therefore not only an assembly centre but is also in charge of the development of locally adapted vehicles.[16]

Volvo do Brasil's local supplier base accounts for a relative share of parts and components in the final assembled vehicles.[17] Originally the local content requirements encouraged local sourcing, but today the competitive price and quality of the local suppliers is also a main reason for the increased share of domestically produced parts. Interestingly, the ten biggest suppliers of Volvo do Brasil account for 65 percents of Volvo's local purchases. Among these ten suppliers, only three are local (Sifco, Bruning, and Schulz) while the remaining seven suppliers are follow-source suppliers. [18]

1.3 Problem background

"One way to cut costs from exporting is when the suppliers export directly, as the vehicle manufacturer does not have internal taxes and suppliers approach

[14] Alvstam & Ivarsson 2003, Dias da Silva 2003
[15] Ivarsson & Alvstam 2003
[16] Olsson & Moberger 2002 & Olsson 2001
[17] Ivarsson & Alvstam 2003
[18] Ivarsson & Alvstam 2003

the end-users directly. In the future, vehicle manufactures are requesting for making business only with suppliers that are at the same time exporters.[19]"

As has been mentioned, when sourcing from emerging markets globally, there are two ways to export. These are the indirect way and the direct way. The indirect sourcing happens through the local host country affiliate, in this case VdB, and the direct way is when suppliers in the emerging market supply directly to the end users, or Volvo plants. In the future, however, Volvo is increasingly looking for global suppliers with direct export ability, as it enables cost efficiency maximisation in the supply chain.

Currently, VdB is exporting on behalf of its suppliers, becoming an active channel for indirect exportation from suppliers. This process was started in 1999, when it was apparent that parts from Brazilian suppliers were found competitive in terms of cost and quality. However, not all the suppliers had the capacity to do exporting on their own, and VdB began to export parts. This way, the demands from other Volvo units worldwide could be met and Volvo could gain hedging benefits.

At present, Volvo do Brasil handles the parts exporting on behalf of 25 suppliers. This means that Volvo do Brasil buys the parts and becomes the owner of the goods in this process. Subsequently, VdB handles the documentation, packaging and transportation-related matters. VdB then sells the goods to the logistical provider, Volvo Logistics Corporation Hub in Arendal, from where the plants in Europe pull the parts. In this sense, Volvo do Brasil has a trading company role and in cases of larger component suppliers in Europe, VdB takes the role of a second-tier supplier. In our thesis, this process will be referred to as the export process, including the stages from order to delivery to the end user.

Exporting from Brazil is very bureaucratic and the long maritime transportation increases risks involved in the delivery process. However, exportation through VdB has served its purpose and it has worked considerably well. At present, nevertheless, the initial hedging benefits are no longer realized due to currency fluctuations and a relatively weak dollar. Additionally, the accumulated costs

[19] de Carvalhaes 2003

for export administration and logistical aspects have increased Volvo's interests in finding a better solution for VdB to get back to their core business, to produce and export CBUs. The natural solution is to transfer the export process to the 25 suppliers themselves. This has also become possible as VdB's suppliers have developed during the course of VdB's presence in Brazil.

According to the interests of the company, the group of case suppliers were presented to us. They included Sifco, Schulz, Unipac, Proxyon and Alpino. In addition, we had the opportunity to visit and interview Wabco, a follow-source supplier of Volvo. From this group, Sifco handles the export and logistical matters independently without the interference of Volvo do Brasil. Further, Schulz is starting to implement direct exporting and the remaining ones are subsequent targets for the process implementation. Hence, the main concerns of Volvo Truck Corporation and VdB are, at present, the options available for transferring the export process and competence (and the associated responsibilities) to the target suppliers, without the extra work currently performed by Volvo do Brazil.

In this thesis, the focus is on the export process and its transfer to suppliers. When referring to the direct export process, we refer to the exportation of parts from Brazilian suppliers to the pick-up point without the involvement of VdB as an intermediary. Our intention is to include physical logistical aspects to the degree so as to evaluate the direct export process requirements for the suppliers through mapping the steps and activities in the export process. Our interest here is to see the material flow and the corresponding information flows between the parties to find what the process transfer means in operational terms for the flows.

1.4 Problem Formulation

The area of interest, or the problem area, involves the aspects of direct export from Brazil. By direct export, we mean the elimination of VdB as a middleman in the export process from Brazilian suppliers to other Volvo units in Europe and North America.

Our main problem question is as follows:

> How do TNCs transfer export processes to their emerging market suppliers aiming for mutual gain for the parties involved?

As it is clear, the main question here involves a variety of areas. First, it involves global sourcing, particularly sourcing from emerging markets. Second, it involves mapping the export process and studying its transfer from VdB to the case suppliers. Further, it involves the investigation of motives as well as factors influencing the process transfer in the case company context as well as in the country context. Therefore, to answer this question we have generated four sub-problem questions.

> ***A) What does the export process look like at present when Volvo sources globally from the Brazilian market?***

To answer the question above, we need to map out the current export process (from order to delivery). This will be done in order to see what the export process looks like in operational terms. This means, in practice, identifying the links in the information and material flows, as both VdB and Volvo Truck Corporation (VTC) purchase from the target suppliers.

Having mapped the current parts exportation process and the motives behind the change, we will investigate the export process implementation (transfer). This will be done by answering the following question.

> ***B) How is the export process being transferred from Volvo do Brasil to target suppliers?***

Additionally, to investigate the ability of the target suppliers to start exporting directly, we will study the factors that influence the process transfer from Volvo do Brasil to the target suppliers.

C) What factors affect to the transfer of the export process from Volvo do Brasil to the target suppliers?

Having investigated the factors affecting the export process transfer, we will explore how the process transfer is experienced by the various parties.

D) How is the export process transfer from VdB to the target suppliers experienced by the parties involved?

At this point, we will have an insight of the effects and factors of the process transfer. Additionally, we expect to have developed an understanding of the various perceptions of the parties involved that will reveal the main challenges, opportunities and risks associated with the export process.

1.5 Purpose

"We are anxious to receive the results of this study which with no doubt will be a reference point for Volvo in the forming and defining of the future export strategy from emerging markets.[20]"

Our objective with this thesis is to find determinants affecting the transferring of the export process (currently handled by VdB) to the target Brazilian suppliers. The process transfer, however, rests on bilateral interaction; that the old regime of an active buyer taking advantage over a passive supplier is no longer valid. It is not possible to separate purchasing decisions from strategic issues. Instead the emphasis should be on managing the relational interdependencies in interaction.

Through conducting this study, we aim to generate guidelines in the direct export process transfer from customer to supplier. First, we intend to create general recommendations for TNCs to take into account when transferring exporting to their suppliers, and further we wish to generate more specific guidelines for our case company, Volvo do Brasil. These guidelines will take

into account the interests of the parties involved as well as their capabilities in terms of the process transfer. We hope that these guidelines will help Volvo to proceed with the export process implementation and detect the critical issues around the subject.

1.6 Delimitations

Whereas the operational view to export and supply related aspects clearly involves physical flows as well, and there are transportation economics perspectives to the issue, we have nonetheless adopted a behavioural scientific view to the export process transfer. This means that rather than focusing on the logistical and physical flows related to the process in terms of money and goods, we have taken a more relational approach in terms of understanding the factors that may influence the process transfer from customer to supplier.

In our work, we have limited ourselves in terms of trade policies, discussing them in a general manner where relevant in terms of parts exportation from Brazil. It should be noted, however, that another thesis written by Luis Benito and Marina Gireva focuses solely on the trade policies in effect in the Brazilian context.

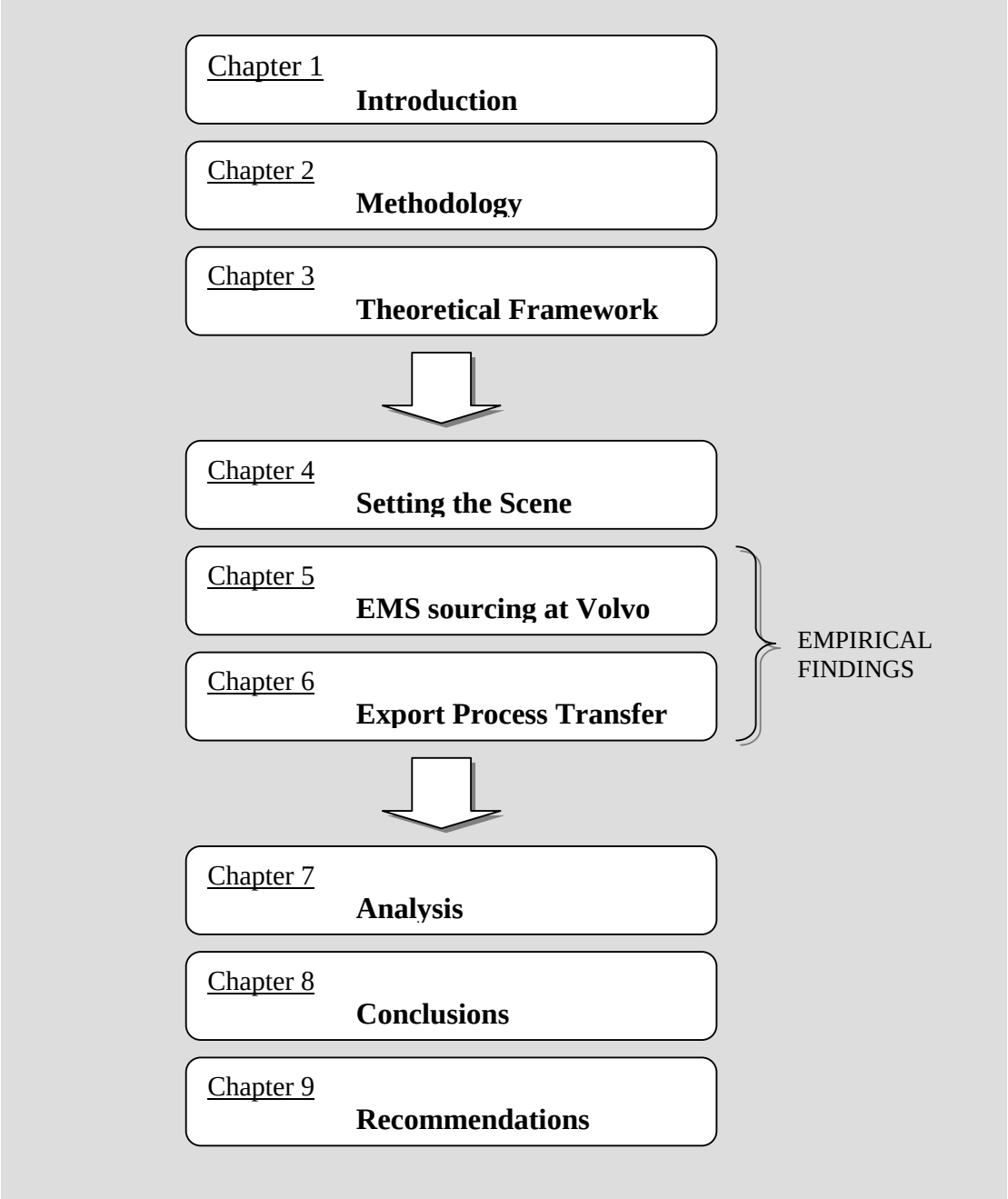
As VdB operations in Brazil also span the production of Volvo buses, our thesis could have considered the supplier aspects and relations of the suppliers not only to VdB/VTC and VTNA but also that of Volvo Bus Corporation. However, as our purpose is to investigate the direct export of parts to VTC in Europe from Brazil through the Global 3P purchasing perspective, we will mainly concentrate on Volvo Trucks. Nonetheless, Volvo Bus will be mentioned in the context of VdB and the commercial vehicle industry.

[20] Santos 2003

1.7 Disposition

The disposition of our thesis will follow the following sequence:

Figure 2. Disposition of the thesis



Source: Own

2 Methodology

In this section we will discuss the research approach and the method employed in our field work. This chapter should serve as a roadmap of our research process.

2.1 Research Strategy

This study is based on qualitative research. Qualitative studies in the basic form "seek to discover and understand a phenomenon, a process, or the perspectives and worldviews of the people involved."[21] Our aim is therefore to understand the export process from Brazil, and of VdB, to find the realities that may affect the export process transfer from VdB to selected suppliers. In qualitative studies, data collection is mainly based on interviews, observations or document analysis. The resulting analysis does not seek to build a theory, but instead it aims at finding recurring patterns.[22]

This qualitative case study is interpretive. Interpretive case studies include thick and rich description that is used as data to develop abstract categories or to illustrate, challenge or support theoretical assumptions held prior to data collection. The level of conceptualization in interpretive case studies can vary from suggesting links between variables to theory construction. In interpretive case studies the common form of analysis is inductive.[23]

This thesis is based primarily on the abductive method. This involves using both deduction and induction in the research. Deductive research starts with the gathering of theoretical information and finding a suitable case for the theory. Inductive research, on the other, hand starts with empirical findings to generate a theoretical frame and potential implications.[24] Much of our study's early stages was based on the deductive method, looking at secondary information while waiting for primary sources (interviews) to be carried out.

[21] Merriam 1998
[22] Merriam 1998
[23] Merriam 1998
[24] Merriam 1998

Originally, this study was to explore the area of technology transfer and related determinants. Subsequently, the problem was redefined to investigate supplier competence development together in collaboration with our supervisors and Volvo do Brasil. Our main research task was to look at the direct export process (at present done by VdB on behalf of 25 suppliers) and its transfer from VdB to the target suppliers.

Prior to our fieldwork, the problem area was redefined to focus on the transfer of direct export competence from VdB to selected case suppliers. Initially, the benchmark supplier was planned to be Sifco, but during our fieldwork it became evident that Sifco has carried on the exporting for such a long time without the interference of VdB that it could not be used in terms of evaluating the transfer of the direct export process from VdB to suppliers. It was also determined that Schulz was a more suitable benchmark object as it had already started and carried through parts of the direct export implementation in collaboration with VdB. Therefore, much of our criteria for the process transfer and the resulting checklist have been constructed based on the experiences of Schulz. Furthermore, Sifco has been used as an example reference for export competence.

2.2 Method - Case Study

This study will be based on a case company and it will be presented as a qualitative case study. A qualitative case study "is an intensive, holistic description and analysis of a single instance, phenomenon, or social unit."[25] Case studies are one form of empirical social research. Of Yin's (1994) five research strategies (experiment, archival analysis, history, survey and case study), the case study method involves a more hands-on view to a firms operation.[26] The case study method provides an in-depth exploration of a firm and its context, giving an explanatory and interpretative perspective to the circumstances of the firm. In a case study, the process itself is in focus rather than the outcome.

A case study is a preferred research strategy when the questions are of the character 'how' and 'why', when the phenomenon studied is contemporary and

[25] Merriam 1988

has a real-life context, and when the researcher has little control over the events happening. 'How' and 'why' questions are likely to favour the use of case studies, experiments, or histories. Even a single case study is sometimes sufficient to provide an explanatory purpose. The researcher's objective should be to pose competing explanations for the same set of events and to indicate how such explanations may be applied to other situations.[27]

One reason for using a single case is when it represents the critical case in testing a well-formulated theory. The theory has specified a clear set of propositions as well as circumstances within which the propositions are believed to be true. To confirm, challenge, or extend the theory, there may exist a single case, meeting all the conditions for the testing of the theory. The single case can then be used to determine whether a theory's propositions are correct or whether some alternative set of explanations might be more relevant. In this manner, the single case can represent a significant contribution to knowledge and theory building.[28] Such a study can even help to refocus future investigations in an entire field.[29]

Nonetheless, there are limitations of using a single case and producing generalised recommendations in terms of validity. A case study investigator's goal is to expand and generalise theories (analytic generalisation) rather than showing frequencies (statistical generalisation). In addition: "the goal of case studies is to build a proper case with analytic sophistication rather than creating something that can be easily replicated time and time again."[30] Therefore, case studies not only should seek generalisability but also attention to the individual case. The generalisability of the study derives from a strong description of the context of the case.

In qualitative case studies, the acknowledgement of the researcher's influence on the case is of importance. In short, as the researcher is a variable in the research design, it is increasingly important to be aware of the potential

[26] Patton and Appelbaum 2003, Yin 1994
[27] Patton and Appelbaum 2003
[28] ibid
[29] Yin, R. K, 1994
[30] Ibid.

influence it may have on the validity of the study (in terms of analytic generalisability). [31]

As we have found so far that there are no theories relating in particular to a host country suppliers export competence development, we have chosen to combine sourcing theories as well as a process model employed by Volvo Global Trucks in order to generate guidelines or parameters for developing the direct export competence of the identified suppliers. In addition to the sourcing perspective, behavioural and relational aspects will be utilised in order to gain a deeper understanding of the 'drivers' for customer-supplier relationship development.

2.3 Choosing The Case Company

As was stated earlier, the case company and the research topic were suggested by our professors at the School of Economics and Commercial Law. We found this challenging as it included working with a large company and investigating the problem in a real-life context. An additional challenge would be whether we would be able to find alternative guidelines for export competence development of selected host-country suppliers as expected by the company. Further, the suppliers were provided by Volvo do Brasil. Originally, the three suppliers were Sifco, Schulz and Unipac. However, while conducting our field-work on location in Brazil, additional suppliers were suggested. We took the opportunity to interview them and gain insight to their views on exporting directly.

2.4 Data Collection

In qualitative studies, data collection may be conducted through interviews, observation and/or through document analysis. Often all three methods are used in order to gain a more complete view of the case.[32]

2.4.1 Interviews

In qualitative research, a common mean in collecting data is individual interviews. According to Merriam, interviews may be conducted as highly structured, semi-structured or unstructured and informal interviews.[33]

[31] Ibid.

In this thesis, we prepared the data collection by structuring four interview guides (see Appendices 1-4) around the issues that we considered essential for analysing the set research problems. Prior to every interview, we sent an interview guide to the interviewee with the intention of providing him/her with a general understanding of the nature of our study and to provide a framework for discussion. It was detected already in the first interviews that our understanding had not been sufficient to cover all the important areas and the originally planned questions served as guidelines to the discussions. As the interviews proceeded, additional questions were asked around the issues brought up by the interviewee, therefore increasing the interactivity.

Therefore, in this thesis primary data has been collected mostly through unstructured and in-depth interviews in which the questions have been open-ended. This means that the interview process has been flexible and exploratory, and the conversation informal.[34] Already at a very early stage, we dismissed using the tape recorder, as we found that it restricted our interactivity and the informal nature of the interviews. Instead, both of us made notes which were documented immediately after the interview. When structuring the final empirical findings into the thesis form, it was easy to conduct follow-up questions with the interviewees by e-mail as they had all suggested this option already during the interviews.

These interviews have been conducted at Volvo Trucks Corporation in Gothenburg (3P purchasing organisation and the logistics department), Volvo Logistics Corporation in Arendal, Volvo do Brasil (purchasing organisation), Volvo Logistics do Brasil and selected host country suppliers. The initial interviews conducted in Sweden prior to our fieldwork have provided us with a sound basis for understanding the aspects related to Volvo's global purchasing and the role of Volvo do Brasil. The interviews at VdB with the host buyers and the discussions with the purchasing management team contributed to our insight of the current export process. This information was complemented by interviews with VLdB (logistical aspects) and at VLC in Gothenburg. The interviews with the suppliers' representatives provided us with a supplier

[32] Merriam, 1998
[33] Merriam 1998
[34] Merriam 1998

perspective to the aspects related to exporting directly from Brazil to other Volvo companies.

At VTC we interviewed eight persons, at Volvo Bus in Gothenburg one prior expatriate from VdB, at VdB we conducted interviews with eleven persons, at VLdB (Volvo Logistics do Brasil) we interviewed two persons, and at Volvo Logistics Corporation (VLC) one person. The local supplier representatives account for nine interviews. We also visited one follow source supplier where we interviewed their export specialist and commercial representative (for details and names of interviewees, please refer to the references).

Due to the de-centralized Volvo 3P global purchasing organization, the responsible persons for purchases from Sifco are located outside of Sweden. As our travel plan included Sweden and Brazil due to time limitations, the interviews with those persons were conducted via e-mail contact. This may have influenced our primary understanding of Sifco as a supplier. However, as was said earlier, Sifco is not one of the process transfer target suppliers. We feel that the information gathered on site (in Brazil) has been sufficient for our purpose.

Our research problem became defined while at VdB. Up to this point, there were many natural filters that may have influenced the defining of the problem. This may be due to distances and the primary contacts being mainly for secondary data collection and also because there was no opportunity to get a closer view to the problem prior to our travel. The contacts were mainly through e-mails, which allowed for misunderstandings of the process prior to our field research.

In addition to the primary data gathered through the interviews, we have also utilized diverse secondary sources. These include utilizing prior research from the field, literature, earlier related studies, articles in journals and magazines as well as other written sources. In addition, web sites and other e-sources, such as the company intranet, have been used.

2.4.2 Observations

Observation can be considered as a research tool when it serves a prepared research purpose, is deliberately planned and recorded systematically and lastly, is subjected to checks and controls on validity and reliability. In this thesis, our observations are based on the conversation, subtle factors and our own behaviour.[35] This has involved evaluating our role in the setting of the interviews, analysing the informality or formality of the interaction and conversation between the parties as well as the context. Observations proceed in three stages; entry, data collection and exit.

In entering a setting, we as researchers needed permission and confidence of the potential gatekeepers to conduct our study; this was firstly provided by the school and our initial VdB contact in the case of VTC. This granted us initial legitimacy. On location in Brazil, it was the buyers at VdB and the contacts through VdB that granted us legitimacy and access to the suppliers. This was seen in the way we were received and even in cases where the supplier was not a prime target of our investigation; we were provided a work room, laptop with internet access and a telephone, while our accompanying buyer conducted his work at another supplier. All suppliers granted us the opportunity to see their plants, where possible, and supported our project with workrooms.

While interviewing the staff at VTC and spending two weeks in VdB, we were able to observe themin a real life environment. In addition, we travelled to some suppliers together with representatives from VdB, which contributed to our understanding of the established supplier-customer relationship.

2.5 Quality of The Research

2.5.1 Reliability

Reliability refers to the degree to which the research findings may be replicated.[36] In the Brazilian context, our findings may be replicable considering that the requirements of the Brazilian government are the same for all exporters. Therefore, one could expect that in the normative sense, the views of suppliers could be the same. However, how the process is perceived by all

[35] Merriam 1998
[36] Merriam 1998

suppliers in the case company context may vary, and also because "human behaviour is never static."[37]

2.5.2 Internal Validity

Internal validity is connected to reliability. "Traditionally, a study is considered more valid when repeated observations in the same study or replications of the entire study have produced the same results."[38] Internal validity is of importance when speculating on the finding's general applicability.[39] In our study, we believe our internal validity and repetitions in our findings would have been higher if we had had the opportunity to interview all 25 suppliers. However, in our sample, based on interviews with five suppliers (of which two already exported directly), the factors found most challenging in the export process were repeated. In addition, the interviews conducted with the purchasing organisations in VdB and VTC respectively also show repetition on key issues related to the capability of suppliers to export directly from Brazil to other Volvo units.

2.5.3 External Validity

External validity refers to the "extent to which the findings can be applied to other situations."[40] Mainly, it evaluates the generalisability of the results of the research study in a wider context.

The study and method used in our study, evaluating the influencing factors for the transfer of the export process from an affiliate to host country suppliers, may be considered valid in the context of Volvo. However, as much of our findings rest on one supplier's experiences of the direct export process implementation, it is questionable whether these results would be applicable for any automotive TNC foreign affiliate's supplier in corresponding emerging or developing markets.

It is also questionable whether the findings from Schulz reflect the 25 supplier sample in total, as the suppliers vary in terms of parts significance, complexity, size, export experience and financial status. However, as the evaluation is greatly based on external requirements that are the same in Brazil for any

[37] Merriam 1998, p. 205
[38] Merriam 1998, p. 205
[39] Merriam 1998

exporting company and Volvo requirements are also the same in principle for all suppliers, it is likely that the suppliers are faced with the same sets of risks associated with direct export. Therefore, it is likely that the suppliers will perceive the challenges in a similar way.

The fact that additional suppliers (Proxyon and Alpino) were assigned to us as interview objects in the final stage of our field work might affect our thesis' validity as due to scarcity of time, we did not have the opportunity to interview the host-country buyers. We recognise the difficulties in comparability of the empirical findings between the original suppliers as the material regarding these new suppliers is scarce. Therefore, we have decided to treat the findings as a composite without separating the findings into the two respective suppliers.

[40] Merriam 1998, p. 207

2.6 Critical Review

As was said earlier, our selection of the behaviour science perspective to our study limits the perspective only to the relational aspects of the process transfer. If the process were studied by transport economists, it is likely that they would present a somewhat different perspective through different theories. However, as we have chosen the relational aspects as an underlying basis for process transfer, we have also based our field study on in depth interviews. The interviews were conducted with VdB and VTC as well as VLC, but with the focus being on the target suppliers and their perspectives on exporting. Our primary research strategy was to form a basic understanding of the purchasing and underlying strategy; this information was provided to us in interviews at VTC. The subsequent interviews at VdB revealed the operational aspects to buying and the delivery of goods from Brazil to Europe. This allowed a complementary view to the strategic perspectives.

We interviewed five suppliers, of which three are part of the 25 target supplier group. Schulz and Sifco are not included in the target group because both already export directly; Schulz has just recently implemented direct exporting. Unipac, Proxyon and Alpino do not export directly to Volvo units at all. The variation in the situations of the case suppliers partly contributed to difficulties in term of comparing the case suppliers' perspectives on critical aspects of exporting directly.

In the interviews, our intention was to interview each host buyer for each supplier and the supplier in order to get a more complete view of the aspects linked to the process transfer. However, while on location the case suppliers, originally three, became five. This restricted the time available for interviews and in the case of Alpino, Proxyon and Wabco, we did not have the opportunity to interview their respective host buyers. In addition, the comments on Bruning are based on the comments of the purchasing management team. Due to this, our interpretations pertaining to these suppliers are based purely on purely suppliers' views to the exporting.

Moreover, a factor that may affect the academic reliability of our findings is the fact that a Volvo representative was present in some interviews with the

suppliers. However, in practical terms this allowed us full access to the suppliers, granted us transportation and gave us an insight to conducting business in Brazil between customer and supplier in real life. Additionally, it gave us an insight to the relationships between the customers and suppliers (host buyer and contact person).

To summarize, we feel that our thesis process has been successful. We attained plenty of data during our fieldwork that has allowed us to form an understanding of the export process and related aspects when transferring that process from customer to supplier.

3 Theoretical Framework

Considering our research problem and the transfer of direct export process, there are no theories that directly explore the area. Due to this, we have gathered various complementary theories that form a frame through which we will conduct our study. Keeping this in mind, we will begin the theoretical framework by an overview of current trends taking place in the globalising industries and supply management.

3.1 Global Sourcing

In the globalising industry, there is increased pressure for supplier competence and lower costs, and truly global suppliers are ones that supply their client firms' factories worldwide. This is also known as global sourcing. Through global sourcing, the client company relies on the supplier on an international scale (often the supplier in question is also the only supplier of the particular component to the customer company) that has the required competencies and financial resources to further invest in development. Global sourcing has cost benefits due to economies of scale enabled through increased production volumes.

The choice of sourcing globally reduces costs to the assemblers as they can conduct business with suppliers located in different continents through global supplying. This creates an advantage of obtaining high quality components at a competitive price. On the other hand, the assemblers can not ignore the existence of important regional markets with special characteristics. This fact motivates the assemblers/producers to establish closer relationships with local suppliers in the form of closer geographic proximity and closer co-operation in order to develop products and processes in collaboration which are suitable in the market in question. When the local suppliers supply only the foreign affiliate of a TNC, it is known as local sourcing. It has been said that local sourcing stimulates cooperation and also encouraged joint-learning about particularities in the local and regional market.[41] However, vehicle assemblers today are combining these two sourcing strategies in different proportions

[41] Laplane & Sarti 1997, Humphrey & Salerno 2000

depending on host country requirements, the target market and the components in question.[42] Local sourcing can also be from so-called follow-source suppliers. These suppliers follow the original equipment manufacturer (OEM) to new markets. This type of sourcing reduces uncertainty as the parties are already familiar with each other.[43] Another trend in the globalisation of sourcing is the sourcing from emerging and developing markets. The emerging market sourcing involves moving assembly or production facilities to low cost (labour, facilities, etc.) countries. [44]

These sourcing methods push suppliers to maintain a global status. Not only do customers expect the management of 2nd and 3rd tiers of the 1st tier suppliers, but also design capabilities, excelling in manufacturing, and the ability to make and deliver the products across markets (geographically distant ones too). This puts on additional pressures requiring financial and managerial resources, also often requiring export experience and competence. [45]

3.1.1 Global Sourcing Implications on Exporting

As has been discussed so far, global sourcing (from emerging markets) puts additional pressure on the suppliers to maintain quality, meet standards of assemblers (design), and making and delivering the products according to specifications. In the case of emerging market sourcing, the export issues become relevant only after the local supply base has been developed to the point that sourcing globally from these suppliers becomes viable.[46] As a result, the often geographically distant emerging market raises the issue of export capability of the suppliers in that market. The exports from emerging markets may be done indirectly or directly, meaning that the buyer organisation serves as a channel for the goods to export, or the suppliers export directly on their own, respectively.[47]

3.1.2 Recent Trends in Purchasing and Supply Management

The economic developments have shown the importance of reducing cost in all areas across industries in order to survive. The buying and selling transactions

[42] Laplane & Sarti 2000
[43] Humphrey & Salerno 2000
[44] ibid
[45] ibid
[46] UNCTAD 2001
[47] "Aprendendo a exportar", federal government informative CD, 2002

have historically been viewed as asymmetrical - what another gains, the other stands to lose. However, win-win situations exist and single transaction focus has shifted toward a relational, long–term dimension: "The traditional emphasis on optimising single transactions is now supplemented with a long-term view of procurement efficiency and effectiveness."[48]

Therefore, rather than considering purchasing as a transaction-based function at the periphery of the organisation, it has assumed a more central strategic role where professionalism and a relationship focus are key features.[49] "A relationship is a result of an interaction process where connections have been developed between two parties that produce a mutual orientation and commitment."[50] So, a relationship is not a given outcome of interaction between two parties, but a variable that may take on different values in the course of interaction. Forming relationships with suppliers (vertical) along the supply chain (forward and backward) is a means of reducing costs, and a potential opportunity for generating a win-win situation for both supplier and customer.

Further, this has become visible in the convergence of relationship marketing and supply chain management. "There is a convergence taking place between, on one hand, typical relationship marketing concepts and activities and, on the other, supply chain management, which is an activity often primarily associated with logistics and supply side operations."[51] Some researchers have even gone as far as calling purchasing relationship buying.[52]

This long-term view to customer supplier-relationships and the purchasing function can be considered a contributing factor to supply base consolidation; partly because investing in a long-term relationship in a large supply base would not only tie up resources but also be economically unviable. Having multiple suppliers implies that there are various relational ties. As the relationships incur costs and benefits, the size of the supplier base has cost effects. An approach to this is the tier system, developed by Lambert and

[48] Gadde and Håkansson 2001, p. 4
[49] Gadde and Håkansson 2001
[50] Håkansson and Snehota 1995, p. 26
[51] Seppälä 2001
[52] Seppälä 2001, Cox 1996

Cooper.[53] A buyer arranges its suppliers in accordance to set criteria and then focuses on maintaining a relationship with a few key suppliers (1st tiers). The key suppliers then take responsibility for the 2nd tiers and 'manage' the relationships down the line. This way, buyer companies have been effectively able to reduce costs as well as focus on fewer key suppliers.

The tier system, and the shifting of responsibility of 2nd and 3rd tier suppliers to 1st-tier suppliers, forms supplier networks; it has been said that in today's industrial setting, firms no longer compete with firms, but rather networks compete with other supplier networks.[54] In networks, interdependencies are seen as positive, generating a dynamic tension and also as potential sources of inter-organizational competitive advantage.[55] Therefore, as was mentioned earlier, the joint-development opportunities are sought through the interdependencies with the objective to generate competitive advantage throughout the network and develop the network competence.

However, this thesis focuses rather on the dyadic relationships found in a network (between a customer and a supplier) and aims to analyse that relationship in terms of supplier development. Therefore, the network theory will not be addressed in detail. However, it provides a sound rationale for analysing the dyadic relationship within the network and how the interdependencies may shape the adaptations required of both parties.

3.2 Customer-Supplier Relationships

As has been discussed already, strategic supply management is shifting customer-supplier relationships toward the long-term relational dimension from the traditional transaction-based (arms-length) dimension. This move is also partly driven by reducing transaction costs through the establishment of partnership relationships. According to Palmer (in Egan 2001), external organisational relationships include both horizontal and vertical dimensions. The vertical relationship dimension represents the relationships that integrate all or part of the supply chain through, for example, component suppliers, manufacturers and other intermediaries. The horizontal dimension represents

[53] Lambert & Cooper 2000 pp. 65-83
[54] Lamming et al. 2000
[55] Dyer and Singh 1998

the corresponding integration but within the line of distribution (including competitors). These dimensions are known as partnerships and collaborations respectively.

3.2.1 Partnership relationships

In this thesis, partnering is defined as "a relationship between customer and supplier organisations recognised as such by the parties involved, whose principal objective is a shared increase in the effectiveness and efficiency of joint responsibilities within the remit of the relationship."[56]

What distinguishes arms-length relationships (low-involvement) and partnership relationships (high-involvement) is, according to Gadde and Snehota (2000), the occurrence of activity links, resource ties and actor bonds. Activity links are the 'fit' measure, including procedures, routines, and systems in the two firms. Resource ties are the ways of allocating and binding internal resources with external ones. Finally, actor bonds involve the establishment of trust, attitudes and commitment. Arms-length relations are characterised by limited contact and involvement, standardised orders, centralised shipping, weak activity links, limited co-ordination, adaptation and interaction. Durable arms-length relationships are ones that require less face-to-face communication, less assistance and involves fewer relation-specific investments.[57] The distinction also becomes apparent in Seppälä's (2001) relationship research model (see Appendix 5).

The relationship research model shows each of the components 'in action' in the context of the type of relationship found between firms (customer-supplier). The relationship continuum ranges from market-based (arms-length relationships) on the left to the further developed relationships (long-term contractual relationships, or partnership relationships). It is clear from the table (in Appendix 5) that in partnership relationships, trust is based on benevolence. Willingness to co-operate in the future is clear, communication is abundant and such that builds trust and mutual learning. The companies are engaged in joint goal and strategy formulation and solving problems in a co-operative manner, sharing risks and rewards to generate a win-win situation. Lastly, both

[56] Egan 2001, p.159-161
[57] Gadde & Håkansson 2001

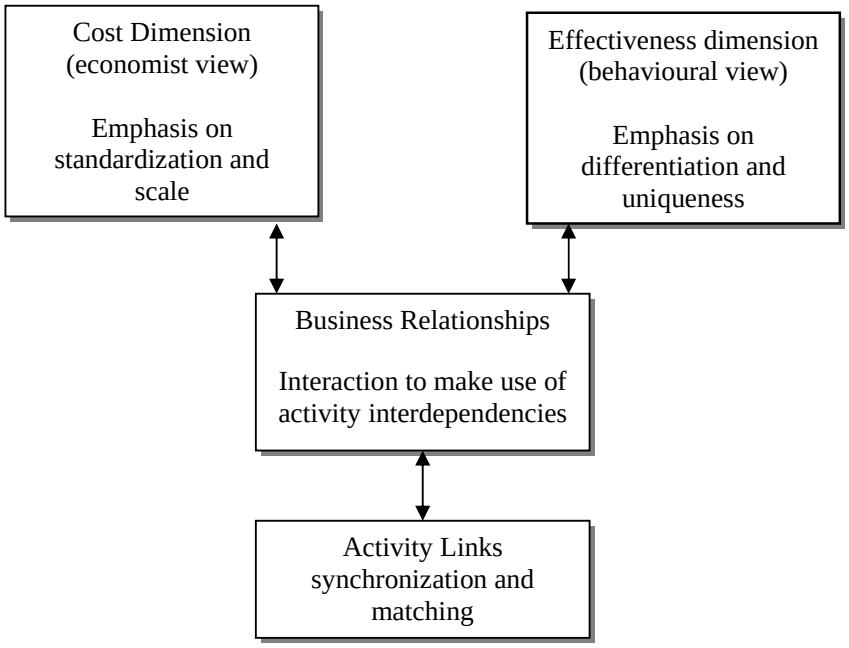
customer and supplier top management are committed to the business relationship, making investments based on the relationship.

According to Ford, the substance in a relationship is based on the interplay of the actors (the companies and the individuals in them), who perform certain activities (they develop, produce, sell and buy products or services) that are based on a compilation of resources (technological, human, financial, etc.). [58] It is argued that through the actor bonds, the actors learn about each other, invest in the relationship, and ultimately, social exchange will develop their knowledge of each other contributing to trust development. The relationship serves as a link to the actors' different activities. It is argued that the activity links in a relationship are important to a firm because it provides both companies an option of operational rationalisation. The resource ties play a significant role in inter-firm resource development and resource innovation.[59]

The concept of learning is clearly a closely linked factor to inter-firm relationship development and change. In inter-firm relationships, interactions are the basis for learning; through interaction, the firms in the relationship learn of each other's abilities and uncertainties. This allows for a bilateral view of the exchange process, what each party needs and what they can offer to the relationship.[60] However, important factors underlying the learning process are willingness, ability and need of companies to learn.

[58] Håkansson and Snehota 1995, Ford 1998
[59] Ford 1998
[60] Ford 1998

Figure 3. Theoretical Bases of The Activity Link Concept



Source: Håkansson and Snehota 1995

The figure above shows the activity links as a means of synchronisation and matching of competencies through interaction, also showing that the interaction has an impact on effectiveness and cost. The relational aspects can, therefore, reduce the total cost base as in the automotive industry 60-70 percent of the total vehicle cost is made up of parts and component costs.[61] This not only highlights the strategic role of purchasing but also needs to focus on price. Price has been found the most important factor when making a purchasing agreement. Subsequent factors were quality, technological background, previous relationships and the origin of the capital initially invested. Whereas cost and price are key factors, relationships become of key importance when the object of exchange is complex and of high importance to the buyer (involving high business risk).[62]

So, the benefits sought through partnership relationships include lower transaction costs, assurance of supply, improved coordination and higher entry

[61] Salerno et al. 1997
[62] Salerno et al. 1997

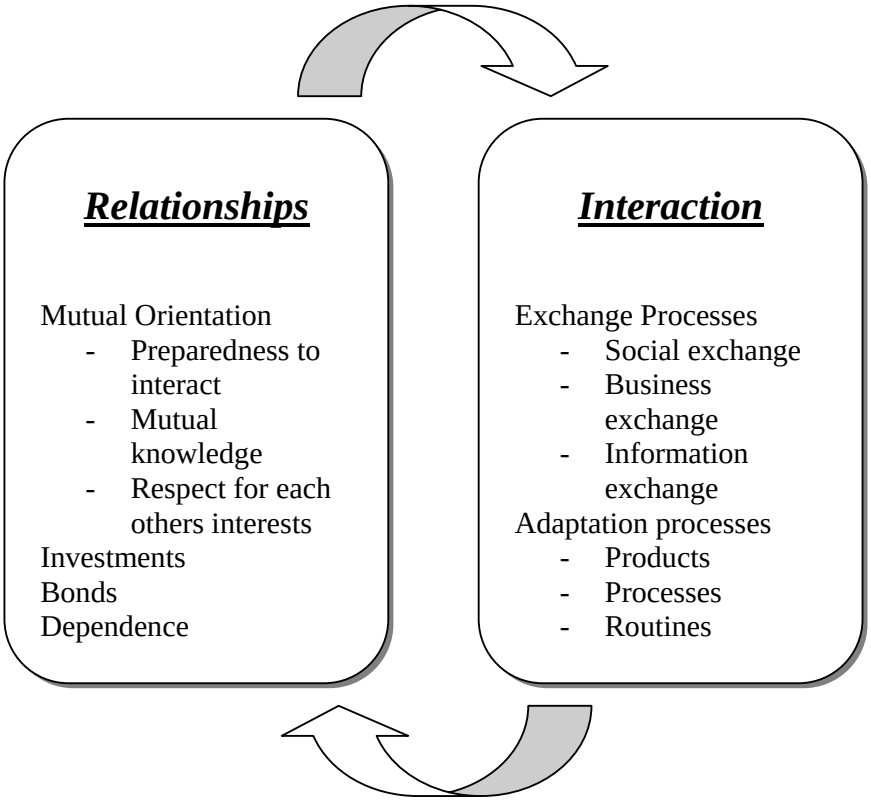
barriers.[63] In addition, partnership relationships or the interaction in the relationship between customer and supplier is considered by many scholars an effective vehicle for organisational learning[64] and mutual orientation[65]. It has been said that in order to gain the benefits identified, "buyer and supplier organisations must interact in a way that is mutually respectful, and where the relationship exhibits characteristics of true win-win partnerships."[66]

3.2.2 Interaction Processes

Mattson and Johanson (1987) identify inter-organisational interaction processes as exchange processes involving business, social and information exchange. In terms of adaptation processes, they include the product level, production level and routine level adaptations. Over time, both customer and supplier may make adjustments in their product, administrative procedures or production processes to suit the other better; these adjustments may be formal or informal and they are said to contribute to the development of trust in the relationship.[67] Adaptations may occur in technical, logistical, administrative, and financial or knowledge (technologies and R&D) levels. These adaptations are often expensive. Therefore, a key issue here is to continuously assess the relationship investments against the benefits sought.[68]

[63] Sheth and Sisodian in Egan 2001.
[64] Argyris et al. 1978, Grant, R. 2001
[65] Johanson & Mattson 1987
[66] McHugh, Marie et al.. 2003, p. 23.
[67] Mattson & Johanson 1987
[68] Ford 1998, pp.25-42

Figure 4. Relationships and Interactions In Industrial Markets



Source: Johanson & Mattson 1987, p.38

As the figure above also shows, the adaptation occurring over time in relationships contributes to mutual orientation development. In other words, interaction processes reinforce the relationship; the interaction paves the way for common understanding and knowledge sharing. The relationship determines the remits of the interaction; the concepts may be considered mutually reinforcing.[69]

[69] Johanson & Mattsson 1987.

Ford (1978, 1998) describes the long term 'relationships' and interaction in them as routinised to the degree where the 'interaction episodes' become a matter of expectations and taken-for-granted-behaviour. The transaction 'episodes' in the short term (or points of interaction where product-, service-, money, and social exchanges occur) constitute the 'total relationship' between the companies. The episodes at present are greatly influenced by the past 'episodes' (i.e. relationship history), and this will influence the future interaction as well.

However, as firms not only interact with external parties in customer supplier relationships but also internal resources, Lewis and Slack (2002) find that, in studying the resource-based view of the firm, what partly determines a firms capability to utilise it's intangible resources such as supplier relationships, contracts and a common approach to supplier management is the internal interaction of a firm's transforming resources. The transforming resources are the resources internal to the firm such as staff, facilities, etc. which are applied to transformed resources. The transformed resources include materials, information and customers; they are the operational inputs that are transformed and their focus is on the interaction of transformed resources with the transforming resources.[70]

3.3 Interaction Determinants in Emerging Markets

As we have so far established, aspects that contribute to organisational learning or knowledge transfer are enveloped in the interaction in customer-supplier relationships. However, no relationship exists in a vacuum. All relationships and interaction have a context and the context variables influence the interaction in the relationship. Instead of the institutional model, we will be using UNCTAD's Linkage programme (2001) to find determinants for organisational learning in an emerging or developing market context. The linkage programme evaluates the influence of the foreign affiliate's context in technology transfer (also referred to as adaptations, organisational learning or knowledge and skill transfer).

[70] Lewis & Slack 2002

3.3.1 Backward Linkages

The linkage theory (UNCTAD 2001) complements the above rationale and is particularly useful in considering TNC's foreign affiliates and their relationships to their suppliers in the host country. The linkage theory identifies backward and forward vertical linkages as well as horizontal linkages. Vertical backward linkages are those that a TNC's foreign affiliate forms with local suppliers (backward in the supply chain) and vertical forward linkages are the foreign affiliate's relations with distributors in the host country. Horizontal linkages involve interaction between the foreign affiliate and host country competitors.

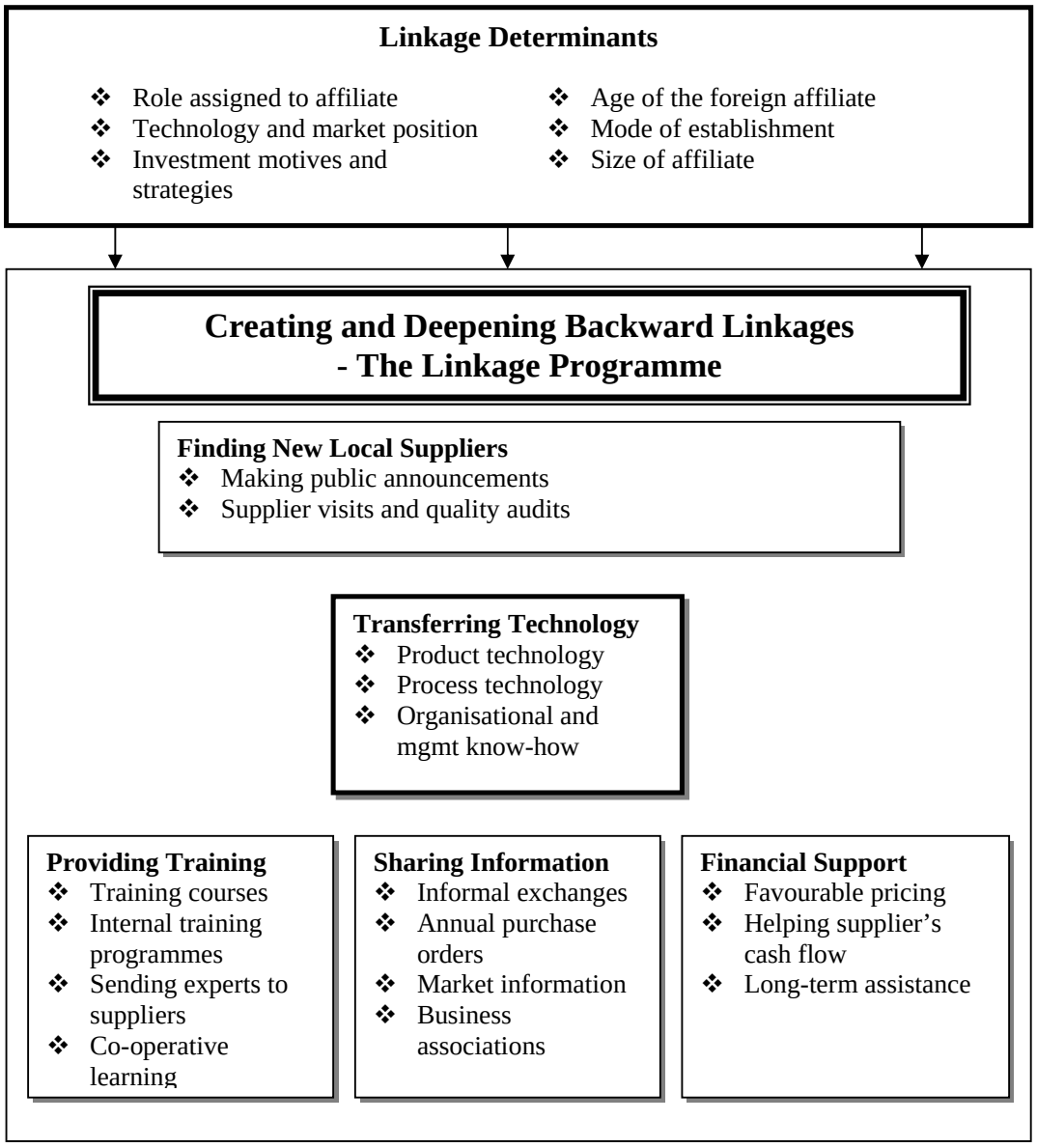
Backward linkages are defined as "transactions that reach beyond arms-length, one-off relations (as in buying standardised products off the shelf) and involve longer term relations between firms[71] such as partnership relationships. It is claimed that the majority of inter-firm transactions involves backward linkages, particularly noticeable exchanges involving exchange of information, skills, technology and other assets.

3.3.2 The Linkage Determinants

The linkage programme (UNCTAD, 2001) focuses particularly on the vertical backward linkages. It is useful in identifying the transfers of information, knowledge, technology, skills and know-how between customer and supplier in developing markets.

[71] UNCTAD 2001

Figure 5. Illustration of the Unctad's Linkage Programme



Source: Robye & Rosander 2002

The determinants for backward linkages in the UNCTAD model are as follows: the role of the foreign affiliate, the age of the foreign affiliate, technology and market position, investment motives and strategies, mode of establishment and the size of the affiliate.

In terms of the role of the affiliate, it has been said that the importance of foreign affiliate's (plants) roles in the local market should be seen and studied as an entity "that can absorb, transform, transfer and deploy knowledge."[72]

In strategic and investment terms, the foreign affiliate 'filters' the local supply base in search for development potential. This way the local supplier base is narrowed entering into closer relations with the remaining ones. The suppliers that remain in the supply base will then be "expected to manufacture and supply on a global basis; complex systems, to have independent design capacity and to solve problems jointly with the assembler."[73] It has been said that the selected suppliers will enjoy increased productivity, upgrades in technology and export growth. The technology and market position of the affiliate has significance in backward linkages, when products are specialized and technologically advanced, and there is a tendency to rely on in-house production or relationship with few selected suppliers.

The role of the affiliate refers to the degree of autonomy of the affiliate in sourcing; this determines how freely the affiliate may develop the local suppliers. It has been said that affiliates with stronger local ties have more autonomy. However, lack of autonomy has been found in some cases to inhibit the forming of local linkages. In addition, with affiliates with complete mandates for production globally, there is a tendency to have deeper supplier relations.[74] The age of the affiliate is said to impact local sourcing with time. This involves the hiring of local managers, thus increasing local potential and knowledge. The mode of establishment refers to the way the foreign affiliate was established, through M&A or through a Greenfield investment. It has been said that in the latter case supplier linkages are to be built up from scratch where the other option already has the relationships in place. The last of the determinants is the affiliate's size. The larger affiliates are said to source less locally due to local supplier limited ability to respond to large volumes.[75]

The means by which the transfers are done includes finding new suppliers, transferring technology, providing training, sharing information and extending

[72] Fusco & Spring 2003, p. 28
[73] UNCTAD 2001, p. 138
[74] Zanfei 2000, Frost et al. 1999 in UNCTAD 2001 Promoting Linkages
[75] UNCTAD 2001

financial support. These actions are means by which a firm may create or deepen its linkages to local host country suppliers; it also shows factors that influence vertical backward linkages.

3.3.3 Transferring Technology

In this paper we will consider the terms knowledge asset transfer and technology transfer as having ultimately the same meaning. Whereas knowledge transfer is more a term utilized in organisational and development studies, the corresponding term in industry is technology transfer.

Technology transfer is a term widely applied in transfers of know-how, skills and technologies between customer and supplier. It spans the transfer of product technology, process technology and organisational and managerial know how. The main area of interest here is the transfer of process technology and the transfer of organisational and managerial know-how. In managerial and organisational know-how transfer is included the introduction of new practices (such as network management for example), purchasing and financial or marketing techniques.[76]

The exchange processes and respective adaptations are forms of organisational learning and knowledge transfer. What is transferred in such interaction are knowledge assets or competencies.[77] Knowledge assets can be defined as "firm specific resources that are indispensable to creating value for the firm."[78] They are the inputs, outputs and moderating aspects in the organisational knowledge generating process. And, "Unlike physical assets, competencies do not deteriorate as they are applied and shared; they grow."[79]

Knowledge asset transfer may occur internally or externally to a firm. This thesis rests much on the external transfer of knowledge assets: the transfer of knowledge assets from one organisation to another, a process that occurs either deliberately (through learning and know-how agreements), inadvertently (through spillovers in alliance contexts) or imitation (between competitors). In this thesis, the focus is mostly on the deliberate knowledge asset transfer, involving learning and know-how agreements. However, whereas internal

[76] UNCTAD 2001 Promoting Linkages
[77] Hamel & Prahalad 1990
[78] Nonaka, Toyama and Konno 2001 p. 28

knowledge transfer is often assumed to be easier than the external one, this is not necessarily so.[80]

There are four categories of knowledge assets (see Appendix 6). These are experiential knowledge assets, conceptual knowledge assets, routine knowledge assets and systemic knowledge assets. Whereas knowledge assets themselves may be considered as an important source for a firm's competitive advantage, prerequisites to the competitive advantage involve managing, evaluating and transferring the knowledge assets.[81] As has been said, the technology transfers and knowledge asset transfers occur within a relationship. However, as the emerging market context and the determinants for technology transfer show, there are multiple factors that influence the transfer. These factors include the determinants as mentioned in the UNCTAD (2001) Linkages, but also distances as identified by Ford (1997).

3.3.4 Distance in Industrial Export Markets

A related concept or determinant to interaction in export markets is distance. According to Ford (1997), there are five types of distance to consider in business-to-business relationships. These are: cultural, geographical, social, technological and time distance.

- Social distance - refers to the degree of familiarity of ways of thinking and working between the individuals of each firm.
- Cultural Distance – refers to the degree of difference between the norms, values or working methods between customer and supplier due to national characteristics.
- Technological distance – refers to the difference between suppliers and customers product and process technologies.
- Time distance – refers to the elapsed time from contact establishment, placing an order until the actual products or service is transferred (contract lead time from order until delivery).
- Geographical distance – refers to the physical locations distance between each company (or units of a company*)[82].

[79] Hamel & Prahalad 1990, p. 82
[80] Teece 2001
[81] Nonaka et al.. 2001
[*] Our own reference unit is the affiliate and the mother company distance
[82] Ford 1997

According to Ford (1997), the factors that mostly influence trans-national business are social, geographical and cultural distances. In cases of relationship development, however, the relationship process focuses on commitment establishment and reducing the distance. These distances are reduced through interaction and face to face meetings. An additional impact is that it has been said that communication also facilitates the distance reduction.

In managing relationships and reducing the distance, it has been said that it should be the function of the operational unit in question. In other words, the operational (day-to-day, managing a single relationship) management needs to be distinguished from the strategic relationship management as it has been implied that the strategic relationship management (managing a portfolio of relationships) should be managed 'from a distance' from the worldwide organisation level and the operational management of the relationship responsibility is left to the unit closest to the relationship party. Additionally, it has been said that the operational level of managing relationships is an approach mainly found in the area of industrial export marketing. [83]

3.3.5 Own Reflections on The Theoretical Framework

So far, we have considered the aspects of relationships, interaction in the relationships as a basis for knowledge and technology transfer. We have also shown that there are context dependent determinants to technology transfer as well as distances that influence the interaction between a customer and supplier in an emerging market. The linkage theory established the key factors in the function and role of the foreign affiliate in terms of global purchasing and sourcing. The additional theories show that partnership relations and trust (commitment fostering) develops through interaction. In interaction is also embedded the basics of knowledge transfer and organisational learning, which are key features in our study. Based on these, we have formed a couple of hypotheses.

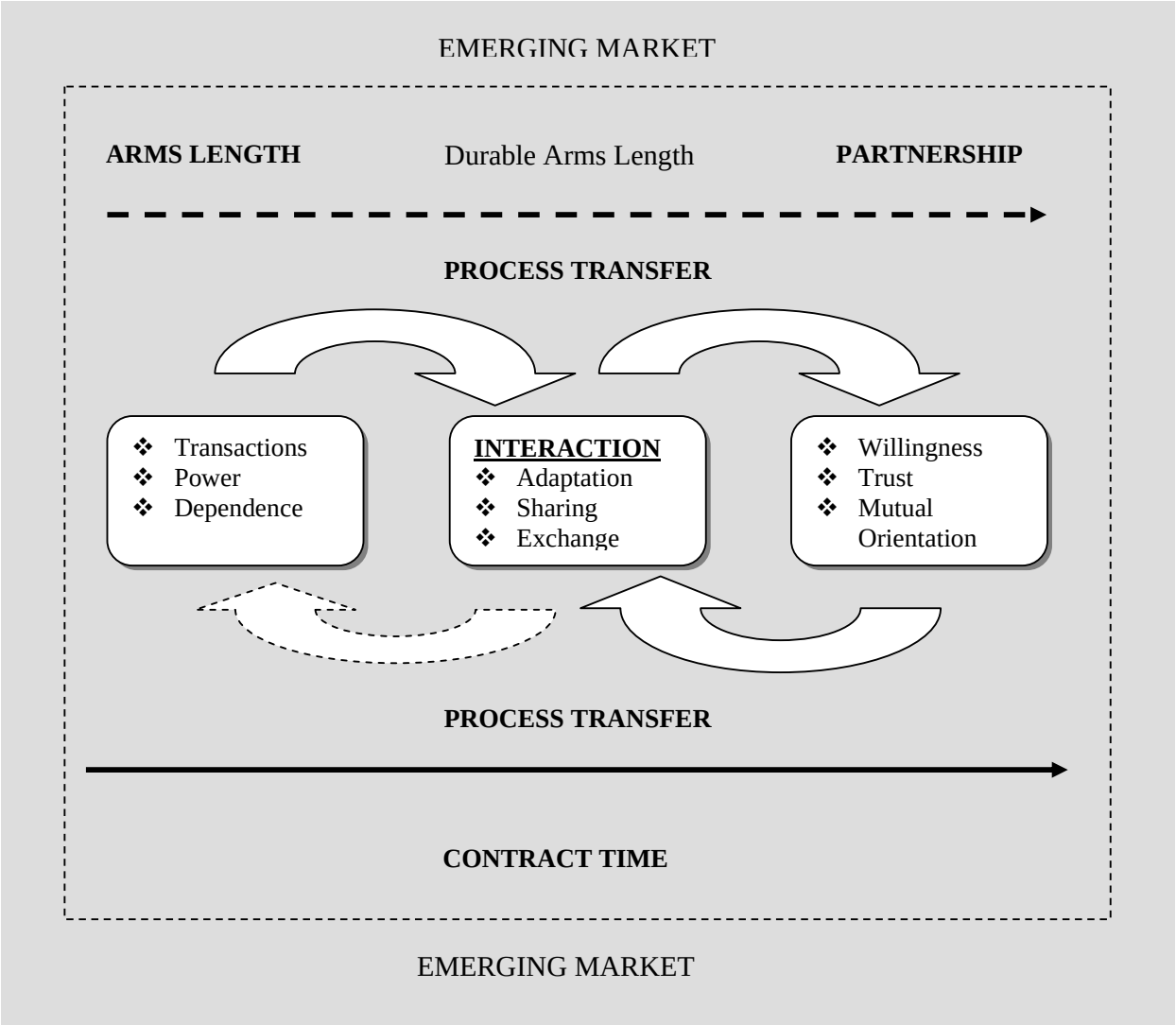
We assume from the pure geographical distance that VTC would have less interaction with local suppliers in Brazil when compared to the local affiliate VdB. Our hypothesis based on the assumption that the partnership relationships exist mainly between VdB and the local suppliers more so than between VTC

[83] Ford 1997

and Brazilian suppliers. Between VTC and Brazilian suppliers we hypothesise the relationship to be more of an arms-length relationship.

The second hypothesis rests mainly on the patterns of interaction found in each type of relationship. We assume that upon relationship initiation between customer and supplier, the interaction and level of involvement are higher than later when the more stabilized patterns of working together (routines) have developed. Also, as in any relationship there are joint projects, as in a marriage or buying a house for instance, and this requires more interaction and resource sharing than in the more stabilised routines. In this sense we assume that the relationships occur in a cyclical fashion; meaning that upon initiation the involvement is high and in stabilised periods it is low again, reaching high again in joint development projects between customer and supplier.

Figure 6. Own Conceptual Model



Source: Own

From the theories, we have constructed a conceptual model (above) that will be used as a reference tool in the analysis of the direct export process transfer. The factors identified above are selected factors that determine technology transfer to the degree of considering the relational basis contributing to the target supplier willingness to take on the process of direct export. The model attempts to combine the relational aspects that are considered as a basis for external knowledge transfer/technology transfer (interaction aspects) as well as the contract time and type. These factors will be referred to later in the analysis as

the willingness factors. On the left hand cycle, there are mainly the transaction-based, arms-length relationships and on the right hand cycle, there are the partnership relationships that facilitate technology transfer. What the figure does not show, however, is the fact that not all transaction-based arms length relationships ever develop to partnerships, but may well remain as such throughout the business-to-business relationship.

Further, the model also shows that relationships may remain in the durable arms-length or arms-length level, where involvement and interaction is limited. This means that the relation is question would remain in the remit of the left hand cycle (dashed arrow). This means that even in arms-length relationships, there is interaction, but not to the degree of generating mutual trust to promote inter-organisational learning as is seen in partnership type relationships.

However, the model does not address any factors that relate to the Brazilian suppliers capability to take on the direct export process. In our minds, the capability is a factor determined by the pre-set requirements, or the business context that they are in. Therefore, in terms of the local context and the external context specific requirements, we aim at finding these through our empirical study to complement the model above. These factors will be called the capability factors in the analysis. As one of our sub research questions also states, our study aims at finding these specific requirements that are set for suppliers to take on and accept the direct export process.

4 Setting the scene

In order to approach the research problem and prior to the presentation of the empirical findings, it is important to gain a base understanding on the external powers and factors affecting the Brazilian vehicle industry and further our case company, Volvo do Brasil as well as its Brazilian suppliers.

4.1 Overview of the Brazilian vehicle industry

The Brazilian automotive industry has a history reaching back to the beginning of the 20th century. The first international producer to set up assembly operations was Ford in 1925, and shortly after other major U.S. auto vehicle manufacturers as General Motors and Chrysler followed. Assembly plants were set-up encouraged by local government's policies and import tariffs. Further, non-tariff barriers encouraged green-field plants and TNCs started establishing local production plants in the late 1950's. [84]

With trade barriers falling in the beginning of the 1990s, more new vehicle manufacturers entered the market. The barriers to imports fell and manufacturers could now supply several countries from a single plant (as in the case of Volvo's Brazilian plant), able to take advantage of the economies of scale.[85] Between the years 1995 and 2000, the vehicle producers had committed some $21 billion USD for new plants (50 percent of the investments) and upgrades of existing ones.[86] The increased presence of the multinational automobile manufacturers also had an impact on the local supplier development as many follow-sourcing suppliers entered the market and smaller Brazilian supplier were encouraged to consolidation through mergers and acquisitions by their multinational customers.[87]

Brazil is today the largest producer of automobiles in South America and a key exporter of vehicles. The incentives for foreign vehicle producers are the low labour costs and skilled workforce as well as the established local auto-part

[84] Stephens & Cole 1988 and O'Keefe & Haar 2001
[85] Smith et.al 2000
[86] Smith et al.. 2000 and Fusco & Spring 2003
[87] Zilbovicius et al.. 2002

sector. Having said this, an interesting feature of the local market, is the bid wars over the foreign auto producers' investments between the different Brazilian states. [88]

The financial shocks experienced by the Brazilian economy together with the fierce competition in the Brazilian market are challenges to the international vehicle producing TNCs with operations in Brazil. In the passenger car segment, some of the producers have even decided to withdraw from the market.[89] However, the situation in the commercial vehicle segment is more positive.

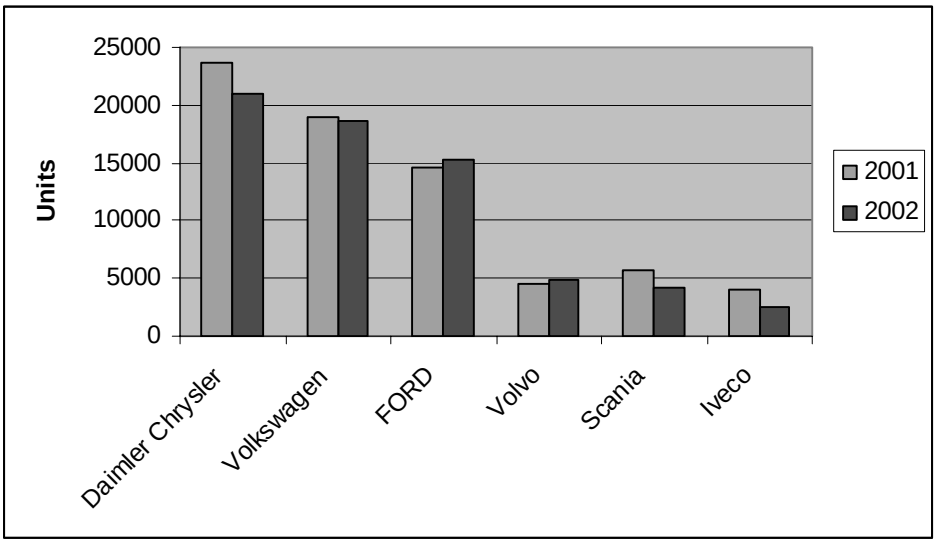
4.2 The Brazilian Commercial Vehicle Segment

The two main categories in the commercial vehicle segment are the light commercial vehicles (LCV) and the heavy duty vehicles (HDV) including both trucks and busses. Brazil has been a major market for the heavy duty truck industry, partly because of poorly developed railroads. When considering the levels of freight transportation per mode, it can be seen that during the 1990's, around 60 percent of the freight was transported by road while the same percentage for railroad transportation was only 20 percent. Some 15 percent of the freight was also transported by water ways.[90]

The commercial vehicle segment is the first in Brazil to feel the changes in the economic situation. Although the overall vehicle sector has experienced decreased demand and expected sales to drop by 8 percent in 2003, the trucks and bus segment is having more positive times. The fact that the truck production is expected to grow more rapidly than that of the passenger car segment, can be partly explained by companies trying to compensate for the weak demand in Brazil by expansion of export. However, the new investments can be seen also as a sign of the truck and bus producers' trust to the recovery of the economy and an increase of sales.[91]

[88] Smith et al. 2000
[89] Fusco& Spring 2003
[90] ANFAVEA 2003
[91] 2003

Table 1. Total Production of Commercial Vehicles 2001-2002



Source: modified from ANFAVEA (Associacao Nacional do Fabricantes de Veículos Automotivos) 2003 and OICA (International Organisation of Car Assemblers) 2003

Depending on the segment studied, the market shares can look very different. When discussing in terms of the overall commercial vehicle segment without dividing into sub-segments, volume wise the commercial vehicle segment is divided into two 'leagues' as the table above indicates. DaimlerChrysler (DCX), Volkswagen and Ford all produced over 15 000 units in 2002 while Volvo, Scania and Iveco stayed below 5 000 units.[92] DCX has led the market for 33 years and during 2003, DCX and VW competed fiercely for the number one market position. In the first quarter of the year DCX lost its market leadership for a short time to Volkswagen.[93]

4.2.1 The Heavy Duty Truck Segment

The heavy duty (HD) truck segment includes the heavy- and super-heavy trucks over 16 tons. The competition in the HD segment is very intense between producers such as Volvo, Scania, Mercedes-Benz Trucks (part of DaimlerChrysler) and recently Volkswagen, who until now has been competing mostly in the lighter segments. Volkswagen is the newcomer in the HD

[92] ANFAVEA 2003
[93] Monteiro 2003

segment and it recently announced that it aims on reaching a market share of 25 percent and eventually becoming the market leader in the segment.[94]

The overall heavy duty truck production in Brazil during the year 2002 was around 68,500 units. Compared to 2001 with a figure of 77,431, the production had fallen by 11 percent.[95] When discussing the heavy duty truck players, the market is distinctly divided between four players; Mercedes Benz (DaimlerChrysler), Volvo, Scania and Volkswagen. Each of these companies possesses around one third of the market.[96]

4.2.2 The Bus Segment

When looking at the percentages of passenger transportation modes, nearly 97 percent of the passengers in 2000 travelled by road while only 2.2 percent by air and 0.8 by railway. Brazil has a low motorisation rate and the ratio is nine inhabitants per one passenger car.[97] This has led to bus travelling as a popular transport form in Brazil and the local network of bus routes is very dense. The major players in the Brazilian bus market are Mercedes Benz and Volkswagen. Volvo competes mainly in the transport-focused segment with luxury coach.[98]

The Brazilian bus market performed well in the first half of the 1990s and reached an annual sales volume of 17,300 units in 1995. The high sales volume in 1995 was derived from the fact that great proportion of the bus fleet was replaced at the time. Further after 1996, the bus sales have faced a cyclical downturn. The government is encouraging companies to change their highly polluting old fleets, but simultaneously the improvement of the rail system can take a share of passengers from the bus transport. In 2001, the produced units were 22,699, compared to the year 2002 when 23,163 units were produced. [99]

[94] Monteiro 2003
[95] OICA and ANFAVEA 2003
[96] Sjöstedt 2003
[97] ANFAVEA 2003
[98] Sjöstedt 2003
[99] The Economist Intelligence Unit 1999 & ANFAVEA 2003

4.3 The Brazilian Auto-Components Industry

The Brazilian auto parts and components industry supplying the assemblers directly or indirectly with components is a network of diverse and specialised components producers (see Appendix 7). This network is increasingly internationalising and the amount of purely local component suppliers is reducing.[100]

It can be said that the situation during WWII and the period immediately after where the raw materials were scarce and were used to support the war led to growth of a substantial Latin American spare parts industry. As new vehicles and spare parts were not imported from abroad, the local industry started providing the market in order to keep the existing fleet of vehicles operating. These suppliers started as small family-owned workshops, but they provided a basis for the later development of a local auto parts industry.[101]

Until the beginning of the 1990s, protectionism in the Brazilian market made importation of assembled cars and components nearly impossible, which encourages the nationalisation of the production and therefore local contents in the CBUs were high. In the beginning of the 1990's, the opening of the economy brought radical changes to the assembly industry and therefore also to its entire network of suppliers.[102] However, even today assemblers keep their local content levels high in order to have access to benefits offered by the government.[103]

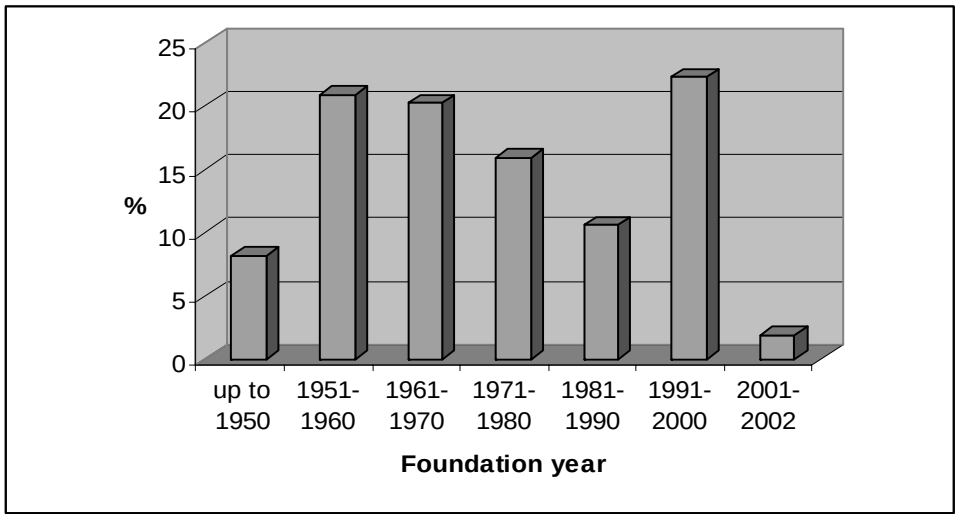
4.3.1 The Trends in the Sector

After the liberalisation of the markets, the Brazilian auto-parts industry has become an object to restructuring. The industry has adopted the value adding process, the supply chain management thinking, and product design process among others. New foreign component suppliers, often follow source suppliers to vehicle producers, have entered the market and joint-ventures, mergers and acquisitions have taken place. This is seen in the Brazilian auto parts industry

[100] Laplane & Sarti 1997
[101] O'Keefe & Haar 2001
[102] Salerno et.al 1998
[103] Alvstam & Ivarsson 2003

as a trend of consolidation and internationalisation, which has caused many challenges for the locally-owned Brazilian suppliers.[104]

Table 2. Age of Auto-Part Producers Members of Sindipecas



Source: Modified from Sindipecas (Sinidicato Nacional da Indústria de Componentes para Veículos Automotores)

The table above shows that only 8 percent of the current members were founded before 1950, while a large percentage (41 percent) were established between 1950 and 1970 under the protectionist actions of the government. In the 1970s, 16 percent of the Sindipecas (the national syndicate of auto parts producers) members started their business and in 1980 the percentage was 11 percent. Interestingly, the foundation of new companies sped up after the opening of the Brazilian auto parts markets and we can assume that many of these companies are also foreign-owned subsidiaries to greater TNCs or joint ventures between new foreign entrants and local players.

In 2002, 78 percent of the Sindipecas members had their capital source on foreign actors while the remaining 22 percent had a local capital origin. Compared to 1994, the level of foreign capital had increased by 26 percent (from 52 percent) while the amount of Brazilian-owned components suppliers had decreased from 48 percent to 22 percent.[105]

[104] The Economist Intelligence Unit 1999 and Zilbovicius et. al 2002
[105] Sindipecas 2003

The geographic distribution of the component manufacturers has also changed during the last decade as the suppliers have followed the assembly industry. In 1992, the Sao Paolo City area dominated as the locations for production facilities of component supplies (39 percent). The ABCD area (cities of Santo Andre, São Bernardo do Campo, São Caetano and Diadema) was the second most popular location area with 19 percent and rest of the Brazilian states came third in the comparison. By 2002, the situation had changed and the Sao Paolo city had lost its dominance to other states while the ABCD area came third in the comparison. [106]

4.3.2 Local Content Requirements

During the 1950s and the 1960s, the local vehicle supplier industry grew rapidly under the government's protectionist policies. The local content requirements were nearly 100 percent and the import taxes were astronomical. [107] Through the adoption of free market policies in the 1990s, the import taxes were reduced from practically prohibiting import to 35 percent for assembled vehicles and 14 to 18 percent for auto parts. At the same time the local content requirements were reduced to 60 percent and many local auto-part producers out of the business. The government even conducted policies favouring new vehicle manufacturers entering in the market in form of substantial fiscal incentives and a local content level of just 50 percent during the first three years of operations.[108]

Originally, the local content requirements encouraged local sourcing. But today the competitive price and quality of the local suppliers is also a main reason to the increased share of domestically produced parts. Companies also source locally in order to avoid import tariffs, insurance costs and freight costs related to import activities.[109]

4.3.3 ATA Autoparts Technologies Alliance

An interesting example of supplier base consolidation in Brazil is supplier alliances in the auto-parts sector. In order to cope with the increasing competition caused partly by international follow-source suppliers, local suppliers have been encouraged by public authorities to form alliances where

[106] SINDIPECAS 2003
[107] Zilbovicius et al.. 2002
[108] The economist intelligences unit limited 1999, p.99

they are able to create synergies. An example of this kind of Alliances is ATA, Autoparts Technologies Alliance.

The ATA alliance is a partnership of auto part producers supported by both public and private institutions that "foster technological research and development as well as exports."[110] The consortium is a totally independent alliance that serves as a forum where the 13 members share information on quotations, service providers, workers unions and other issues related to production and exporting. The meetings take place once a week with all the member representatives present and at the A.T.A premises. The location is in Sao Paolo, near to the premises of General Motors (GM).[111] Through A.T.A the members are able to co-ordinate, integrate and control the industrial activities of the partners and achieve synergies.[112] Of these 13 members, around 60-70 percent export at the moment. [113]

4.4 Rules and Regulations for Export from Brazil

4.4.1 MERCOSUR's Impact on Exports

In addition to local content requirements set by the Brazilian government, there are additional trade regulating agreements. One of these is MERCOSUR, the Southern Common Market. MERCOSUR is ideally a common market, but practically has stayed to the free trade area level. At the moment discussions are conducted between the members and the next level, the customs union level, is planned to be achieved by January 2006. [114]

When discussing the effect of MERCOSUR in the exporting of Brazilian companies, it is therefore essential, according to an interviewee, to make a distinction between the MERCOSUR free trade area and the 'automotive' MERCOSUR, officially known as Automotive Regime and Common Policy. [115] Academically the MERCOSUR, or the Southern Common Market, is a custom union where around 80 percent of all the goods are under the Free Trade Area meaning that a common external tariff (CET) has been established

[109] Ogliari 2003 and Alvstam & Ivarsson 2003
[110] A.T.A 2003
[111] Gazola 2003
[112] A.T.A 2003
[113] Gazola & Giampietri 2003
[114] O'Keefe and Haar 2001, Ogliari 2003
[115] Ogliari 2003

for similar products imported from de the common market. By the automotive Mercosur it is emphasised that the automotive sector is not included in the free trade area and that instead, bilateral agreements are made between the member states.[116] For instance, the bilateral agreement between Brazil and Argentina is made respecting the trade balance limit on country level and aiming at maintaining trade flexibility. This exclusion aims at securing that the automotive exports are in balance as this has been traditionally an important industry for both Brazil and Argentina. For other importers than those with whom Brazil has a specific bilateral agreement within the MERCOSUR, the import tariff is 35 percent, which is the highest possible import tariff allowed by the World Trade Organisation.[117]

In order to gain the benefits from the bilateral agreements within the MERCOSUR, the parties have to respect the rules of origin specified in the bilateral agreement. This includes that the exporters within the two countries having a bilateral agreement have to be able to prove that the goods exported have a minimum of 60 percent of local content; this applies to all industrial exports from Brazil.[118]

The Treaty of Asunción in 1991, which established the guidelines for the gradual creation of a free trade area among Argentina, Brazil, Paraguay and Uruguay, excluded the automotive sector as a whole. Therefore, the decisions regarding importation of foreign vehicles and auto parts were left to be dealt with domestically in every member state.[119]

Already in December 1994, the Common Market Council, which is MERCOSUR's highest institutional body, outlined the initiation of an implementation of common rules among the member states to also reach the automotive sector.[120] The transition period for the automotive sector to become included in the FTA started in January 2000 and will end in December 2005. It has been stated that from January 2006 there will be a common automotive policy implemented among the MERCOSUR member states. However, there have been some rumours that this will be postponed to a later date. The

[116] Ogliari 2003
[117] O'Keefe & Haar 2001, Ogliari 2003
[118] Ogliari 2003
[119] O'Keefe & Haar 2001
[120] O'Keefe & Haar 2001

business community in Brazil seems to also have doubts about the functionality of the MERCOSUR: "Already from the beginning the main players in the MERCOSUR were Brazil and Argentina. Now that Argentina's economy is in bad shape, what is left in the MERCOSUR? Brazil."[121]

On the other hand, it is generally admitted that the decisions taken at MERCOSUR and at the national level affect the whole industry and it is difficult for companies like Volvo do Brasil to predict how these will affect the market. The possible changes and the possible effect make business planning challenging as the changes are also difficult to secure in business plans and strategies. When considering the supplier relationships, the decisions taken at the company level under uncertain circumstances can be difficult to rationalise to the suppliers.[122] Multinational vehicle manufacturers are waiting for results in the integration of the automobile sector into the customs union as this has impeded them to use the MERCOSUR region efficiently as "an export platform for global sales."[123]

4.4.2 Export Regulations

There are four main laws governing the exporting organizations. These laws are mainly on taxes. The taxes that apply are on export taxation (IE), taxation of commodities in circulation (ICMS) with exceptions for semi-assembled commodities and raw materials (Kandir Law), tax on industrial commodities and finally, taxes for social contribution (COFINS) and social integration (PIS).

For Intra company exports (from affiliate to group plants), the government has set a minimum profit margin for the goods exported which is 4 percent. This has been put into effect to prevent the mere sending of goods from Brazil without making a profit. An additional law for exporters from Brazil is one that requires the exported goods to be invoiced to an external third party (such as a commercial agent) as the goods leave the Brazilian border.[124]

[121] Capriglione and Morais de Araujo Souza 2003
[122] Ogliari 2003
[123] O'Keefe and Haar 2001
[124] Rutting , Santos 2003

4.4.3 Funds Available for Exporters

The exporting companies have a few options for gaining financial support. The organisations involved here are the two banks BNDES (Banco Nacional de Desenvolvimento Econômico e Social) and Banco do Brasil. Both banks are public banks that have their own programs for export support.[125] BNDES has EXIM (export and import financing program) and Banco do Brasil has PROEX (Programa de Financiamento às Exportações).

4.4.3.1 BNDES

Under BNDES function most of the export agencies in Brazil. The BNDES allows subsidies (lower interest rates for loans) and leases for exported goods.[126] The BNDES and the EXIM objectives are to increase exports from Brazil. BNDES provides support for exporting organisations in Brazil, maintaining favourable conditions for exporters and also ensuring the exporters competitiveness in the international external markets.[127] BNDES is also involved in the public capital goods sector.

4.4.3.2 Banco do Brazil

Banco do Brazil, the other public bank providing support for exporting organizations has a program called the PROEX for granting loans for exporters. Banco do Brazil acts as an agent of the national treasury and they are accounted for in the national budget. The PROEX focuses mainly on the post shipment phase of the export, when the goods have left Brazil but have yet not been paid for and for this there are two different units: equity loans and financing. Both of these units grant loans based on the value of the exported commodities. Banco do Brazil also does business in the capital goods sector, both private and public.[128]

4.4.3.3 Drawback

In addition to loans and guarantees from the banks, the exporting companies also have an opportunity to tax reductions. One such is the ‘drawback’. The drawback is granted to an exporting company when raw materials are imported for the export goods production purposes. However, to get the ‘drawback’, or

[125] Ogliari 2003
[126] Ogliari 2003
[127] Aprendendo a Exportar, Federal Government informative CD 2003
[128] Ogliari, Aprendendo a Exportar, Federal Government informative CD 2003

tax reduction for the imported raw material, the exporting company needs to prove to the Central Bank that the imported goods are ultimately for export purposes. If proof is not provided, then the company will face severe fines. For local purchases of raw materials there are no tax reductions similar to the drawback.[129]

4.4.4 The Export Process and Authorities Involved

In the following, a description of the export process will be made considering the Brazilian requirements on exporters. In the subsequent section, commercial, logistical and communication aspects will be considered. The export process consists mainly of the packaging and logistical aspects for the goods, but also needs to consider the local export business context, rules and regulations as well as related processes for handling and customs clearance of the goods.

4.4.4.1 REI

This registry, REI (Registro de importadores e exportadores), has all exporters and importers listed. In it, legal entities (organisations) as well as persons may register for exporting. However, in the case of exporting organisations, the registration to this register is automatic as the first export activity is pursued.[130]

4.4.4.2 SISCOMEX

The SISCOMEX system (Sistema Integrado do Comércio Exterior) is an integrated system for external commerce for Brazilian exporting companies. It is claimed to be the first export registration system that is completely IT based. Through this system, the local government is able to control Brazilian external commerce. The system was created in 1993 for export purposes and was implemented also for imports in 1997. It is administered by the Ministry of Foreign Trade (SECEX or Secretaria de Comércio Exterior), by the Secretary of the Treasury (Secretaria da Receita Federal, RF) and the Central Bank of Brazil (BACEN). Through the SISCOMEX, the exporter may register and proceed with exports. The SISCOMEX can be used only after the Revenue Ministry has granted a password for the organisation in question. The password is provided as the introduction for the 'terms of responsibility' have been completed.[131]

[129] Hardeman, Ogliari 2003
[130] Aprendendo a Exportar, Federal Government informative CD
[131] Rutting and Hardeman 2003, Aprendendo a Exportar, Federal Government informative CD

Registro de Exportacao

The RE (Registro de Exportacao), or Export Registry, is initiated upon making an entry to the SISCOMEX. The RE number is one that can be obtained by the exporter themselves or their commercial representative. The RE is approved automatically by the system granted that the conditions for export have been met and all details have been given correctly. The RE is valid for 60 days from issuance and is automatically cancelled after that period. Upon registering to the RE, the exporter gets a reference number that is the export license.

RES, RV, RC

The RES (Simplified Export registry) is of a shorter nature than the RE. The validity is only for 5 days from issuance and it can be used for exports not exceeding 10 million USD worth. It is mainly used for the customs-handling period from passing the customs up to loading onto the vessel for shipment. The RV (Registro da Venda) is a sales registry, controlling the sale prior to exporting. This RV needs to be done in the SISCOMEX prior to the RE registration. The RC (credit registry) is a module of the SISCOMEX and it is up to the exporter or their representative to register required details for credit in the system. The RC also needs to be solicited prior to getting the RE registry reference, it is a system that protects the exporter in question from immediate financial risks that may be associated.

4.4.4.3 Customs process

As the goods are ready to be shipped, and the export register has been completed, to get the goods out of the port they need to have a declaration for customs dispatch; this may also be done through the SISCOMEX system. This is a fiscal arrangement that is to ascertain that the goods are definite for exportation. From the issuance of this to the system, the exporter has 15 days for document handling by the Ministry for Revenues. The confirmation of cargo needs to be done and it may be done by the exporter or their respective agent. At the port the goods are subject to three types of customs inspection channels:

- Green channel – Exporter is free to deliver to ship without any further inspection of documents or physical examination of the goods.
- Yellow channel – Exporter needs to submit all documentation for inspection by the customs officials prior to shipment
- Red channel – Exporters goods and documentation are subject to inspection by the customs officials at the port prior to shipment.[132]

The selection of an exporter to proceed through the channels is made randomly. However, it has been confirmed by interviewees that it is helpful if the exporter is a well-known company or frequent exporter when compared to smaller more unknown firms involved in exports.[133]

In addition to doing the customs and documentation (RE, etc.) on their own, an exporting company can also seek help from customs brokers (stationed in the harbours to facilitate the administration), or trading companies. Customs brokers deal effectively with the legislative aspects of exporting and customs and keep their clients updated on any changes in the legislation.[134] However, whether in-house or outsourced to a customs broker or trading agency, interviewees state that the documentation and administration of the exporting is a high cost to an organisation and the handling of the issues in-house requires an administrative structure.[135] When the goods are shipped, an SD reference number is created. This reference number has to match the RE number and the given details registered under it in the SISCOMEX.[136]

4.4.4.4 Incoterms

The International Commercial Terms (Incoterms) also apply for exports from Brazil. The main ones of interest here are EX works (EXW), CIF and FOB. These terms apply only for transport on waterways.[137]

The EX works represent minimum requirement for the seller (supplier in this case). The risks and costs associated for the pickup of the commodities falls on

[132] Rutting, Hardeman 2003, "Aprendendo a Exportar", Federal Government informative CD, 2002
[133] Hardeman 2003
[134] Hardeman 2003
[135] Ogliari 2003
[136] Hardeman 2003
[137] "Aprendendo a Exportar", Federal Government informative CD, 2002

the buyer, if not otherwise specified in the buy-sell contract. In practical terms, this means that the commodities for sale are located at the sellers premises (a warehouse for instance) that is accessible for the buyer to pick up.

FOB, also known as Free on Board (port of shipment), is a term where the seller carries the risks and costs for the exported goods until the port of shipment. From the moment on when the goods are loaded onto the vessel, the risks, costs and responsibilities of the good are transferred to the buyer. This term is only applicable for transports of goods via waterways.

CIF, also known as cost, insurance and freight (port of destination), is a term where the responsibility of the commodities (i.e. ownership of goods) is shifted from the seller to the buyer at the harbour (for ex. Santos or Sao Francisco do Sul), upon loading the goods onto the vessel. The seller is responsible for contracting the transport and logistical provider. However, the seller carries the costs in transport until the destination harbour. This term applies only for transports via waterways.[138]

4.4.5 Summary of the Export Process

As the regulations above indicate, there are many things to take into account when considering exports from Brazil. In practical terms, the following issues are to be considered when starting to export from Brazil independently: knowledge of the international trade associations and institutions such as the FTA and Mercosur, the bureaucratic processes and the administration required for their handling need to be prepared for, in-house or externally and making an investment in the administration and handling of exporting. One needs to get the Export license, the RE from the Central Bank for each export trade transaction, and they need to be connected to the SISCOMEX system.

Prior to being able to register for exports, the company needs to present a commercial invoice. This means that the business will have to have been set up with an external partner prior to getting registered or having access to the SISCOMEX by the password granted by the authorities. It may take up to three days for the central bank to issue this document. This document also has to travel with the merchandise, so for instance, “in the case of a public holiday in

[138] Capriglione, Ogliari and Hardeman 2003, “Aprendendo a Exportar”, Federal Government informative CD

the middle of the week, there really isn't a real chance to obtain the document due to the three days; this is why the merchandise sometimes has to wait."[139]

As the RE is granted and the details have been given (payments to receive, etc.) for the RE, a proof of shipment (SD reference) should be received and this reference should match the RE details given. From the proof of shipment reference the commercial invoice is issued and the there is 180 days time to payment (legal maximum); these payment times are subject to inter-company agreements. If the payment terms are not followed as set in the RE, the Central Bank may evoke the license. However, as delays are frequent, there exists certain flexibility. The exporter can submit a letter explaining the delay and is usually granted an additional 180 days for payment.

4.4.6 Future Developments

As vehicle manufacturers need to compensate the stagnation of sales in their home markets, they seek for new emerging markets. In 1995, Brazil doubled its import taxes for vehicles that had been produced outside Brazil by companies that were not present in the country. This resulted in more automobile producers establishing operations in Brazil in order to be able to answer the Brazilian demand.[140]

However, with the current down turn in the vehicle producing sector and the resulted overcapacity in the Brazilian market, the vehicle manufacturers are trying to compensate for this by looking for new export markets. This trend is also followed by the Brazilian auto-parts producers. These sectors are now pushing for the government to implement reforms as the administrative bureaucracy and the high taxes increase local production costs and reduce the competitiveness of the Brazilian producers in the external markets. [141]

[139] Hardeman 2003
[140] O'Keefe and Haar 2001
[141] Ogliari, Hardeman 2003 and O'Keefe and Haar 2001

The complex export system and high demands on documentation are time-consuming and create export barriers for smaller local companies who would need exporting in order to survive. This does not make it easy to follow the government's and President Lula's motto: "Export or die".[142] Another form of protectionism practiced by the Brazilian government can be seen in the local suppliers' selection of LSP. According to the law, a Brazilian exporter cannot pay for services rendered from an external logistical service provider. To work their way around this, the services are invoiced to the supplier's foreign affiliates. This applies also in the case of VdB; the payments for VLC's services are made via Volvo Group's central account.[143]

At present, the Brazilian government has issued a proprietary measure (MP in Portuguese) for the congress. This means that all the various laws that address the exportation processes would be consolidated under one law. However, prior to making this a law, the Brazilian congress has 120 days to discuss the matter and then grant the MP to be passed as a law.[144]

[142] Rutting 2003
[143] Bergström 2003
[144] Ogliari 2003

5 Sourcing at Volvo

In this chapter we will describe the findings of our field study. The findings presented in this chapter are primarily based on interviews at VTC and VdB in terms of Volvo's global strategic approaches to sourcing. The subsequent chapter maps the processes related to global sourcing at VdB level both supplier and Volvo unit perceptions. Facts and information from both chapters will be discussed in the analysis.

5.1 Sourcing Strategies

"By seeking new suppliers from markets where the TNC has affiliates, the TNC can not only reduce costs in the local affiliate level and fulfil the local content requirements, but also possibly detect suppliers having the capacity to export to other plants and therefore becoming a global supplier."[145]

The separate worldwide 3P organisation is responsible for the product planning, purchasing, product development and program management for the three trucks companies of Mack, Renault and Volvo Trucks.[146] Therefore, all purchasing activities are centralised with the aim of implementing Volvo's Global Sourcing Process through the whole organisation.

Volvo 3P has recently launched a strategic sourcing program in order select across all the categories suppliers who are innovative and competitive suppliers in the Volvo Trucks.[147] Volvo conducts both global and continental strategies in global sourcing. The strategies are revised at least once a year.[148] This may help in reacting to the fluctuations in the markets. The decision of having either global or continental strategy depends on the complexity of the product, the local integration needs and to a degree depends on the size and weight of the parts.

[145] Ivarsson &Alvstam 2003
[146] Volvo Group Annual Report 2002, p. 2
[147] Volvo Supplier Portal 2003 (1)
[148] Barreto 2003

As has been said, Volvo uses both global and continental strategies when sourcing. The 3P organisation is at present exploring the options of continental and global strategies and the focus is in emerging markets.[149] As part of 3P sourcing strategy, emerging market sourcing strategy has a special role. This strategy includes moving technology parts to the use of the whole Volvo and its units from emerging markets. Volvo's target is to increase the purchasing from emerging markets. A particular team has been formed to investigate the opportunities and help the line organisation to handle the emerging market strategy.[150]

5.1.1 Supplier Base

Depending on the strategy in use, global or continental, this defines the supply base. When referring to Volvo's global sourcing strategy and the Global Sourcing process, both global and local as well as systems and technology suppliers are included. The global strategy is therefore a vision for all the sourcing activities in the Volvo Global Trucks pushed forward by the 3P organisation. [151]

- ***Systems suppliers***: these suppliers develop their components independently without Volvo drawings. These suppliers are often TNCs themselves and in some cases they are of greater size than VTC.
- ***Technology suppliers***: these are suppliers supplying technologies to Volvo or even to Volvo's component suppliers (1st tier). Volvo specifies and submits the drawings to the supplier and the supplier produces according to the order. These suppliers work in close collaboration with Volvo in developing the parts.[152]

Volvo aims at having one supplier for each technology. One future requirement is that these suppliers have a local presence where Volvo is. This means in practical terms that the supplier becomes a follow-source supplier to Volvo.[153] This requires a global product that would fulfil all the needs of all the Volvo Global Truck brands; Volvo Trucks, Renault and Mack, being as common to all of them as possible. This would, with no doubt, create synergies and it is

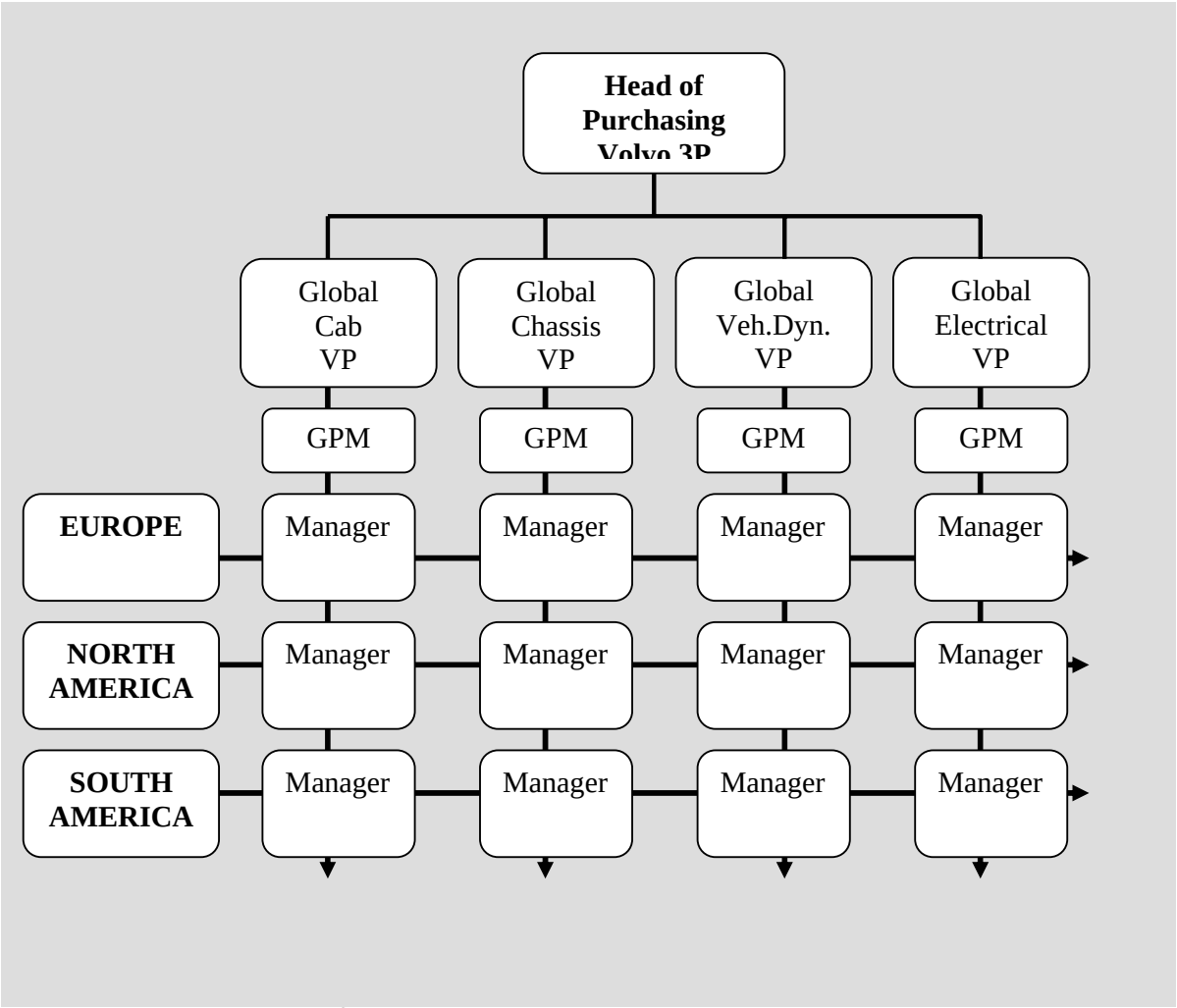
[149] Purchasing management team 2003, Dias da Silva 2003
[150] Blin 2003 and Bergstrom 2003
[151] Belforte 2003
[152] Blin 2003 and Berndtsson 2003
[153] Belforte 2003

perceived that in the long-term, Volvo might be reach a result close to this ideal picture.[154]

Volvo's ambition is to consolidate its supplier base. Practically, this means that the company encourages its suppliers to 'organise themselves' more efficiently. For some this means mergers and acquisitions, for others it mean supplier alliances like the A.T.A (mentioned previously).[155]

5.1.2 Global Purchasing Organisation

Figure 7. The Volvo 3P Purchasing Organisation



Source: Own application.[156]

[154] Belforte 2003
[155] Lagerblad and Berndtsson 2003
[156] Based on Purchasing Management Team Information 2003

The above organisation table represents the Volvo 3P Purchasing organisation. The organisation is a matrix organisation where the global Vice Presidents have global responsibility for different parts groups related to Cab, Chassis, Vehicle dynamics and Electronics. Further, each continent responsible is in charge of all the part groups continentally. In every continent there is also a manager responsible for the buyers. Every part segment also has a manager responsible for the purchasing globally, the Global Purchasing Manager (GPM).

Related to the ongoing mapping of future global suppliers, the GPM has calculated the accumulated volumes of the different Volvo Global Trucks sites together to be quoted from the suppliers world-wide. The Brazilian, North American and European buyers are now preparing a supplier list to be presented to the GSC. Both current suppliers and new potential suppliers have been requested to quote including the costs for supplying to all the Volvo companies. Further, at the 3P level, the suppliers that have conditions to become global suppliers will be selected.[157] For the sourcing of sheet metal and pipes, it was decided that the strategy is continental (U.S., Europe and Brazil-South America) and the Brazilian supplier base is seen as very competitive. This would further mean that this segment could in the future globally supply all Volvo units.[158]

When initiating a new supplier relationship, it is Volvo's policy that the geographically closest affiliate to the new global supplier is the 'owner' of the purchasing agreement. This means that the host country buyers are the closest contact to the supplier and are involved also in the process when other Volvo companies source from Brazil. However, at the negotiation phase with every separate Volvo unit, the respective buyer from other Volvo companies, for instance VTC, is the main negotiator and the results are then reported to the local affiliate.[159]

[157] Dias do Silva 2003
[158] Belforte, Rocco 2003, Purchasing Management Team 2003, Dias do Silva 2003
[159] Rieck, Lagerblad 2003

5.2 General Requirements for Suppliers

The overall characteristics that Volvo looks for in its suppliers are characteristics related to the supplier's strategy, development, wanted relationship with Volvo and quality. When it comes to strategic issues, Volvo hopes that the supplier is a 'global partner', however also supplying locally and fulfilling the demands in local content markets. The supplier should also consider Volvo as a 'preferred customer', giving Volvo access to innovation and including transparency when it comes to cost and strategy.

Volvo is looking for suppliers who have development capabilities in the form of being able to become complete system suppliers (components) in cases where this would add value. The desirable supplier has good technical and innovation skills as well as recruiting resident engineer when required. Volvo states that in the case of the supplier-Volvo relationship, *the most important element is that the relationship is considered as long-term character* and there exists pro-activity in reducing costs and improving performance. The last but not least important characteristics of a potential Volvo supplier are issues concerning the quality of supplied product. Volvo requires very high quality standards and good management of the supplier's lower tier suppliers, especially in low-cost countries.[160]

Volvo has established a Supplier Portal as a communication channel to the suppliers. From the Supplier Portal, the suppliers can find general information addressed to current and future suppliers for information regarding the company methods and requirements for suppliers. As Volvo states: "The site will be the single source for information and a dedicated working tool for today's and tomorrow's Volvo partners."[161] The Supplier Portal is therefore a part of Volvo's E-business strategy.

[160] Volvo Supplier Portal 2003 (3)
[161] Volvo Supplier Portal 2003 (2)

5.3 Supplier Evaluation Manual

The key document in selecting and evaluating both potential and existing suppliers at Volvo is the supplier evaluation manual (SEM). It is a tool that evaluates all the key aspects that Volvo finds as critical for a well functioning supplier-customer relationship between the supplier and itself. The manual is used globally and proceeded by specifically chosen Volvo personnel and therefore aiming at comparability through all the Volvo units. All Volvo companies use the SEM regularly every three years. However, the frequency varies depending on the development of the supplier in question. The Volvo companies also exchange information when it comes to the result of the SEM for particular suppliers.[162]

The SEM is divided into eleven groups of parameters in which the supplier is evaluated. These are the general profile of the company, its management, its environmental issues, its products' and processes' quality, the logistics, the after-market, the competence, product development, finance, productivity and sourcing of the supplier. Parameters can be revised upon need.[163]

The different parameters are rated from 0-3. All together, the company can achieve a maximum of 100 points. According to the points achieved, the potential global suppliers are graded with A, B or C-status. The supplier falls in the C-category if it has achieved only 0-50, points, into the B if the SEM-grading is from 51-80 points, and into the A-status if it has been graded with 81-100 points. In general, C-graded potential suppliers do not become Volvo-suppliers. In the end of the evaluation, the B and C-grade suppliers are provided with feedback and suggestions both verbally and as written documentation. The document serves as a plan in order to improve the areas in the SEM-evaluation where the supplier has potential for improvement.[164]

The SEM includes certain 'stopping parameters' meaning that even the supplier would reach an overall grading of B or C with the joint points; these parameters can not in any case score 0. If any score is 0, then the potential supplier is

[162] Blin & Berndtsson 2003
[163] Blin & Berndtsson 2003
[164] Berndtsson 2003

disregarded at this stage. An example of a stopping parameter would be the parameter of delivery precision under "Logistics". Other stopping parameters included are global ability, ISO-certifications and lastly financial score (see Appendix 8).[165]

After the supplier has conducted the phase of self-assessment, the responsible team in Volvo conducts the verification phase. There are two variants of the SEM; the longer version called SEM and the shorter version SSEM. In the case of the shorter version, the supplier is responsible for its self-assessment and in many of these cases the verification has not been completed. The latter version is used when time is scarce.[166] At present the export capability of the potential supplier is evaluated on a case-by case basis, with no specific routines or evaluation manual.

5.4 Logistical Audit

In addition to the SEM and its verification (possible lowest grade B), Volvo suppliers are also evaluated in terms of a logistical standard. This standard is the Odette Logistical Evaluation, known as OLE.

The OLE objective is to support Volvo's production philosophy that requires "shorter lead times, higher flexibility and reliable delivery times which in turn creates a need for fast, flexible and instant flow of both information and material through each link of the supply chain."[167] The OLE is also used similarly to the SEM or at times as a part of it. It is also used when evaluating potential and existing suppliers, finding improvement needs and solutions to delivery problems respectively.[168]

The OLE system is a tool that may be used both by suppliers in assessment of their logistics capability as well as by customers as an evaluation tool. The Volvo PQP12 is an Odette-based logistics evaluation tool. It is also known as OLE. The areas evaluated include procurement, production and distribution

[165] Berndtsson 2003
[166] Björn 2003
[167] Volvo Supplier Portal 2003 (5)
[168] Andersson 2003

(see Appendix 9). Of these areas, our interest is on the logistical aspects related to the procurement function.

There are three steps of the OLE process. The steps are self-assessment, verification, and implementation and follow-up. In the first stage, the supplier evaluates their capability in logistical terms on their own, then the verification is done by a Volvo staff member from the logistics department; the verification is mainly overseeing that all demands have been met by set parameters. The implementation process and follow-up stages include coaching (supplied by Volvo staff) and development issues that have been identified in the audit stages.[169]

In the procurement part of the logistics audit, there are sub-areas that are evaluated. The starting point is the logistics process analysis. The remaining areas are: EDI, materials requirement planning, packaging, transport (inbound), goods reception, stock management and lastly the potential to launch new or changed projects (new part developments or changes, responsiveness) or phase out (when supplier is to be left out of the supplier base).[170]

An important aspect to logistics is the cost. In the PQP there are various different costs that accumulate into the logistical costs. While emphasising the importance of constant cost leadership, key areas for logistics costs are:

- Transportation and distribution costs
- Inventory costs
- Administration costs including system support
- Packaging costs
- Handling costs
- Storage space costs

These formulate the total cost for the logistics handling process. In the case of Volvo do Brasil, they are responsible for the logistics costs endured when exporting and these costs are reflected in the prices that the end-users receive.[171]

[169] Volvo Supplier Portal 2003 (5), Bergström, Andersson 2003
[170] Volvo Supplier Portal 2003 (5)
[171] Purchasing management team 2003

5.5 The Global Sourcing Process

Volvo's Global Sourcing Process (GSP) is a rather new standardised procedure. It was initiated in 1996 as it was noticed that a common, standardised tool for finding 'world-class' suppliers was lacking in the organisation. The GSP is therefore a decision making tool for all the parts and components sourcing within the whole Volvo Global Trucks organisation. The prior situation was such that Volvo had a large number of parts which were bought in small volumes worldwide, but through the GSP it has become possible to obtain economies of scale and savings.

Each of Volvo's suppliers has undergone the eight-step decision model. The eight steps of the Global Sourcing Process are as followed:

1. Process initiation
2. Early specification and target cost
3. Evaluation of potential global suppliers
4. Request for quotation and supplier feedback
5. Evaluation step
6. Negotiation
7. Create pre-proposal
8. Final negotiation

The GSP and the manuals used connected to it, as the SEM, are tools that make standardised global sourcing possible in all the Volvo units. The use of these systems enables the buyers in the organisation to rely on the standards and quality of the global suppliers. The purpose of the process is therefore to generate global standards for the supplier base so it may be used by the whole Volvo 3P purchasing organisation world-wide.[172]

5.5.1 Global Sourcing Committee

The Global Sourcing Committee represents the forum where the purchasing units meet to report, co-ordinate and decide upon sourcing activities. The

[172] Volvo Supplier Portal 2003 (6)

Committee also focuses on issues regarding the Global Sourcing Process and has a cross-functional representation.

The responsible buyer presents the proposal for a new supplier or new parts and the calculations on behalf this proposal. The GSC is therefore the decision forum for all sourcing issues; both when sourcing of existing parts and all new parts. The GSC also conducts all the major negotiations and plans all the strategies for all the segments. The Committee has to come to agreement when issues arise. If this is not possible, the conflict must be lifted to the Panel Committee.[173] The Panel Committee consists of the VP Global Purchasing, Site VPS and cross-functional representatives from Powertrain, Products Development and other functional representatives.[174]

5.5.2 The Role of Volvo do Brasil

Volvo do Brasil is the only unit among the Volvo Group units in the emerging markets, where supplier relationships are nurtured independently. All Volvo do Brasil suppliers must be approved according to the Global Sourcing Committee.[175] Volvo do Brasil is a strategic unit in the emerging market sourcing strategy currently promoted and pushed by 3P.[176]

Volvo do Brasil has around 170 suppliers, both local and follow-source suppliers, and it has traditionally outsourced a great proportion of the parts and the sub-assembling needed in the productions as cabs, gearboxes and chassis parts.[177] In the case of Volvo do Brazil, many of the supplier relationships were already formed in the late 1970s. According to Ivarsson and Alvstam (2003), 90 percent of the partnerships within the Brazilian supplier base started before 1998, and the rest, in 1998 when Volvo started to develop new product models.[178]

Volvo do Brasil has headed to the increase of local sourcing as well as improving and expanding its model line. In the case of some certain models, the company has aimed to increase the local content up to 80 percent.[179] Volvo

[173] Volvo Supplier Portal 2003 (7) and Volvo Intranet 2003 (2)
[174] Blin and Volvo Supplier Portal 2003 (7)
[175] Ditzel 2003
[176] Purchasing Management Team and Dias do Silva 2003
[177] Purchasing Management Team and Dias do Silva 2003
[178] Alvstan & Ivarsson 2003 & Dias do Silva 2003
[179] The Economist Intelligence Unit Limited 1999

do Brasil's role in Volvo sourcing is to independently manage its local supplier networks and also to investigate the possibilities of recommending local suppliers to be raised to the global supplier level in accordance with the GSP. Within the Brazilian suppliers, the usage of the Supplier Portal has just started and three suppliers are currently included in a pilot project.[180]

5.5.3 Consolidation of Supplier Base

At Volvo, the trend of consolidating the supply base globally has taken place for some years. In the Brazilian context this has meant narrowing down the supply base from 470 suppliers to 172 within a decade.

This consolidation is also occurring at present, driven by the 3P global purchasing organisation. In addition, the outsourcing or transfer of the direct export process is one that was discussed earlier by the Volvo organisations and has since been pushed for by the 3P organisation. This push for transferring the direct export responsibilities to suppliers is also part of the strategy, where the objective is to focus on the core business; the production and exporting of CBUs. This is mainly the objective for VdB, as many interviewees agreed that the present role of VdB as a trading company needs to be changed.[181]

[180] Dias do Silva 2003
[181] Purchasing Management Team 2003, Franksen 2003

6 Parts Exportation from Brazil

In this part, we will map the outlook of the parts exportation process as done through VdB at present, also reviewing the underlying motives and the subsequent rationale for changes.

6.1 Exporting Parts Through Volvo do Brasil

6.1.1 Process History

Due to the demand detected in other Volvo companies and the hedging opportunities, VdB started exporting on behalf of some suppliers.[182] The process was initiated in 1999, and among the parts needed at VTC were castings from Schulz in Brazil. Upon the initiation of supplying from Schulz to VTC it was already discussed that Schulz would export on its own in the future, independently of VdB.[183]

Initially, the quality of the parts and the geographical distance in sourcing from Brazil faced some objections at the design department of VTC. However this was proven otherwise, as the parts proved to be of Volvo standard and with a competitive price. As the parts costs were found competitive, VTC started to consider potential future parts flows from Brazil. To present, many designers recommend sourcing from Brazil.[184]

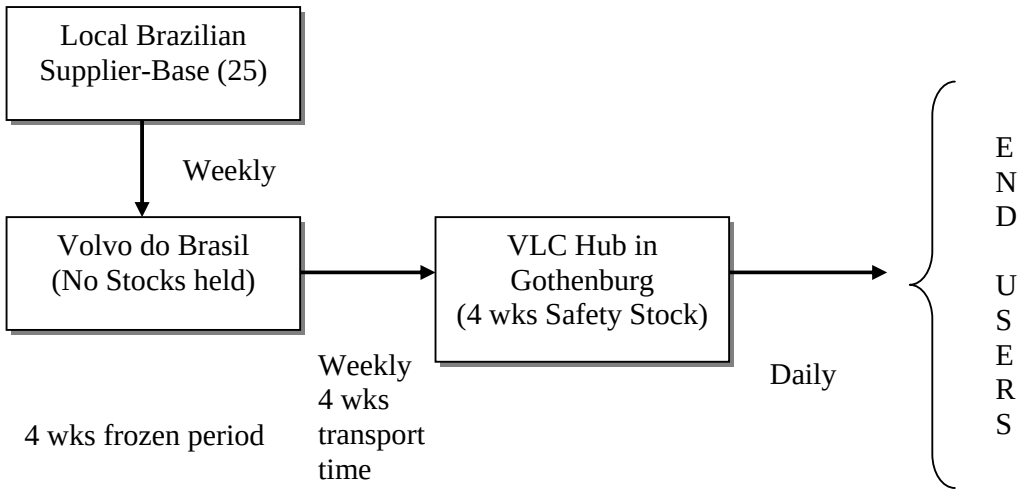
6.1.2 Current VdB Parts Exportation Process

Volvo do Brasil's export organisation is divided into three divisions and includes spare parts and CBU exports and the inbound and outbound logistics for parts exported on behalf of some suppliers.[185] Three persons are working with the parts exportation full time. At present, VdB handles both commercial and logistical aspects of the process. This means document handling, packaging as well as buying and picking up the goods from the supplier's premises in accordance with EXW (Ex Works, Incoterms 2000, see Section 4.4.4).[186]

[182] Berndtsson 2003
[183] Rutting, Jagino 2003
[184] Jagino 2003
[185] Rutting 2003
[186] Ogliari, Capriglione, Purchasing management team 2003

Here, VdB assumes ownership of goods and becomes the exporter, taking on the costs for the goods export all the way until the receiving port and taking on the risks for the goods up to the port of departure. Therefore, it can be said that VdB here takes the role of a trading company as the parts are further sold to the logistical provider, Volvo Logistics (VLC). To present, VdB exports parts on behalf of suppliers with the total invoice value of 16.5 Million USD and a total of 150 part numbers. In container terms the parts account for 12-14 containers per week.[187] The CIF Incoterms covers the exports that VdB does on behalf of the suppliers.[188]

Figure 8. Parts Exportation to Europe



Source: Rutting 2003

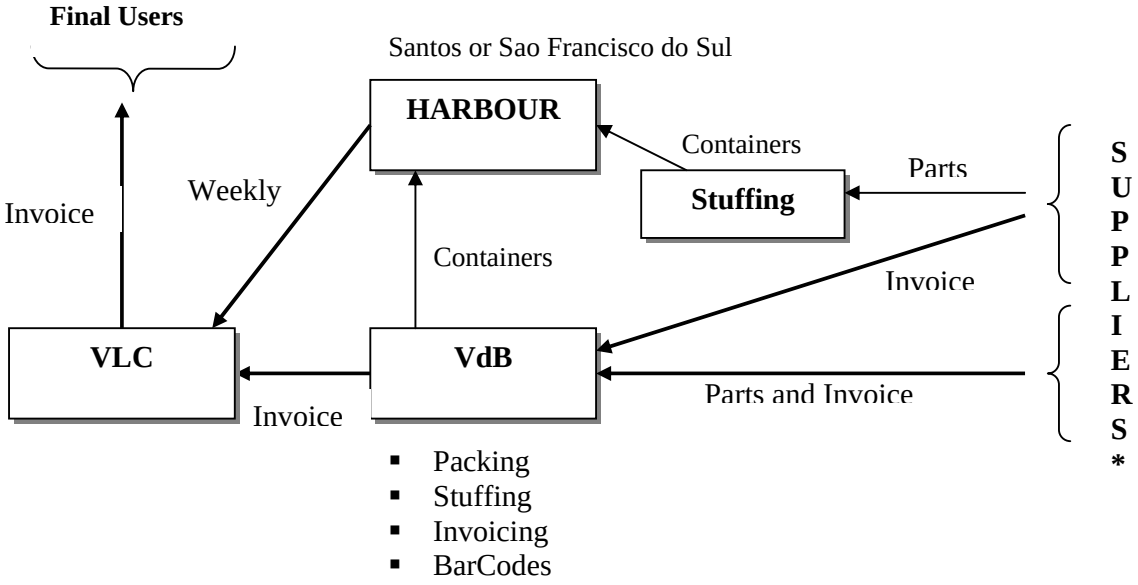
The above figure shows a simplified overview of the parts exportation from Brazilian suppliers to Volvo companies with VdB acting as a middleman. The picture shows that at present VdB exports on behalf of 25 suppliers and it also shows the delivery frequencies, stocks held and gives some indication of the time frame of exporting parts to Europe via VdB.

[187] Santos, Rutting 2003
[188] Ogliari, Capriglione, Purchasing management team 2003

The transport time from Brazil for the goods to VLC is four weeks. One week is calculated for inland handling and three weeks for maritime transport. Additionally, the safety stock held by VLC has to be the equal amount of time the transport takes, also four weeks.[189] As VdB holds no safety stocks for the suppliers on VdB premises, VdB has a 'four week frozen period.' The frozen period refers to when changes to volumes can not be accepted but the customer has to wait to the fourth week.[190] VdB exports parts not only to the six Volvo end users (plants) via VLC, but also to some large component manufacturers in Europe. The four external component suppliers are Visteon, Vivi, Waack and Arvin Meritor.

6.1.2.1 Delivery Implications

Figure 9. Delivery Process to Europe



Source: Rutting 2003

*The suppliers are divided into two routes for goods and invoices due to the fact that the suppliers nearest to the harbour deliver goods to the harbour and then invoice VdB. The suppliers closest to VdB on the other hand, deliver to VdB.

[189] Rutting, Purchasing Management team 2003
[190] Rutting 2003

The above figure shows the current ordering process including the goods and invoices flow between the parties involved and done by VdB. In the figure on the right hand side, it can be seen that there are two groups of suppliers that VdB exports for. The suppliers that are closest to the ports used (Santos in the State of Sao Paulo and Sao Francisco in the state of Santa Catarina or Rio Grande do Sul) deliver the goods directly to the ports. The goods are stuffed into the containers at the port. The invoice for the goods goes to VdB.

In the case of suppliers nearer to VdB than the ports, VdB collects the goods, packages, stuffs, and labels the goods, then sending them to the port and onward to the VLC HUB. In this case, both the goods and the invoice are sent to VdB. In all the cases of the 25 suppliers that VdB exports for, the LSP is VLC. This is an intra-group recommendation, that in the transports between the Volvo companies, VLC is used.[191]

From the port onward, the ownership is transferred from VdB to VLC in accordance with the Brazilian law, which requires the goods to be owned by an external trade partner from the Brazilian border onwards. In the case of VdB doing the exporting, it is done so under the Incoterms CIF; cost, insurance and freight (port of destination), meaning that even if ownership of the goods is transferred to VLC with the invoice from VdB, VdB is responsible for the cost, insurance and freight of the goods until the port of destination. VdB therefore sells the goods to VLC, who then stocks the goods and invoices the end users (Volvo Plants and external component manufacturers) as the goods are pulled from the safety stock. VdB is therefore also susceptible for any currency risks between Europe (EUR) and U.S. (USD) to Brazilian Reais.

When VdB exports for the suppliers, the suppliers receive payment from VdB within 60 days from their invoice date. VdB, on the other hand, receives payments in accordance with the export agreement done, but in legal terms within 180 days from the invoice issuance and usually only when the goods are pulled from the VLC stocks by the end users.[192]

The process is almost the same for all suppliers. However, Unipac's goods have a somewhat different flow pattern. Unipac's goods flow from their plant

[191] Rutting, Andersson, Dias da Silva 2003
[192] Purchasing Management Team 2003

to the port closest to them, Santos in Sao Paolo state. The invoice for the parts is sent to VdB. VdB then invoices VLC for the goods and the parts are shipped to VLC and some of the parts further through VLC to Visteon, a system supplier to Volvo in France. Visteon produces the dashboard, instrument panel that includes air ducts produced by Unipac. When the components from Visteon are ready, they are sent to the Umeå plant in Sweden and the Curitiba plant in Brazil to be assembled into the trucks. Having VdB in the middle creates a rather peculiar situation as the parts originally leave VdB in order to later return in the form of an assembled dashboard.

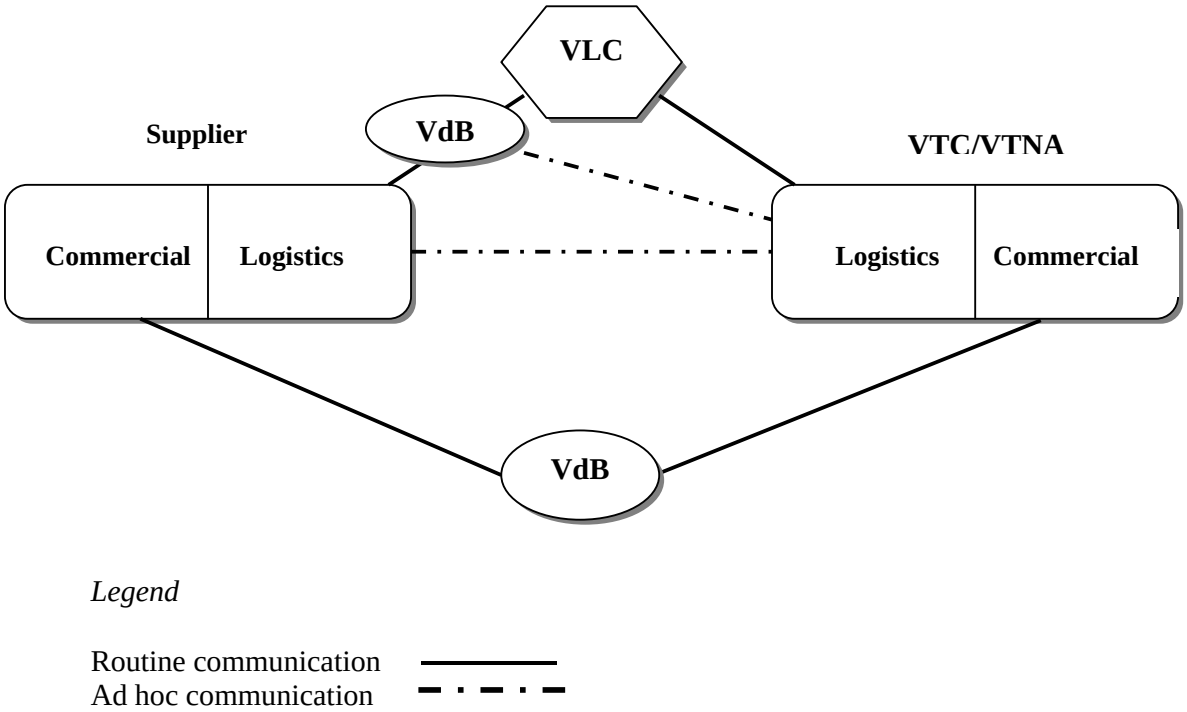
The component supplier, Visteon, is a large supplier with great importance to Volvo. Volvo's purchases account for approximately 1 percent of Visteon's turnover.[193] Visteon has declined the direct supplying from Unipac due to the fact that Unipac is a long distance from France. Interestingly, Visteon and Unipac, however, have a direct business relationship in the plastics business in Brazil, where Unipac supplies Visteon's affiliate.[194] However, only the plant in France assembles the instrument panels. It has been said that so far, the goods flow, per se, has not been an issue but rather the time and the price that are accumulated by the processes in getting the parts to the end users.[195]

6.1.2.2 Communication Implications

The communication interfaces of the 25 suppliers and VdB and end users is as follows:

[193] Björn 2003
[194] Björn, Ribeiro, Purchasing Management Team 2003
[195] Belforte, Rieck, Björn 2003

Figure 10. Communication Interfaces



Source:Own

In the figure above are the main communication partners in the process where VdB does the exporting on behalf of the suppliers. The main interfaces for communication in this case are the suppliers' outbound logistics organisation and the respective inbound logistics organisation at VdB. In the case of parts exportation, the inbound and outbound logistics is handled by the same unit. The three persons working in this unit are the main contact with the receiving organisation, in this case VLC. As VLC is the main pickup point for the end-users, it is rare that the end users as such are, or need to be, in contact with either the supplier or VdB at this point.[196] The end-users main routine communication is only with the pickup point in Arendal.[197] Therefore, at the moment suppliers are not in contact with VLC, as VdB is the one buying the service.

[196] Andersson & Larsson 2003
[197] Andreazza, Capriglione 2003

In the commercial issues related to negotiations and sourcing decisions, VdB has been the actor between Brazilian suppliers and VTC or VTNA.[198] Usually, VdB's buyers' contact person is the commercial representative as it is rare that the suppliers have an export department. As a comparison, in the case of a supplier exporting directly as Sifco, the main communication takes place between the buyer organisations purchasing department (VTC and VTNA) and the suppliers export sales organisation.[199]

The buyers at VdB have expressed their willingness to remain in the communication set up between VTC/VTNA and Brazilian suppliers in the future as well. It is important for them to receive information on prices and volumes agreed between other Volvo units and suppliers when planning future purchases as well as future flows from the suppliers in question.[200] In general, when the direct exporting starts, the communication between VTC/VTNA and VdB is essential to maintain their negotiation power towards the supplier. The future implementation of the direct export process would result in a change in both goods flows and communication interfaces. In the case of the communication interfaces, the contact between the suppliers as Unipac, Proxyon and Alpino and the LSP will be direct, whether it is VLC or some other 3rd party.

6.1.2.3 The Role of Volvo Logistics

The role of VLC in the process is to handle the supply chain from producers until end user. The main role here is to provide service to producers and end-users so that the flows of goods are as smooth as possible for both parties. This is named a door-to-door service by VLC, where their target is the supply chain starting with the goods pick-up from the producer and ending with the delivery of parts/systems to the plants (end users) doors. The communication is, at present, mainly with VdB and the end-users, not the suppliers directly. As the suppliers will start exporting on their own VLC will be in direct contact with the supplier and the end user, becoming the link between them.[201] At present, VLdB's business is about 600 million SEK of which 3 percent are transport costs.[202]

[198] Björn, Andersson, Andreazza 2003
[199] Capriglione 2003
[200] Andreazza, Björn 2003
[201] Bergström 2003
[202] Franksen & Andrade 2003

6.1.3 Volvo Requirements for Direct Exporters

In addition to coping with Brazilian export laws and regulations, the suppliers to Volvo also have to respond to Volvo's requirements in packaging, LSP choice and labelling. From the perspective of VTC's logistics department, the logistical agreement between the supplier and the selected LSP must cover all areas including packing materials, transportation, warehousing, pick & pack, sequencing and sub-assembly in some cases.[203]

In terms of activities, this includes the production of parts according to need, assuring the quality and quantity of the parts, booking the transport, preparing and packing parts in agreed packing material, producing shipping documents, reporting delivery deviations to the LSP, be owner of material and lastly deliver the goods in accordance with packaging instructions.[204] When it comes to the ownership issue, the supplier cannot continue as owner after the goods leave the Brazilian border and this is therefore a challenge.

In addition, there are Volvo specifications for payment times as well. For VTNA, the usual payment receiving time is 90 days and in the case of VTC it may be up to five months due to shipment, handling, storage and invoicing only when goods are pulled from the VLC stock.[205] In terms of packaging, the material is provided by Volvo and the packaging instructions are to be followed. They include packaging all parts with foam, wrapping the parts in plastic and making sure that they are 'immobile' during transport. In addition, the labels are to meet Volvo specifications, so that the goods are traceable to origin if there are any damages or quality problems.[206]

Long-distance suppliers, including many of the emerging market suppliers, need to meet the demands from VTC's logistics department for delivering to Europe. The main criteria are that the suppliers must deliver to a pick-up point where the reaction demands can be met. The required reaction time by Volvo is three days.[207] This means that acceptable alternatives are that the supplier is global but has local presence (in EU/USA/SA), that the supplier works through a partner or a joint venture to have local presence or that the supplier has

[203] Andersson & Larsson 2003
[204] Andersson 2003
[205] Purchasing Management team 2003
[206] Bergström 2003

presence through an LSP contracted by the supplier in three days reaction time from Volvo plants. In this LSP selection, it is emphasized that logistics costs should be distinguishable in the total cost and that VLC should be the preferred LSP being the one of the logistical service providers quoted. By now, VLC has been a natural choice as it is part of the Volvo group and meets the Volvo requirements.[208]

6.1.3.1 Requirements of Volvo Logistics

In terms of VLC requirements, they have a standard requirement of 4 weeks stock, in the case of Schulz they hold 5 weeks of stock at the Arendal hub. VLC requires that the parts are 'flagged' or labelled in accordance with the Odette (OLE) standards, so that they may be traced not only to the supplier (if quality issues arise) but also so they can be identified in terms of batch to identify where the quality problem originates. VLC also does quality screening and checking that the parts meet the standards that the Volvo plants have in case of damaged parts they contract re-working of the parts that is then charged to the customer.[209]

6.1.4 Target Supplier Group

Currently, the supplier group supported in exporting by VdB includes 25 suppliers. These suppliers have been accumulating as the need for the parts has been detected in other Volvo units. However, the 3P organisation (also considering future purchasing strategies for Mack and Renault) pushes to move the responsibility of exporting from VdB to the suppliers. Sifco, a reference supplier already exporting directly on its own, is not part of the group of 25 suppliers. Schulz is not included in the list either as the supplier has already started the implementation process. The current situation with the process transfer will be further described in more detail.

[207] Andersson 2003
[208] Andersson 2003
[209] Bergström 2003

Table 3. The 25 Target Suppliers

Supplier's Name	*Technologies Systems Supplier*		*Follow Local Source*	*Status on Direct Export 1st Evaluation*
ALPINO	PIPES (STAMPED PARTS)	PFT10 PFT11	Local Source	Has potential
BAPTISTUCCI	SHEET METAL (STAMPED PARTS)	PFT02 PFT03	Local Source	Has no potential
BRUNING	SHEET METAL (STAMPED PARTS)	PFT05 PFT06	Local Source	Has potential
UNIPAC	TERMO PLASTIC	PLA11	Local Source	Has potential
ONÇA	PRESSING TUBES	PFT13	Local Source	Has potential
TRELLEBORG	RUBBERS (MOLDED AND EXTRUDED PARTS)	RUB	Local Source	Has potential
VENTRABRAS	SHEET METAL (STAMPED PARTS)	PFT01 PFT02	Local Source	Has no potential
BENERTI	MACHINING PARTS	CAA03	Local Source	Has no potential
BOSCH	INJECTED COMPONENTS		FOLLOW	Has no potential
VALEO	AIR COOLER	ENI01	FOLLOW	Has potential
DANA	ROLLED AND WELDED PARTS	PFT09	Local Source	Has potential
IBRATEC	GENERAL MACHINING	FOR17 FOR20	Local Source	Has no potential
KS PISTOES	PISTONS		FOLLOW	Has potential
L ALBERTI	MACHINING PARTS	PFT05	Local Source	Has no potential
MAHLE	PISTONS AND BEARING SHEEL		FOLLOW	Has potential
MAXYON	CHASSI COMPONENTS	CHC01	Local Source	Has potential
METAL 2	MACHINING PARTS	CAA02	Local Source	Has potential
HUBNER	CASTING PARTS	CAI06	Local Source	Has no potential
WABCO	PNEUMATICO VALVES AND AIR SYSTEM PARTS	BRC02 BRC03 BRC07	FOLLOW	Has potential
WETZEL	ANCHORAGES (MACHINING PARTS)	CAA0 CAA03	Local Source	Undecided
ZF NAKAN	STEERING AND SUSPENS	STS01 STS02 STS03	FOLLOW	Has potential
KARMANN	BIW OR HEAVY STAMPED PARTS	PFT	Local Source	Has potential
PROXYON	FAN RINGS (EXTRUDED PARTS)	PFT05	Local Source	Has potential
ATRA	UNASSEMBLED LIGHT PRESSING	PFT01 PFT02	Local Source	No potential

Source: Purchasing Management Team 2003

The table above lists the 25 suppliers and provides comment; potential to export directly, no potential to export directly, potential but not willing. This first evaluation is according to the purchasing management team and is heavily based on the financial status of the company as well as the export structure and experience of the supplier organisation.[210]

In the list are included the so-called future strategy suppliers, those suppliers who may have the capability to supply globally in the future.[211] The list includes both local and follow-source suppliers, both of which are targets for the transfer of the direct export process. All of the 25 suppliers have been, since the second semester in 2001, preliminarily evaluated and approached in terms of quoting to Volvo including the costs for exportation directly to other Volvo companies. Some of the suppliers are still under evaluation.

In terms of the case suppliers, Schulz has already started the process and exported the first shipment to VTNA and VTC and Unipac is preparing to quote by week 51 (2003), as they are quoting VLdB in terms of price for logistical services. Alpino and Proxyon received the quotation request week 46 (including exports) and quoted in week 47. At present they are waiting for a response from Volvo.[212]

In the following section, we will introduce the investigated case supplier companies. This will also present their export activities as well as their relationship to Volvo. Sifco will be presented first, establishing a reference of an experienced exporter. Further, introducing Schulz will give an example of a supplier undergoing the direct export implementation and the remaining three case suppliers, Unipac, Alpino and Proxyon will be introduced as examples of supplier still in the negotiation phase.

6.2 Case Suppliers

The investigated Brazilian suppliers have started as suppliers to fulfill the local content requirements but are currently considered as potential future global suppliers. The first step in this process is the evaluation of their direct export

[210] Purchasing Management Team 2003
[211] Purchasing Management Team 2003
[212] Borges de Carvalho, Ribeiro, Giampietri and Gacola 2003

abilities. As Brazil is a market included in Volvo's Emerging Market Strategy (EMS), these suppliers are emerging market suppliers to Volvo.[213]

6.2.1 Sifco

6.2.1.1 The Company

Sifco S.A is a Brazilian multinational corporation in the automotive industry. Sifco has two main plants which are located in Jundiai and Campinas. Sifco has also obtained the ISO 9001 and the QS 9000 certifications. Sifco produces I-beams, crankshafts, knuckles, camshafts, pinions, ring gears, gears, axle shafts, steering arms and pitman arms. The company was founded in 1958 in Jundiaí with the following founding partners: Steel Improvement and Forge Company (SIFCO Industries U.S.), the American Brake Shoe Co. and the Smith Vasconcellos Family (Brazil). It became specialised in the production of axles, suspensions and engines components from steel bars forged and machined. Today, both of the companies operate under Grupo de Brazil.[214]

6.2.1.2 Volvo Relationship

Sifco has supplied Volvo do Brasil from the established Curitiba plant in 1979. In 1992, they started supplying VTNA and in 1995 included VTC. The company supplies VdB and Mack with ready-assembled forged parts and components, such as front axles. In the case of VTC, the parts are bought separately and assembled at the Tuve plant. The trend of outsourcing the sub-assembly became popular in the 70s and 80s. However, now the trend has shifted back to having sub-assembling in-house.[215] Sifco has supplied parts directly to other Volvo companies such as VTC and VTNA without the interference of VdB.[216]

The communication routines take place mainly between the commercial responsible and the responsible buyer at VdB, VTC and VTNA, as Sifco has independent business with all of them respectively. In addition, the supplier quality engineers and the Volvo engineers are in contact with the technical

[213] Blin 2003
[214] Company material 2003
[215] Andreazza 2003, Caprioglione 2003 and Rutting 2003
[216] Andreazza 2003 and Capriglione et al. 2003

specialists in the company.[217] Due to geographical distance, the representatives that most often meet Sifco are the VdB team.

6.2.1.3 Joint Development Projects

Sifco is very open for new joint development projects (parts and tooling) with Volvo and Sifco is able to develop in accordance with the requirements of Volvo. When conducting new projects, integrated teams with personnel from both companies work closely together from a very early stage.

Tools are owned by Sifco but Sifco does not pay for the tool itself but for any developments in the part in total. However, if Sifco would need to make an additional investment to develop new parts according to Volvo requirements, 50 percent of the cost is accepted by Sifco and 50 percent by Volvo.

6.2.1.4 Export Activities

In addition to Volvo, other Sifco clients are many global assemblers and suppliers in the automotive market. These include Mercedes-Benz, VW, Ford, GM, Fiat, Scania, Maxion, Meritor, Sisu Diesel, Caterpillar and Dana. Sifco is also a global 1st tier supplier to Volvo Global Trucks. [218]

Sifco began exporting to the U.S.A. by selling I-beams to Mack Trucks in 1971. In 1985, an agreement was signed with Ford Motor Co. to be an exclusive front axle components supplier for the Kentucky truck plant and in 1986, Westport Axle Corporation was established in Cleveland, Ohio, in order to administrate Sifco's business in U.S.A.[219] In 1992, Sifco started exporting directly to Volvo Trucks North America and in 1995 to Volvo Truck Corporation in Gothenburg (see Appendix 10).[220] Currently, export sales constitute nearly 45 percent of the total sales. Most of the export is directed to the U.S., while Europe and Asia contribute 19 percent and 12 percent respectively. The general understanding in the company is that the increase of exporting is vital for the company as the instability of the domestic market calls for diversification to other markets. Because of the unstable situation in the North American market, Sifco has now started to search new possibilities in

[217] Andreazza 2003 and Capriglione et al. 2003
[218] Grupobrasil 2003
[219] Company material 2003
[220] Company material 2003

Europe and Asia in order to spread currency risks and other risks involved in the export activities.[221]

The export sales department consists mainly of four persons. The export sales department handles all export matters centrally and in-house. The department delegates the related issues to respective departments such as logistics, quality, etc. All documentation, pricing and decisions for the selection of transport are dealt with within the department. In terms of assistance to other smaller suppliers starting independent exporting, Sifco has not done that yet. However, if there should be a need for this, it can also be arranged. [222]

The 'New Generation' project within the new Volvo Global Trucks organisation conducted by the 3P organisation, as well as the presence of Seat and Iveco, has made the European market even more attractive. In the near future, Sifco is aiming on exporting 50,000 front axles to the European market including Volvo and Renault V.I. For this purpose, Sifco is now seeking for a hub in France. Volvo is an important customer to Sifco; share of export sales for Volvo is 16 percent of the total export sales. [223]

6.2.2 Schulz

6.2.2.1 The Company

Schulz S.A. was founded in 1963 as a small foundry in Joinville, state of Santa Catarina, with 26 employees. In 1972, the air compressor line started and in 1979 the company started producing castings for the automotive sector. At this point the company was divided into the air compressor and automotive division: Schulz Compressores and Schulz Automotiva. Schulz is a family business and it supplies Volvo with castings.[224]

6.2.2.2 Volvo Relationship

Schulz has been a supplier to VdB since 1997.[225] Later in 2000, Schulz started to supply parts to VTC via VdB. These were castings technology parts. The parts in question are considered critical parts in the safety of the vehicle.

[221] Capriglione & Morais de Araujo Souza 2003
[222] Capriglione & Morais de Araujo Souza 2003
[223] Capriglione & Morais de Araujo Souza 2003
[224] S. de Farias & Valente Boff 2003
[225] Schroeder, S de Farias 2003

Additionally, Schulz parts are 'line stoppers', meaning that if delivery precision fails the production line in the Volvo plants stops.[226] There have been discussions about increasing the purchases by 50 percent.[227] The last SEM evaluation was done in week 36, 2002. Schulz scored B71 in this evaluation. The production of the parts for VTC started in 2002.[228]

6.2.2.3 Joint Development Projects

The parts supplied by Schulz are of a rather complex character. Schulz is a technologies supplier and joint product development programs are often conducted between VTC and Schulz.

The Schulz paint shop has been approved by Volvo specialists and it is one of the few paint shops that fulfil the strict Volvo requirements. The approval process took a time period of two years and this included various visits from the Volvo specialists.[229] Regarding the implementation of direct export to VTNA and VTC, Schulz made large investments in the machines and tooling needed for the production of new parts.[230]

6.2.2.4 Export Activities

Schulz S.A. started its export in the air compressor sector activities in 1978. By the year 1984, the Schulz products were exported throughout Latin America, Central-America and the U.S.[231] Schulz conducts a strategy where the product characteristics are actualised according to the needs of the export markets, heading to a global product offering. The exporting from VdB to other Volvo end users began in 2001. The "Volvo Programme" for exporting directly to Volvo companies started in the second term of 2002. Later in 2002, the company started exporting directly to VTNA. In the end of September, 2003, the first shipment was shipped to VTC and it has been estimated that the process will be 100 percent implemented by January 2004. However, there exists a possibility for extension to March 2004.[232]

[226] Bergström 2003
[227] Blin 2003
[228] Berndtsson, Lagerblad 2003
[229] Jagino 2003
[230] Schwarz 2003
[231] www.schulz.com.br/index.html
[232] Schroeder 2003

6.2.3 Unipac

6.2.3.1 The Company

Unipac, part of the group Grupo Máquinas Agrícolas Jacto, was founded in 1965. The company's first product was a plastic container for insecticide for agricultural use. Unipac is specialised in the production of its plastics products using 'blow moulding' techniques. Even today, the agricultural sector is an important sector for Unipac but the company has during recent years diversified to the automotive industry and is planning to enter the medical equipment sector in the near future.[233]

The company's premises are situated in the Pompeia, located in the borders of the Sao Paolo state. Its industrial park consists of 26,000 square meters with modern production plants. Unipac employs 730 persons. Unipac has also earned the ISO 9001 and QS 9000 certifications since 1998. The QS 9000, which is quality certification used among the automotive industry, was substituted in 2002 by the ISO TS 16949, a required quality system by the major automotive assemblers as Ford, Volkswagen, Mercedes, GM, Chrysler, Peugeot, Renault and Fiat, and which is applied in projects, production and the installation of products associated to the automotive industry. Unipac has also received the environmental certification of ISO 14001/1996 in 2001, which assures that Unipac's economic and technological activities are environmental friendly.[234]

6.2.3.2 Volvo Relationship

Unipac has been a supplier to Volvo do Brasil since 2000. For VTC, however, it has been a supplier since December 31, 2002, when production was initiated. Until this point, VdB and VTC had another supplier, Cipla, for blow-moulded parts (cab and electrical). However, Cipla went bankrupt and a quick solution was needed. VTC asked for reference from VdB and Unipac was recommended. This meant that the tooling owned by Volvo was moved to Unipac to start production as soon as possible.

Production was initiated on New Years Eve 2002. A VdB quality assurance engineer stayed on the plant for three months to train the Unipac staff to use the

[233] Ribeiro 2003

tooling provided by Volvo.[235] VdB assumed again the responsibility for exporting to VTC on behalf of Unipac. According to an interviewee in VdB, despite the fact that VdB was Unipac's 22nd customer, VdB has always has priority in the activities.[236] Unipac performed well in the last SEM evaluation with a score of 81 percent and therefore was graded as an A-supplier. At present, it is the only case supplier with an A-rating.[237]

6.2.3.3 Joint Development Projects

Volvo do Brasil's new medium-heavy truck, the VM model, was the first model to include plastic fuel tanks provided by Unipac. At present, Volvo and Unipac are discussing new product development issues and the DM model is being developed together with Unipac and will also have the same tank as the VM. When it comes to tooling, Unipac has invested in the machinery for producing and tooling the Volvo parts and Volvo has paid for the tooling. However, the machinery investment appreciations are included in the quotations sent to Volvo.[238]

6.2.3.4 Export Activities

Unipac exports currently to the Argentinean market, but otherwise exporting takes place mostly in the Jacto holding company that specialises in agricultural products. At present Jacto exports to over 70 countries. Jacto's export sales account for 40 percent, and the shipments are about 2-3, sometimes 4 containers per week. [239]

Jacto group has an export department of 20 employees that handle all documentation, etc., in-house. Functions handled are documentation, legal, logistics and financial issues. In addition, the department includes the export sales department as well. At the moment Unipac does not export directly to any Volvo company outside Brazil but it is planned that the direct exporting to VTC would start in the 1st quarter of 2004. This would mean that Volvo would be the first in Unipac's automotive customers that Unipac would export to directly. [240]

[234] www.unipac.com.br
[235] Björn 2003
[236] Belforte 2003
[237] Ditzel 2003
[238] Ribeiro 2003
[239] Ribeiro 2003
[240] Ribeiro 2003

6.2.4 Alpino

6.2.4.1 The Company

Alpino Tubulares was founded in 1955 at Sao Paolo city. The company has specialised in assembled bent tubes (produces exhaust tubes, cooling engine and hydraulic tubes and oil suction engine tubes) used in the automotive industry for cars, trucks, buses and tractors. In 1994, the plant was transferred to Jundiai and at the same Alpino diversified into the kitchen-stove manifold sector. Alpino is also supplier to the other industries producing gas burners and tubular frames for furniture.[241] In terms of investments, Alpino's latest investment was in a machine for bending tubes; the cost of that machine was 300,000 EUR.[242]

6.2.4.2 Volvo Relationship

ALPINO has been a supplier to VdB since 1979. According to the SEM evaluation conducted the 17th of August 1999, the company has scored a total average of 52 percent and the average total criteria being 44 percent. The grade achieved was therefore a B but as the last evaluation is over four years old, the evaluation is being revised. It can be expected that the score will be higher this time as Alpino has made large investments in both working systems and equipment. [243]

6.2.4.3 Export Activities

Other main customers to ALPINO are Scania, Mercedes-Benz, GM, Multibras Electrodomesticos S.A., Whirlpool, John Deere, Motores MWM, Valtra Valmet, Cummins, New Holland and Caterpillar. Alpino exports kitchen-stove parts for GE in Mexico with the help of a trading company. Alpino does not have an in-house export structure and does not export for Volvo companies at the moment.[244]

[241] www.alpino.com.br
[242] Giampietri 2003
[243] Giampietri, Purchasing Management team 2003
[244] www.alpino.com.br

6.2.5 Proxyon

6.2.5.1 The Company

Proxyon is a supplier of parts, sets and services within metal stamping, roll forming and stretch bending of technical profiles for the automotive industry. Other customers of Proxyon are Volkswagen, GM, MagnetiMarelli, Delphi, Ford and Scania.[245] Proxyon has obtained the international standards in both quality and environment; ISO 9002, QS 9000, ISO TS 16949 and ISO 14001.[246]

6.2.5.2 Volvo Relationship

Proxyon has been the supplier from the very beginning of Volvo's presence in Brasil in 1979. At the time the first truck rolled out from the line in 1980, parts supplied by Proxyon were already included.[247]

6.2.5.3 Export Activities

Proxyon exports boxes and covers for auto radios to Argentina and to Delphi in the U.S. and door channels to Mexico. Proxyon has an export department and the commercial manager takes active part in the industry's fairs in America and Europe to find opportunities for new business. It is the role of the commercial manager to find and establish new businesses and the International Missions are planned and decided by him. Proxyon is one of the thirteen suppliers in the ATA-alliance.[248]

6.2.5.4 Supplier Development

Volvo is cautious considering the supplier's dependency on Volvo. Volvo's policy is not to contribute over 30 percent to the customer's turnover.[249] It is therefore not in Volvo's interest that the supplier is too dependent as Volvo prefers that its suppliers have as wide a customer base as possible and sees that through this the supplier can gain knowledge that can also benefit Volvo. According to one interviewee, it is also very important that the supplier is

[245] Gazola, Proxyon Company Material 2003
[246] Proxyon Company Material 2003
[247] Gazola 2003
[248] Gazola 2003
[249] Blin 2003

'curious' and aims on finding always new solutions and therefore being innovative and developing and benefiting both themselves and Volvo.[250]

Volvo and its suppliers are in close cooperation when developing new parts and tooling in the case of technology suppliers. Volvo's strategy in developing its suppliers can be called as a pushing strategy. This takes place by communicating to the supplier the future goals of Volvo and what are the trends in the market and how do these affect in the future collaboration between the supplier and Volvo. Therefore, Volvo offers the supplier the possibility to continue developing together with Volvo.[251]

Table 4. Summary of SEM Results of Case Suppliers

SUPPLIER	***DATE***	***GRADE***	***TOTAL AVERAGE***	***REMARKS***
Sifco	20.11.2002	**B**	67%	
Schulz	03.09.2002	**B**	71%	
Unipac	13.11.2002	**A**	81%	
Proxyon	15.10.2003	**B**	65%	
Alpino	17.08.1999	**B**	52%	Being revised

Source: Modified Ditzel 2003

In the above table are the SEM results of the case suppliers. As has been said, the SEM is revised every three years and this is currently in process with Alpino[252]. As is seen from the table, Unipac is the only case supplier that has reached the A grading. However, B level suppliers also have the chance to reach the A level through a development plan made together with Volvo in order to develop the key areas.[253]

[250] Lagerblad 2003
[251] Dias do Silva 2003
[252] Ditzel, Purchasing Management Team 2003
[253] Berndtsson 2003

Volvo do Brasil also encourages suppliers to collaborate with each other when needed. As the buyers in the purchasing department support each other, they also can suggest to their suppliers to initiate a dialog with another supplier in order to find the best solution in some specific issues. As long as the suppliers are not competing with each other in the same parts segment, suppliers are rather open to this kind of proposition from the VdB side. This has been the case of Schulz (forging parts) helping Unipac (plastic parts) with the new quotation including the costs for exporting.[254]

The pressure in the market for continuing consolidation drives the suppliers to seek forms of collaboration. This, for instance, is the case of the above mentioned Proxyon being a part of the A.T.A alliance. Seen as a good example of initiative and encouraged by VdB, Proxyon is currently discussing Alpino of the possibilities for Alpino to enter the alliance.[255]

6.3 The Transfer of the Export Process

In this section a brief overview of the process experienced by Schulz is discussed. In the process transfer description, Schulz is used as a pilot-case, showing the steps taken during the implementation and also considering the various aspects related to the process. The main focus is on showing the Volvo requirements and their influence on the process as well as the collaboration exercised by the companies.

6.3.1 Schulz in the process

As mentioned earlier, Schulz Automotiva started supplying VTC with parts in the year 2000, due to a demand from VTC for a project that required Schulz parts. The exporting was done by VdB. However, already then it was discussed that Schulz would start exporting directly in the future without the support of VdB. The air compressors division has had an export department since they started exporting air compressors in 1978. However, in terms of automotive exports, Volvo was Schulz's first direct export customer.[256]

[254] Santos 2003
[255] Giampietri, Gazola, Belforte 2003
[256] S. de Farias & Valente Boff 2003

6.3.1.1 Exporting to VTNA

At present Schulz is exporting directly to VTNA and the process was initiated in July 2002. For VTNA, Schulz has a commercial agent in the U.S. that handles the commercial issues when importing to the U.S. from Brazil. The agent has 20 years of experience in consulting Brazilian companies in exporting to the U.S. One challenge in the case of VTNA was finding a warehouse and LSP in the U.S. as VTNA carries no stocks in Greensboro.[257]

For VTNA exports, Schulz uses a logistical service provider called Givens. Givens provides services mainly in warehousing and parts handling as well as inventory. This includes operations such as warehousing, management of parts, shipping, receiving delivery schedules from Volvo, responding to Volvo on behalf of Schulz and re-working of parts. In the case of Givens, Schulz's goods are in consignment in the warehouse as VTNA does not have a warehouse.[258] Consignment means that Givens does not own Schulz's goods, but rather stores and holds them until VTNA pulls them from the safety stock.

In terms of safety stock, Schulz has to have an inventory of 90 days on their premises in Joinville. This is due to a 30-day shipment time (including goods handling and customs in Brazil), 30 days of stock in the local warehouse in the U.S. and 30 days consignment time at Givens. According to Schulz representatives, "We produce more than we receive," [259] meaning that there are more goods leaving the plant than what is received in terms of money. This creates a serious dent in the cash flow of Schulz.

6.3.1.2 Exporting to VTC

The implementation of direct exporting from Schulz to VTC was initiated in 2002. In September 2003, direct exporting began and three weeks later the first shipment arrived at the Arendal Hub. At this point, VLdB and VdB (buyers and engineers) had been supporting Schulz. At the moment, VLdB and Schulz have an agreement on the process implementation beginning January 2004, when Schulz is to export independently. It was said that Volvo has been extremely supportive and helpful in the implementation.[260]

[257] Schwartz, Pizzurro, Purchasing Management team 2003
[258] Pizzurro, Schwartz, Jagino 2003
[259] Borges de Carvalho 2003
[260] Schroeder, Santana 2003

The first step in the process was the quoting phase. At this point, VTC sent a request for quotation to Schulz (with drawings). The quotation request, together with the drawings as Schulz is a technologies supplier, were received by the commercial department. The drawings were further sent to the technical department, the foundry, machinery and painting. Then the quotation was rotated via the logistics department, which included the logistical costs such as the outsourced transport and hub costs. After this, the quotation was sent to VTC. This quotation process is the standard process when quoting for new parts ordered by VTC.

In order to define the total logistical costs, Schulz consulted VLC (VLdB) in the summer of 2002.[261] The costs for transport, warehousing and packaging of the goods were quoted from VLdB, which made an offer valid for 6 months. However, as the first shipment was to be sent, VLC's prices had increased by 24 percent since their quote to Schulz (due to increased costs at the VLC Hub in Arendal)[262]. After the initial surprise, a verbal agreement was made and it was agreed that the prices would remain as originally quoted, but would be revised in the beginning of the year 2004. As the total part prices quoted by Schulz to VTC were made according to the original prices given by VLC, the VLC price increases also surprised the final user, VTC as well as VdB. This has caused some speculation about the competitiveness of VLC when compared to other LSPs. Both the final logistical agreement and the purchasing agreement are still to be signed.[263]

Regarding the changes in the administrative structure, Schulz Automotiva needed to create an interface to the logistics department and VLC in Sweden. A position for the export analyst was created. Schulz's air compressors division has an export department, but as the automotive exports are quite different in terms of requirements than the air compressor export. Schulz has also outsourced the documentation and handling of the goods to a customs broker (OTM in Schulz's case).[264]

[261] Franksen & Andrade 2003
[262] Franksen & Andrade 2003
[263] Bergström, Berndtsson 2003
[264] Schroeder 2003

The packages (emballages) are provided to Schulz by Volvo Logistics. Volvo do Brasil provides the labels and packaging instructions to Schulz. However, in the first shipment the packaging was not in accordance with Volvo requirements and the first delivery to VLC arrived with damages. The problem origin is currently being investigated. The alternatives could be that the packaging provided by Volvo was not suitable, that the packaging instructions were not followed or that the packaging and labelling requirements were not clear.

6.3.1.3 Choosing a Logistical Service Provider-VLC

When choosing the LSP, Schulz was offered as one alternative to Volvo Logistics. Schulz also quoted other logistical service providers but VLC's expertise in Volvo Truck requirements was found as an advantage. VLC has been the only LSP willing to accept the ownership of the goods when VdB has been taking care of the parts exportation. However, when dealing directly with the suppliers, it is VLC's policy that the ownership stays with the supplier. Therefore, Schulz still owns the goods while they are in consignment at VLC. The Brazilian laws are creating challenges for Schulz. The laws prohibit Schulz to pay for any services rendered outside of Brazil for their goods.[265] This can be seen as a form of protectionism where the government tries to 'keep businesses within the Brazilian borders'. [266]

Communication is mainly between VLC and the outbound logistics of Schulz. The communication is on a weekly basis, depending on how smooth the delivery and quality demands are met. However, Schulz expressed a preference to having a commercial agent in Europe as language is an occasional barrier. Additional help of a commercial agent would include solving issues such as ownership.[267] This issue has been resolved so that Schulz representative organisation in the U.S. invoices the goods sent to Volvo Logistics Hub from VTC, and VLC holds Schulz goods in consignation. [268]

[265] Bergström 2003
[266] Bergtröm 2003
[267] Schroeder & Borges de Carvalho 2003
[268] Schroeder & Borges de Carvalho, Bergtröm 2003

6.4 Perceptions of the parties involved

In the following, the views of the parties involved including the suppliers, VdB, VTC and VLC, regarding the export process transfer requirements and consequences will be explored.

6.4.1 Schulz Perceptions

For Schulz Automotiva, the main challenges in exporting directly to Volvo companies, is doing business with an international external partner. The experience of the air compressor export department has been useful to some extent but there have been some misunderstandings on the requirements in terms of the packaging of the automotive parts.[269]

The direct export process has required new communication interfaces to VTC, VLC and the inbound logistics in plants as well as the required rules, regulations and documentation required in direct exports. The international business contacts have also required English classes. This has been a very positive experience and a challenge to the staff.[270] In addition, a logistical analyst position had to be created, who is responsible for EDI, materials management, logistics and so on.[271] Schulz realises that delivery precision is a critical issue: "If you do not have an efficient distribution chain, the product quality and competitiveness is secondary. If you do not have the product when the customer needs it, forget the business." [272]

Additional challenges have been the packaging and the labelling of the goods, as they were new functions for Schulz. The payment times are also seen as a challenge, as for VTNA it is 90 days, for VTC it may be up to 5 months and when doing business through VdB it used to be within 60 days from the invoice. Related to the payments, main challenges were identified as the financial exposure and cash flow effects caused by large inventories and payment times and also by the amount of goods in the pipeline. The production requirement for today is for parts that will be used 2-3 months from the

[269] Borges de Carvalho, Schroeder 2003
[270] Schroeder & Borges de Carvalho 2003
[271] Schroeder, Borges de Carvalho 2003
[272] Schwartz 2003

moment they have been produced.[273] However, as there are loans and guarantees available from the local banks (granted against an issued invoice to recipient such as VTC), an interviewee added that "Volvo is the guarantee."[274] Volvo is a well-known and reliable customer, and at times production has been started before the confirmation from Volvo has been received.[275]

Additional issues, according to Schulz, were the slow return on investments. As the payment requirements may stretch up to 5 months, such as in the case of VTC, the investments in terms of machines (labels and packaging), staff and materials were slow to be regained. This also contributed to the financial vulnerability. In the case of VTC, Schulz (through its U.S. affiliate) invoices at once for the whole shipment, but VTC makes payments in the order in which the goods are pulled from the VLC Arendal Hub. At times this can lead to a situation where the last 'pull' may exceed the Brazilian requirements for closing the export sale within 180 days.[276] This is an interesting example of how the Brazilian requirements may not correspond with the real life export activities, which can further lead to Schulz not being able to fulfil the requirements stated by the local authorities.

In terms of benefits, Schulz names the opportunity to learn international business, and also having the name Schulz become more visible for the end-users as well as to VLC among others. Moreover, establishing new contacts and increasing business were identified as benefits.[277] However, it was recognised by the supplier representatives that the new contacts to VTC and VLC are challenging due to language and geographical distance issues. As Schulz's representative mentioned: "Sometimes when the VTC buyer is in contact with me and I have some problem understanding the issue, I contact Pedro Jagino for consultation."[278]

6.4.2 Sifco Perceptions

Sifco has exported already for some time (starting in 1986). They feel that they benefit from exporting. First, they clarify the diversifying need, as the domestic

[273] Schroeder, Borges de Carvalho 2003
[274] Schroeder 2003
[275] Schroeder, Borges de Carvalho 2003
[276] Borges de Carvalho 2003
[277] Schroeder, Borges de Carvalho 2003
[278] Borges de Carvalho 2003

market is not strong enough to support their production; at present their export sales account for approximately 45 percent of their total sales.

Therefore, Sifco sees exporting as a business opportunity and growth potential. At Sifco, the attitude is "you have to export,"[279] and they say that a great benefit in exporting is doing business in a currency stronger than the Real. Sifco invoices in EUR/USD depending on where the buyer is and due to the stronger currencies says that the financial position of the company has strengthened. The main challenges according to Sifco are the port strikes (strong unions in Brazil), which may prevent the goods from being shipped according to schedule. The strikes are quite frequent and to negotiate through them (windows provided by the customs staff randomly) requires 'skills' and money.[280]

6.4.3 Unipac Perceptions

Volvo was Unipac's first automotive customer in 2000. Since then, Unipac has started supplying many competitors to Volvo as well as some passenger vehicle manufacturers. In discussions with Scania, Unipac will set up a small plant near the Scania plant in Sao Paulo for daily deliveries to them. At present, Unipac does not export automotive parts, but they do some exporting to Argentina and U.S. in agricultural machinery. These exports are done with the help of the holding company, JACTO. With the automotive businesses, Unipac has seemingly been encouraged to diversify and it seems to have been beneficial.

At the moment Unipac is preparing to quote to VTC in week 51, including the export costs, and for this purpose Unipac has sent a quoting request to VLC for the logistics services including transportation but VLC has forwarded this to VLdB as they have a presence in Brazil. VLdB will give the quote on costs for VLC services after prior negotiations with VLC. In addition, Unipac has been in contact with Schulz in order to grasp the process requirements and the necessary steps to take. Our interviewee at Unipac agreed that Schulz has been of great help and that the consultation with them will continue as the process progresses. The implementation process has not been started yet. It is planned that Unipac will start exporting during the 1st quarter of 2004.

[279] Capriglione, Morais de Araujo Souza 2003
[280] Capriglione, Morais de Araujo Souza 2003

Difficulties identified for Unipac involved the material flow to component supplier Visteon; the flow is currently through VdB and VLC to Visteon and then to the end-users (VdB and Umeå plants). Additionally, Visteon is not only a customer to Unipac but also Unipac's supplier. In Brazil, Visteon (Brazil) supplies Unipac and in Europe, Unipac supplies Visteon France. Related to the supply to Europe, a challenge according to Unipac is the transportation as well as distribution. This is mainly due to the high cost of transport and also as Unipac's parts are large but lightweight, and the containers are charged per cubic meters, the container space is very expensive. In terms of airfreight, the parts weight and size are main problems as well; here again the issue being the cost of transport.

A main challenge for Unipac, therefore, is finding an LSP that has a service distance of a maximum of three days to the Volvo plants. In terms of the LSP, another challenge is the currency aspect, particularly the fact that services cannot be paid for from Brazil to an external service provider.[281] For example, VLC invoices in Swedish Crowns and moreover, VLdB cannot invoice the services they provide due to the lack of commercial status in Brazil.[282] VLdB has to invoice via VdB, meaning in legal terms that VdB is seen as the service provider, which is not the case. However in terms of safety stocks, Unipac does not see much of a challenge, as Unipac is at present a low volume producer and suspects that it will remain as such. However, as Unipac is developing plastic fuel tanks to other future truck models, the situation could change.

Unipac agrees, however, that the bureaucracy for exports is more of a technicality rather than a main issue. Unipac also expects to have access to the JACTO groups export team in documentation once the process is implemented. For Unipac main issues are the transport and logistics services that they need to deliver and distribute. Unipac did discuss with VLdB the set up of a terminal hub (by VLdB) in their negotiations for quoting the transport and logistics services costs.

[281] Bergström 2003
[282] Franksen 2003

6.4.4 Other Supplier's Perceptions

6.4.4.1 Proxyon & Alpino

Proxyon and Alpino have supplied to Volvo since 1979. Volvo approached both suppliers in terms of initiating the direct export; this was in the form of a quotation request including the costs of direct export. Proxyon exports automotive parts to the U.S. and Argentina at present, but not directly to Volvo companies. In addition, Proxyon is part of the ATA, an alliance that works as a forum for automotive suppliers that want to start exporting. ATA can also be considered a consortium of technology producers, a consolidation of producers that allows for sharing costs of transport, negotiation power and pricing influence.[283]

Alpino does not export automotive parts. Alpino exports parts of stoves gas ducts to Mexico with the help of a trading company in Mexico. The direct export has not been discussed between Alpino and Volvo before. Alpino got a quotation request from Volvo (that would include the costs of exporting) in week 46 and they quoted in week 47. While at Alpino, it was still unclear what the process steps would be as the receiver in Europe had yet not been clarified, the LSP aspect had not been considered and the quality checkpoint had not been defined. The attitude towards the exportation was positive but Alpino is considering hiring an external party to handle all documentation and to contract the LSP on its own. In addition, Alpino agreed that as the volumes and delivery schedules are clarified, that is when they will see what their capacity and capability is in terms of exporting.[284]

What both suppliers see as main challenges in exporting are the transport and shipping related matters. Mainly, the mentioned possible delays, damaged goods, expensive air freight and the additional costs that these shipment risks may induce. Main opportunities for the exports identified by both are the possibilities to increase volumes (as much as tenfold) and the total business with Volvo; access to a larger market is also seen as positive. Doing business in EUR/USD is also seen as a factor that can strengthen the financial positions of the suppliers. Proxyon sees the export as a channel to increasing sales and thus

[283] Gazola 2003
[284] Giampietri 2003

being able to get more financial assistance for their business.[285] In addition, the visibility of the producers to the end users was mentioned as a positive factor.

One challenge detected by the suppliers was related to the fact that both Alpino and Proxyon are low volume producers. As only the quotation has been done and the delivery schedules or order volumes are not known yet, it is difficult for these suppliers to say whether they can respond to the volumes requested by Volvo in the future.[286] A main issue here is said to be the responsiveness and flexibility of producing to order; this means that as Volvo's demand may increase and the suppliers would need flexibility in responding to the volume changes. This has been a challenge of some suppliers in the past. Moreover, the 3P requirements may not be clear yet as they may in the future consider sourcing for Renault and Mack from this emerging market.[287]

Additional challenges felt by Alpino are the international business relations and international market knowledge that they will be faced with. Of the financial risks, Alpino says that the support by the local government in terms of loans and advances (for payments that will be received) are quite good; the government may grant advances up to six months when the exporting company has invoices of anticipated payments to show. The interest rate for advances is comparably low to the market interest rate, 6-7 percent, whereas the market interest is at approximately 24 percent.[288]

As for other challenges, Alpino states "We have no expectations of difficulties as Volvo is a well-known company to Alpino and vice versa." Proxyon is also open to exports: "Direct export is for everybody."[289]

6.4.4.2 Bruning & Wabco

While conducting our field work, a supplier that was mentioned frequently as an example of a supplier not willing to proceed with the direct export process implementation is Bruning (see Table 3). Bruning supplies Volvo with sheet metal (stamped parts). Currently Bruning only exports within South America. They are a strategic supplier for Volvo and considered as a future strategy

[285] Gazola 2003
[286] Gazola and Giampietri 2003
[287] Dias da Silva 2003
[288] Giampietri 2003
[289] Gazola & Giampietri 2003

supplier in the EMS context. However, Bruning has expressed that they have doubts about the process implementation. A factor behind this comment may be the fact that there is little English capability at Bruning "Only the CEO's secretary speaks English." On the other hand, Volvo has its interests in increasing Bruning's willingness as the parts are of high quality and the company has a stable financial status.[290]

Our only interview with a follow-source supplier, Wabco, focused on export related matters. Wabco supplies Volvo with brake systems. Wabco is a follow-source supplier and has wide export experience and global presence. Wabco's biggest export markets are Central and South America and China. In Central America, Wabco uses distributors. Currently, Wabco exports less than they import to Brazil and Wabco was seemingly positive and quite confident about exporting directly. However, it became clear that if direct export from Wabco was started, there are discussions on whether Wabco in Europe (headquarters) will start producing for Volvo units in Europe. This for Wabco in Brazil would mean decreased volumes and total business. This is because the production for Volvo would only be for the use of VdB.[291] Wabco has an export department and they use Schenker and their LSP. The supplier has outsourced the customs handling to an external broker located in the Santos harbour in Sao Paolo. For smaller suppliers, Wabco recommends contracting of services such as customs brokerage. They also emphasise the importance of a full-service LSP. If a small supplier were to keep documentation and handling matters in-house, it is said to be a waste of both time and money.[292]

6.4.4.3 Summary of supplier perceptions

During our interviews, we found that the suppliers had rather similar perceptions regarding the opportunities and challenges related to the implementation of the direct export process. However, having said this, we realised that the suppliers that had not yet proceeded further in the implementation process and had only quoted, were quite positive and did not see the challenges as clear as for instance Schulz, who had already started the process and is aware of the possible pit falls.

[290] Dias da Silva, Purchasing Management Team 2003
[291] Dias da Silva 2003
[292] Hardeman, Lopes Neto 2003

All the suppliers agree that exporting directly to the end users will decrease the currency risk as the invoicing will be done in USD and EUR, and therefore strengthen the financial situation through the stronger currency. Additionally, the fact that their company name will become visible to the end user and the potential future increase in export sales, were seen as opportunities. On the other hand, the suppliers had some concerns regarding the new situation. The main challenges were identified in the financial exposure caused by the gap of having great amount of goods in the pipeline and the time it takes before the money starts coming in. Also, conducting business internationally instead of only domestically was mentioned by the suppliers as a challenge. It has also been found also that Volvo's safety stock requirements and longer payment times have an impact on cash flows of the suppliers. Additionally, common problems were also mentioned to be transport and shipment related, such as customs officials' strikes in the harbours, etc.

Overall, according to our observations of how we and the Volvo representatives were received, the suppliers seemed to be willing and ready to proceed with the process, even in cases where the process implementation had not proceeded further than the initial quotation. The target case suppliers were all relying on implementation in close collaboration with Volvo units.

6.4.5 VdB Perceptions

The role of a trading company taken by VdB when exporting parts from suppliers to end users has created high administrative costs. In addition, VdB also takes the risks associated with transport issues. From the VdB point of view, the export process transfer is mainly for VdB to focus on the core business that is the production and marketing of CBUs, as well as exportation for the domestic and foreign markets.[293] This is also in accordance with the 3P strategy, which is increasing the effectiveness of the supply chain and finding loopholes where savings can be obtained.[294] Many interviewees noted that the transfer of the process would reduce the administration and costs related to parts exportation. In addition, it will remove the currency risks that VdB is susceptible for when they conduct business with the EUR/USD but only

[293] Rutting, Purchasing Management Team 2003
[294] Purchasing Management Team, Bergström 2003

receive in Brazilian Reais. Nonetheless, for the exporting of CBUs, VdB will keep the administration and structures.[295]

As the Incoterms used by VdB is for maritime freight CIF, it means that VdB carries the cost, insurance and freight until the port of destination. The ownership of the goods is, however, VLC's from the departure port onwards. As it has been said by many interviewees, freight costs and compensation for delivery precision are extremely costly, this activity makes VdB susceptible for risks such as strikes in the ports and documentation aspects (subject to delays). This also means that if any delays/damages for the goods carried by VdB should occur, VdB has to carry the costs associated and not the producers. Moreover, a risky aspect is also the quality of the goods. When VdB exports for the suppliers, they also take the responsibility of checking the quality and also carrying any subsequent costs related to that. It has been said by several interviewees, that by exporting directly, the suppliers would become clearer of Volvo requirements and finding the fault in the supply chain becomes easier as an additional link in the information and the goods flow would be removed.[296]

Regarding the challenges faced by the suppliers in exporting, VdB identified a few key aspects in sourcing from Brazil. These are the bureaucracy and the geographical distance, which may cause delays (documentation, strikes, etc.) and increased prices due to risks and costs from transports. A recommendation was to have an in-house export sales department rather than contracting it externally. In this way, the knowledge and experience of exporting as well as the changes in the regulations would be retained in-house and serve for future business purposes.[297] When it comes to the first export implementation process conducted with Schulz, it is evident that VdB is pleased with the short time consumed as well as the results: "Schulz is our success story."[298] As a result of this, Schulz will be a reference for VdB when implementing the export process to other suppliers.

As transports from Brazil take time, exporting from long distance markets becomes risky. The suppliers would therefore accept all the risks that VdB has

[295] Andreazza 2003, Jagino 2003 Purchasing Management Team 2003
[296] Björn, Franksen, Bergström, Purchasing Management Team 2003
[297] Ogliari 2003
[298] Santos, Jagino 2003

agreed to by now. Therefore, VdB expressed that it is important that the LSP selection is made carefully. Volvo has an unwritten policy on using VLC for intra-company logistics within the Volvo group. However, the suppliers may use other LSPs that fulfil the Volvo requirements.[299]

As for challenges for Volvo Trucks, VdB has identified one as being the time frame for implementing the transfer of the export process. It will not occur overnight, and even if the future strategy suppliers (that 3P push for synergies and global supply) will export soon, the parts supplied by Brazilian suppliers may still be attractive for other Volvo companies, so the parts exportation is feared to continue to some degree.[300]

If some suppliers are found incapable of assuming the direct export responsibilities, this may cause price increases for the purchases made locally when VdB quotes the suppliers in the future as the purchases made by VTC may stop.[301] It has been said that VdB's knowledge of the European market may be lacking and the response may not be the one expected by VTC. It may also be also that the headquarters' overall understanding of the implications of strategic decisions on the business in Brazil is limited.[302] In addition, it is VdB who have the closest contact to the supplier and therefore the one that also views the supporting of suppliers as a key factor in doing business. However, VdB also recognises that relationship factors are difficult to measure in economical terms. "Sometimes we do not measure very special things because they are intangible."[303]

In terms of communication, it has been said by several interviewees that the communication and information flows will not (or should not) change very much. Many have noted that it will increase the need for communication. [304]. This is due to the need of the host buyer in Brazil to know the volumes and prices to be able to analyse the purchases impact on the local business. In relation to this, VdB sees this aspect of increased communication and new interfaces as a challenge for both Volvo companies and suppliers. This will be

[299] Purchasing Management team, Ogliari, Araujo, Jagino, Andreazza 2003
[300] Dias, Ogliari, Purchasing Management Team 2003
[301] Araújo 2003
[302] Jagino 2003
[303] Belforte, Rocco 2003
[304] Purchasing Management Team, Andreazza, Araújo, Jagino 2003

a new aspect for suppliers, as they have previously been conducting business mainly with a 'domestic partner,' VdB. When exporting directly, they will be conducting international business and will need to establish contact with new partners as the logistical service provider and the customer's commercial departments.[305] It was mentioned by interviewees that it is very important for the parties involved to meet in the beginning of the business relationship as this creates a more personal bond between them and enables the smoother conducting of business later on a day-to-day basis.[306]

In our observations of the relations between the suppliers and the buyers, we found that the relationship is very close and they are personal. This was seen on multiple occasions. For one, a buyer, referred to the supplier representatives using "we think,"[307] when referring to themselves as well as the supplier. In addition when travelling to Campinas, another buyer stated: "In Campinas you will meet my friend."[308] Only on location did it become clear that the friend was the Wabco contact person. Finally, on several occasions we felt that the buyers became supplier representatives when speaking of changes and their effects on the supplier organisation when visiting their premises and discussing the business in general.

Relating to this, an interviewee has 'warned' VTC in being precise when quoting directly from Brazilian suppliers: "I have been warning VTC to be specific when asking suppliers to quote directly, as the suppliers may not always be aware of the requirements that direct export include (as the direct export news was seemingly fresh to a few suppliers)."[309] Because of the suppliers' inexperience, many have still used VdB as a back-up when quoting to VTC and VTNA. The host buyers have been consulted in order to gain understanding of the costs associated with exporting directly. [310]

6.4.6 VTC Perceptions

The accumulated transport and logistics costs and the transport associated risks are seen as main challenges in sourcing from emerging markets, are seen The

[305] Purchasing Management Team, Ogliari 2003
[306] Araujo 2003
[307] Andreazza, Araujo 2003
[308] Dias da Silva 2003
[309] Belforte 2003
[310] Jagino 2003

geographical distance was mentioned as being one main factor in the sense that the transport consumes time and adds costs. Moreover, this was mentioned as a main cause for reluctance to source from geographically distant markets (emerging markets and other long distance suppliers).[311] This is the case with or without the support of VdB in exporting from Brazil.

However, VTC sees it as more efficient if VdB is removed from the goods flow so that the 'loophole' or fault in the supply chain can be found easier and not only through VdB.[312] On the other hand, VTC recognises that the role of VdB would remain substantial even after the suppliers accept the export responsibilities. This is due to language, culture and geographical proximity as well as the length of the relationship.[313]

It has been said that in the day-to-day operations of direct exporting, VTC would not basically need to communicate with VdB in the case of direct exporting unless something goes wrong in the delivery flow or quality.[314] The commercial department purchasing at VTC and export sales at the supplier would be the main communication interface. Another would be the outbound logistics of supplier and VLC. The VTC purchasing view is that the quoting will be done directly with the suppliers as in the case of Schulz.[315] Direct contact would, to some degree, make the costs and the prices offered by the Brazilian supplier base more transparent and therefore more comparable to others in terms of competitiveness.[316]

When it comes to the current situation with some target suppliers, it has been mentioned that the size and the weight of the parts, as well as a somewhat complex flow, may well be obstacles for which Volvo may decide not to source globally from some suppliers. In these cases, Volvo encourages the suppliers to set up a plant or warehouse in Europe, as this may change the dynamics and enable the supplier to become a truly global supplier to Volvo.

[311] Mackinowski, Andersson, Jagino 2003
[312] Björn, Rieck 2003
[313] Berndtsson 2003
[314] Björn 2003
[315] Benrdtsson, Rieck, Mackinowski 2003
[316] Mackinowski 2003

A key for successful process implementation is the establishment of processes and their effective use. This decreases the possibility for individual adaptations and interpretations. "If established processes exist, the discussion always gets back to the process level."[317]

In case of Bruning, for instance, it has been said that the supplier is capable in terms of Volvo. Nonetheless, Bruning does not seem willing. However, Bruning has been included in the future strategy suppliers (for its segment in the Chassis), even if they have confirmed that they will export directly to other Volvo units. VTC sees this as an opportunity and says that the fears expressed by Bruning may well be unjustified if they'd become more familiar with VTC; a suggestion is made whereby VTC feels that the cultural and geographical distances that Bruning may well be experiencing as barriers to export (as also found in the case of the Danish exporting companies) may be reduced by inviting Bruning to visit VTC, to see the way they work, the plant and the requirements. This, according to VTC, would be a viable way in line with our argument saying that the two willingness and capability factors are mutually exclusive, but when willingness is at stake there are relational aspects that Volvo may use to convince the supplier to do business, as Volvo wants in this case to export directly.

6.4.7 VLC Perceptions

VLC started to accept goods exported by VdB beginning in 2000. The project was on a trial and error basis, or in other words, learning by doing. A part of this project was the set up of VLdB at VdB. The objective was to look at the whole supply chain from emerging markets and make eventual cost cuts wherever possible. VdB has been a pilot case for VLC in working as a logistical service provider when sourcing from emerging markets. [318]

VLdB is an extended arm of VLC in Brazil, familiar with rules and regulations and also finding new business for VLC as well. The view of VLC here is such that VLC should be present (or have a partner) in each emerging market to have access to potential clients as well as facilitate the business. The presence in the emerging markets makes VLC more responsive and maybe enables reactivity in terms of upcoming market changes. The policy with quoting is such that the

[317] Berndtsson 2003
[318] Bergström, Franksen 2003

VLC unit closest to the producers is responsible for quoting and the one negotiating the terms.[319]

According to an interviewee, Volvo needs to adapt a customer-oriented perspective and thus communicate a unified view of Volvo as one unit in emerging markets, not separating the units such as VdB and VLdB.[320] However, as VLC is at present a separate, freely competing LSP in the market, it is not necessarily the LSP chosen from the suppliers. Therefore, it has been said that emphasising independence from VdB and VTC is necessary.

On the issue whether VLC is the choice for suppliers, it has been commented that VLC is expensive.[321] VLC views that this is due to their knowledge of the Volvo companies, Volvo specific requirements and the use of the latest technologies. An additional factor is that VLC (like other LSPs) is trying to get the entire supply chain under their control, allowing them to provide a 'full service.' VLC feels that they are considered a supplier. Rather they would like to be seen as an LSP that controls the whole supply chain, i.e. provides door-to-door service picking up the goods from supplier and delivering them to the end user.[322]

Additional service is provided by VLC in terms of re-working, painting or correcting any delivered goods. For this they contract the services from SORB, a specialised company in Gothenburg. However, suppliers are free to choose any other contact they may have for re-working, but VLC recommends SORB due to their experience inVolvo quality requirements.[323]

In terms of communication, VLC sees a challenge with the delivery schedules matching invoices. The principle is 'first in- first out', which means in practical terms that invoices 1-10 need to be pulled from the warehouse in the given order. This means that the producers (suppliers) need to follow an order with deliveries and match invoices to them. VLC currently invoices the end-users. In the case of VdB exporting the goods, the goods are owned and stored by VLC in a duty-free warehouse (non-bonded warehouse). This means that VLC gets

[319] Volvo Trucks Intranet
[320] Bergström, Franksen and Andrade 2003
[321] Rieck, Mackinowski, Bergstrom 2003
[322] Bergström 2003
[323] Björn, Bergström 2003

the VAT reduction benefits. When the suppliers initiate the exporting, the goods will be held in a non duty-free warehouse (bonded warehouse) and in this situation, the tax benefits are only for the end user who pulls the goods from VLC consignation.[324]

VLC has a safety stock requirement for 4 weeks. In the case of Schulz, this is 5 weeks. However, as not all parts have the same demands from the end user time-wise and there is increased pressure to meet just-in-time requirements, VLC is planning to introduce an ABC warehouse system. The A-warehouse would include the JIT parts, B-warehouse parts with 2-3 weeks demand and C for parts with 4 week demands. [325]

For VLC, the main risks in emerging market sourcing in general are transport related, strikes, time differences, wars and other host country context factors. An additional aspect is the fact that many emerging market suppliers depend on raw materials from Europe and when they hold the minimum required amounts of raw materials to minimize tied up capital, there is little flexibility in the supply. This may then result in delivery delays and in worst cases line stops. These may cost up to 1.5 million USD for one day at one plant. According to an interviewee, "The key factor in sourcing from emerging markets is that the suppliers need to supply us (VTC-plants) from Europe."[326] This means, in practical terms, production or warehousing through partners in Europe. For several case suppliers this is a consideration.[327]

In addition, VLC or VLdB may not accept all the suppliers that approach them. At present when VdB does the exporting, this is 'secured' and filtered by VdB in the middle. VLC may refuse taking some low-volume suppliers as customers as this would not fill the containers effectively and would make the handling and transport expensive. An additional factor is that as of yet, VLdB does not have individual commercial status and invoicing is done via VdB. This is due to Volvo Group policy to have one legal entity under which all Volvo companies should be.[328] Naturally, to make business profitable, the preference of VLC is on the larger suppliers, with higher volumes; in cases where this is

[324] Bergström 2003
[325] Bergström 2003
[326] Andersson 2003
[327] Capriglione, Morais Araujo de Souza, Ribeiro 2003
[328] Franksen, Ogliari, Purchasing Management Team 2003

not applicable, a Volvo company channel (such as VdB) is preferred. However, this approach is not supported at the 3P level, where the push is toward global supply, encouraging sourcing from larger volume producers that meet requirements of supplying all Volvo markets or companies from one location.[329]

VLC is hoping to establish a commercial agent status for organisations wishing to export to Sweden and Volvo. In addition, VLdB is planning to set up a terminal hub at the port of Sao Paulo so to facilitate the consolidation of goods stuffed into the containers and the inland handling. [330]

6.4.7.1 Summary of the Volvo units' perceptions

As has become evident, the benefits of the outsourcing of the export to suppliers include minimizing their risks in terms of currency as well as financial (transport costs and risks associated) aspects. Additionally, the administration for the parts exportation would be removed, removing on one hand nearly 20 million USD worth of business, but also enabling VdB to get back to their core business. Moreover, in removing VdB from the goods flow allows for direct access to the fault if anything would go wrong in the pipeline. What VdB sees as a challenge for the suppliers is the bureaucracy of exporting from Brazil, the required international trade experience and an export structure and attitude of the management toward exporting. An additional aspect is the supplier ability to respond to volume demands and volumes as well as other Volvo units' requirements. The ability to respond also relates to the time that the process transfer will take; some concerns of the pace were expressed emphasising that the process is time consuming.

In terms of VTC, the additional link in the goods flow would be removed and it would make the supply chain more efficient and the accumulated costs for sourcing more transparent. VTC would also see the flow in the pipeline directly, enabling them to detect the faults in the flows and processes without an additional link. Nonetheless, what VTC sees as a main challenge in this is the distance and the accumulated risks and LSP related matters that the supplier will have to deal with (in Section 6.1.3.).

[329] Bergström, Purchasing Management Team, Berndtsson, Mackinowski 2003
[330] Bergström, Franksen & Andrade 2003

For VLC, like VdB and VTC, the concern is the size of the supplier and their business for VLC. At times VLC may not be able to accept a supplier's business due to low volumes. Additional views of VLC include the distance and the reaction time to getting parts from such a long-distance. Therefore, in line with the VTC logistics department's requirements, VLC recommends that the suppliers should be able to have production or warehousing in Europe to supply the Volvo plants in Europe.

7 Analysis

Our discussion will build on the developed sub-research question areas. In the discussion, we will pick out relevant examples from our empirical findings. In our discussion, the findings will be discussed reflecting our theoretical framework, particularly the compiled factors identified in our own model. Additional findings discovered during the research will also be discussed as we find that these are very interesting to present. The analysis and discussion in this section builds much on our interpretations of the situation and also on the implications that removing VdB as middleman will have on the actors, the flow of goods and communication.

7.1 Volvo do Brasil as Middleman

Mapping out the export process as it is at present (through VdB) helped us to understand the complexity of the situation as described in the beginning of Chapter 6. We already had an idea of the process outlook based on our field work in Sweden. However, the underlying motives and actors involved in the export process became clear only after the interviews in Brazil.

After VdB started exporting on behalf of its local suppliers (among the first was Schulz), the Brazilian supply base was found to be of good quality and a competitive price. This increased the demand for parts from Brazil. As the function of handling exports was in place at VdB, it became a good channel for obtaining parts for plants in Europe and North America. This, however, gave VdB the role of a trading company, buying the goods from suppliers and also assuming the risk and the costs associated with exporting.

It seems that the sourcing initiation from Brazil was a suitable strategy at the time. However, the economic situation shifted and it became non-beneficial to continue. Since, global purchasing and 3P started seeking alternative solutions for making the supply chain more effective and to create savings through synergy effects. In our opinion, an additional dimension to the awkward situation can be seen in the fact that these suppliers were considered ‘global’ when they in fact, per definition, were not global suppliers; they did not supply to all Volvo units on all continents. Clearly the terminology and classification

of global suppliers varies. This may be due to the distance aspects, but also due to the different operational roles of the Volvo units. Additionally, VdB exporting on behalf of suppliers is in our opinion a rather interesting situation, as VdB ultimately was a supplier to VTC and VTNA, also becoming a second tier supplier to Visteon in France.

So, through the process of cost cutting in the supply chain initiated by the global purchasing organisation and 3P, the parts export function at VdB is to be eliminated. This, to us, seemed to come as somewhat of a surprise to the suppliers. VdB has since requested quotations from the suppliers including the costs of export and VdB has preliminarily evaluated the suppliers' ability to export. Three of the case suppliers (not yet implementing the process) showed no particular concerns in direct export as they felt that the volume base and general situation would remain the same. This, however, seems contrary to Volvo's view, as it seemed that the objective in the future to source globally included having larger suppliers that would be able to respond to sporadic volume increases.

In opinion it could be seen that suppliers, while positive in their attitudes, they seemed uncertain of the process and objectives in general. This was also seen in the concerns expressed by Alpino and Proxyon. Both expressed uncertainty of the process as it was unclear who the end users will be and in what volumes the demand will be. Moreover, the quality screening of their parts and the location for was unclear. This may partly be due to the fact that the export issue came as news to the suppliers but also because the LSP aspects had not yet been addressed. In our opinion, the proceeding of the process with suppliers has seemingly started with the quote request. However, with some suppliers, the export had been discussed earlier, but no time frames or plans seem to have been prepared. In the case of Alpino, for instance, the quote request from Volvo including export costs had been received in the previous week of our visit and while we were there, the quote had already been sent to Volvo.

This may well justify the statement and recommendation as stated by an interviewee: "Volvo units need to be careful when quoting directly from Brazilian suppliers, as they may not always be aware of the requirements of

Volvo units."[331] This is why some suppliers have already quoted but probably need to change their quotes once they realise all the aspects included in the export process. It can be said that there is an increased need for information and communication not only between customer and supplier in Brazil, but also internally between the Volvo units. This will ultimately minimize margins for mistakes and increase comparability between suppliers, which will help Volvo in its purchasing decisions.

7.2 Removing the Extra Link

7.2.1 Export Requirements

As has been reviewed, the suppliers need to meet two sets of requirements in delivering parts from Brazil to Europe. These are the Brazilian export requirements (rules and regulations) and the requirements of Volvo. The requirements of the Brazilian government are found in Chapter 4 and the Volvo requirements are found in Section 6.1.3., and constitute the total requirements that the supplier needs to meet. This means that the 'real' ability of the suppliers to export depends not only on the set requirements but also the suppliers' resources that allow the supplier to manage the requirements. In the following, we will reflect on the experiences of Schulz in the process implementation. We will also discuss the most challenging factors in export for Schulz and the other case suppliers (not yet implementing direct export).

It is clear that for Schulz, the most risky aspect of exporting directly has been the financial exposure. This exposure is caused by the fact that there are more parts in the pipeline due to geographical distances, handling and transport times and payment terms than there is money coming in. In our opinion, the financial exposure and the risks associated are things that need to be clear in the start up of implementing the direct export. Here we feel that VdB's initial evaluation based on the suppliers' financial status seems sound. In the case of Schulz, however, it was felt that the exposure was partly remedied by the business partner being Volvo. It seemed that doing business with Volvo as a partner is enough of a guarantee for Schulz as well as other case suppliers. In short, the business brought in by Volvo to the suppliers is worth it.

[331] Belforte 2003

In addition to the financial exposure, a challenge identified by case suppliers is the expensive freight cost and risks caused by the geographical distance to market. The freight is expensive and needs to be insured. It is apparent that for suppliers, the direct exportation from Brazil to Europe is clearly an issue that needs careful financial assessment.

The current situation where VdB is a middleman brings certain security in the sourcing so that VLC, for instance, accepts the ownership of the goods. So it seems that VdB serves as a 'filter' or channel for the goods. However, in the case of suppliers, the ownership will not be taken by VLC. This is a big challenge for the local suppliers, especially in the Brazilian context. This is because the Brazilian laws state that the ownership needs to be transferred to the party outside of Brazil but also prohibits any services to be paid for outside of Brazil. This, for small suppliers, is a clear obstacle that may be solved through association, or having presence through a commercial agent (such as in the case of Schulz in the U.S.) on other continents. This, in addition to the financial exposure, is a main obstacle for small, local suppliers to export directly.

Additional LSP related aspects, in the case of VLC at least, can happen that the volumes produced by the target suppliers are not sufficient to meet VLC's volume requirements in terms of profitability. This further challenges the smaller suppliers in implementing and succeeding in exporting directly.

Moreover, export issues also involve practical challenges. These involve the packaging and labelling of the goods prior to shipment. This is to be done strictly according to Volvo standards to ensure the quality of the parts while in transport. The difficulties in the packaging and labelling were somewhat of a surprise for Schulz. As has been mentioned earlier, Schulz has had trouble in the packaging already with the first shipment to VTC. While the cause for the mistake is being investigated, it was said that the packages (provided by Volvo) were initially not the right size for the parts, but also that the packaging instructions had not been followed. The parts were not wrapped as Volvo requires and the parts arrived damaged at VLC. VLdB stated here (and VdB agreed) that the problem may have been caused either by incomplete packaging and labelling instructions or that that the instructions were not followed. Either

or, it seems that the information about the packaging and the details related to this aspect had not been fully addressed and this has been corrected.

So, whereas having an experienced export department is clearly of help in the documentation and administration of exporting, the practical Volvo related requirements may cause difficulties in the process. This seems so, especially if these details are not addressed carefully from the beginning with Volvo instruction. It seems, therefore, that Schulz as a starter to export for Volvo has faced more challenges meeting the Volvo requirements, rather than the documentation-related matters. Interestingly, Sifco (experienced exporter) stated the most challenging part of the exporting is the bureaucracy and the shipping-related risks and problems.

From the Volvo perspective, it was mentioned on several occasions that a key factor in suppliers looking to start exporting is that the supplier has the structure and a pro-export attitude in the management. Volvo sees this as a determining factor (alongside the financial issues) for a supplier to succeed in direct export. However, in some cases, as the above case with Schulz shows, the problems are more of a practical nature.

Relating to the export structure and management attitude towards exporting, Volvo preference seems to be that suppliers have an in-house export department. The argument behind are the advantages of having an in-house department with access to the latest updates on legislation and changes directly. However, this is debatable in a sense as the service is available by external service providers such as LSPs and customs brokers that many suppliers had found good. It may be that the recommendation to have an in-house export department facilitates learning and the operation in the bureaucracy for the company, making it less dependent on external service providers. However, Wabco, a follow-source supplier argued that for small suppliers, the set up of a department in-house is a wasted investment. This confirms to us that the investment in setting up an export department with staff that is educated is a substantial one, making it unviable for smaller suppliers to establish.

7.2.2 Process Implementation

In implementing direct export at Schulz, there were a couple of surprises involved. One of these was the cost of the LSP (in this case VLC) for Schulz.

VLC is, according to many, very expensive and a price increase in their services during Schulz contract time was an additional financial consideration in the process implementation. It also seems that not only the costs of the transport but surprises regarding Volvo packaging and transport requirements as well as responding to volumes needed were causing uncertainty in some suppliers (Alpino and Proxyon). For instance, the recommendation from VTC logistics department is such that VLC should be the primary LSP contact. However, the supplier is free to select any service provider, and as VLC is comparably expensive, it seems that there are various messages about the usage of VLC going around.

In addition, if the price of VLC is not competitive compared to other LSPs, it would make sense that the suppliers question the usage of VLC as an LSP. However, our perception was that it was VTC more than the suppliers who were questioning the usage of VLC and stated that VLC, like any other LSP, should compete in the free market, providing competitive services. Nonetheless, it is clear that working with VLC has advantages as being part of the Volvo group; the Volvo requirements are known and followed. Additionally, VLC provides ´suppliers with consulting with logistical aspects. Some interviewees stated that VLC should have priority in considering an LSP, while other interviewees emphasised the fact that VLC should be considered on equal terms with any other LSP in the market. However as far as our findings show, there is no clear message in the LSP selection about selecting VLC as an LSP. This has to be clarified within Volvo in order to be able to give a clear message to the supplier.

The apparent differences in the export attitudes can partly account for the fact that suppliers are at very different stages in terms of the implementation of direct exporting. This became evident in discussing the challenges and difficulties in the process, as both Sifco (experienced exporter) and Schulz (recent exporter) could already see the benefits of exporting to their total sales as well as being able to provide the service to other automotive customers alongside Volvo. However, whereas the positive attitudes of Alpino, Proxyon and Unipac may be partly accounted for by the newness of the process and lack of knowledge of the process requirements, the suppliers were nonetheless open towards learning and the challenge of new international opportunities.

In addition, the communicating of the requirements will allow the supplier to prepare for the upcoming investments. It has been found in trust related theories that expectations and not meeting them will reduce trust. Therefore, it is critical that Volvo informs the supplier of its own requirements as well as the Brazilian requirements for exporting as much as possible. Otherwise, the supplier may experience surprises once starting the exportation and feel that the decision to export was unwise. However, we believe that this uncertainty may be reduced by the relational or willingness factors.

As has been seen, Volvo pushes the suppliers in a developmental way also evaluating the supplier's resources. We think, that suppliers decide on exporting based on their opportunity to increase business with Volvo and also because exporting is vital for any Brazilian suppliers as the export markets in Europe balance the sluggish domestic market. Moreover, the prospects of being able to offer an additional service to potential and existing customers were positive. It can be seen that in the case of suppliers not having any export operations, the implementation process requires radical changes both in operations and the mindset of the supplier. This means having a pro-export attitude for conducting business internationally and meeting Volvo-specific requirements. As it is clear that Brazilian companies must export or die, and for Volvo it is a matter of "tudo ou nada" (all or nothing), there is a push from two sides for the suppliers to export.

As Volvo is a big customer, the suppliers are positive about the option to increase business with Volvo. When looking for additional target suppliers in the future, Volvo needs insight as to what the consequences of direct exporting may be for suppliers as this will assist in the pushing or encouraging of other suppliers to start exporting as well.

In the following, we will discuss the actors involved in the transfer of the direct export process of the Volvo companies, namely VLC and Volvo units VTC and VdB. The actors will be discussed in terms of the direct export process transfer and the implications to the actors, including implications on Brazilian suppliers.

7.3 Volvo do Brasil's Role in the EMS

We have found that Volvo do Brasil's age, establishment mode and investment strategies are determining factors for VdB's role in the global strategy of Volvo. This is of particular interest as, sourcing from emerging markets currently constitutes a large part of the global purchasing strategy pushed forward by the global 3P organisation. The UNCTAD model and linkage program (Chapter 3, Section 3.2.3.), classify the determining factors for longer term supplier relationships in an emerging market as the age, mode of establishment, size, role and technology as well as investment strategies used by the foreign affiliate.

As VdB was setup in 1979, this has allowed VdB to establish a name for Volvo and also to establish a reputation among the suppliers. We believe this is a determining factor in Volvo pushing for supplier development and getting a positive response from their suppliers. This was already shown in the previous section, where Volvo is, by some suppliers, considered a guarantee for business. The possibility of increased business drives the willingness to cooperate and development of the suppliers and the good reputation among old suppliers finding new ones rather smooth for Volvo.

It was also found in our field study that the role of VdB is of strategic importance in terms of sourcing from emerging markets. This can be seen in that VdB's plant is a main factory (technologically advanced products), which has responsibility for its local supplier base. VdB is independently responsible for the selection, development and evaluation of suppliers. This can be seen in the fact that the SEM function and performance with a supplier is the responsibility of the closest unit geographically, in this case VdB. From this we can say that the strategic supply management is quite decentralized, granting autonomy to VdB in selecting suppliers for their own purposes.

However, in terms of the global purchasing, autonomy and role, VdB is responsible for the recommendation of local suppliers for the GSC as candidates for global supply, also defending them in the GSP process. The global strategy seems to be focused on the so-called 'future strategy suppliers' or 'New Generation' suppliers that will be able to supply Volvo units on a

global scale on their own. This has, in our opinion, brought on additional pressures for the Brazilian supply base.

The above mentioned situation is a result of the global strategy of 3P and the global purchasing organisation objectives include cutting costs throughout the supply chain. In Brazil, not only will VdB be selecting suppliers for their own utilisation, but at the same time scanning suppliers looking for global ability, i.e. exporting directly on their own to other Volvo units. This shows that the role of VdB as a supplier developer is emphasised as is also supported by the backward linkages theory. The development aspects are of key importance as suppliers in emerging markets are generally considered not so developed (such as exporting in this case). However, this also puts emphasis and weight on the standardised protocols and the common terminology in classifying and selecting suppliers. Furthermore, this requires increased communication and information sharing and highlights the need for standardised processes.

So whereas the direct export process may be seen as a harmonisation of the supply base on a global scale, it puts on additional pressures on the foreign affiliate, VdB. Thus, if the future strategy as has been implemented by VdB at present is to have a supplier base that is able to export independently of VdB, small suppliers (even ones with the quality and Volvo standards as by the SEM) may have to be left out. This is, at present, raising some concerns for the smaller suppliers maintaining their business with Volvo locally as inevitably, decisions not to use some suppliers will have an impact on the relationships formed at the local level.

The experiences of the implementation of the direct export on Brazilian suppliers have served Volvo Global Trucks and VLC as a pilot case. This will in the future help the organisations cope with similar projects, for instance in India where all the sourcing from local suppliers is currently done through Volvo India.[332] In India, the relationships with the suppliers are young and the parties have not had time through interaction to develop adaptation.

The channelling of parts via the foreign affiliate may well be a good alternative in sourcing from emerging markets. This may be due to the fact that distances

[332] Bergström 2003

such as geographical, social, time and cultural need to be decreased through relationships and interaction. However, this takes time. Therefore it may well be that the approaches of VdB and VTC in terms of the Brazilian supplier base seem different and need to be different, as they have different objectives and perspectives for the suppliers. The VTC perspective may be more of a larger, strategic scale and the VdB one may be more production or operations focused, as may be defined already to be so (role and function, autonomy). These may explain to a degree the differences in views and action plan consequences when comparing the headquarter level with the foreign affiliate.

Therefore, we believe that implementing a similar approach in other emerging markets (such as India and China), will require more time from the affiliates, especially the greenfield investment as mentioned in the UNCTAD. Time is needed for the affiliates to establish themselves in the market and for the establishment of local relationships with suppliers to jointly develop the export competence of the supplier base in question. In short, the age of the foreign affiliate is fairly critical for relationship development. This confirms to us our hypothesis presented by our own model where it was stated that contract length affects the development of the relationship from an arms-length relationship to a partnership relationship. From the pilot case of sourcing from Brazil and the gathered experiences, it seems probable that a similar approach will be pursued in other emerging markets such as India and China.

7.4 Relational Aspects in Technology Transfer

In the following we will discuss the relational factors affecting export process transfer. This will be done through discussing the relationship between Volvo and the suppliers and then through analysing the internal interaction and roles between the headquarters and foreign affiliate.

7.4.1 Mutual Orientation between Supplier and Customer

With the help of our compiled theory model, we can better understand the signals and analyse findings from our field work. As was stated in the theoretical framework (Chapter 3), relationships and interaction are mutually reinforcing and interaction results in adaptations promoting organisational learning. Key elements in partnership relationships and interaction were as

summarized by Seppälä (Appendix 5) and elements supporting the interaction processes (as discussed in Section 3.2.2.) were found in multiple interviews.

Of the five case suppliers, three have established their business relationships since the establishment of VdB. They are Alpino, Sifco and Proxyon. It can therefore be deduced that the companies' knowledge of each other is fairly mutual. This can be seen in a statement by Alpino's representative: "Volvo is a known partner for Alpino and vice versa."[333] To this was added that there are no concerns or expectations of difficulties. These aspects show that the interaction has generated mutual orientation contributing to willingness in developing together with Volvo. An additional comment on joint-development projects showing the suppliers preparedness to interact was stated by Sifco: "If Volvo were to order a front axle from us for a 70-tonne vehicle, we would do it. Of course there would be investments, but those costs would be shared with Volvo."[334] Here it is evident that risk and reward sharing, commitment, cooperation and trust are quite clearly present. These factors are also identified in the model by Seppälä as key factors in partnership relationships.

In the case of Unipac, a relatively new relation to Volvo (since 2000) has developed quite quickly. From an ad hoc start-up after the bankruptcy of another global supplier Unipac, has in fact the highest SEM grade of all target suppliers in our case study. Additionally, as it has been said, Volvo has always had priority, even in the case when Volvo was in fact the 22nd customer for Unipac. Moreover, Unipac is currently participating in developing a new truck model with Volvo. This involves daily contact between VdB and Unipac. The new medium-heavy model launched in Brazil in October 2003 was the first truck to be built with a plastic fuel tank. The new model in development at present will use the same feature.

These factors not only show the willingness of the supplier to develop with Volvo, but also the fact that developments and adaptations are done jointly. They also show that there is a commitment and interest in developing the relationship, as this may result in more work with Volvo through increased volumes.

[333] Giampietri 2003.
[334] Capriglione, Morais de Arausjo Souza 2003

As for the pilot case-supplier, Schulz, and direct export, the relation with VdB began in 1997. Supplying to VTC was confirmed in 1999, and deliveries began in 2000. This too, a rather ad hoc start for supplying other Volvo units (VTC), required strict commitment from Schulz to develop a Volvo approved paint shop. It took two years for Schulz to develop a level approved by Volvo. Investments and visits were made by both parties, by Volvo in the tooling and by Schulz in the machines. These factors show that there is mutual interest and also that Volvo and Schulz share risk and costs in the investments. In addition, as Schulz is a technologies supplier, Volvo provides drawings for tooling and parts that require frequent visits of design and quality engineers on location.

Additional evidence for our interpretation of trust and commitment that exists between the supplier (Schulz) and Volvo can be seen in the fact that at this moment, the purchasing agreement and the logistical agreement have not been signed. Nonetheless, deliveries are sent in accordance with delivery schedules and VTC and VLC are communicated with weekly.

In our research, it also became evident that having Volvo as a customer is a guarantee itself to some suppliers. “To us, Volvo is a guarantee.”[335] This came up when discussing financial aspects of exporting and conducting business with VTC (as exporting to VTC has cash flow effects). Additionally, it was revealed that production is initiated at times at Schulz in accordance with drawings from Volvo even prior to the confirmation of the order by Volvo. This and the quote above show a high degree of trust and commitment in the relationship between Schulz and Volvo, which are clear means in adaptation and organisational learning terms that Schulz is willing to export.

When travelling with the Volvo buyer, we found ourselves at times in the most interesting role of ‘messengers’ regarding the new process of transferring the export from VdB to the suppliers. We were also able to observe the reactions from both sides and the style upon which the discussion was conducted. We could observe that the contact between the buyer and the supplier representatives was very informal and that the VdB buyer assured the full support of Volvo in the process, making clear for the supplier that starting taking care of the exportation to other Volvo companies and plants was a must.

[335] Schroeder 2003

Additionally, in our own observation, it was apparent that there was space created for us and the Volvo purchasers or engineers' visits at the suppliers; the former purchaser for Sifco said, "At Sifco I have full access,"[336] when discussing our visit and the relationship with the supplier.

Interestingly, the relationship between the buyers and the suppliers is on such a personal level that it seemed at times the buyers took the standpoint of the suppliers and as mentioned in the description of our findings, referred to the discussions between buyer and suppliers as "we think."[337] In our opinion it is quite evident that the relationships between buyer and supplier are on a personal level. This can also be a limiting factor, as the buyer also has the personal relation at stake when implementing the proposed changes as instructed in the global strategies.

Additional evidence of the presence of trust in the Volvo supplier relationships is seen in the attitudes of suppliers such as Alpino, Proxyon and Unipac. They were seemingly not concerned about direct export and were clearly willing to proceed with the implementation. We feel this was partly due to the freshness of the issue as well as lacking information of the required efforts in the process. However, an underlying factor to the willingness to develop together with Volvo, as demonstrated by the case suppliers and also Sifco, may be partly explained due to commercial issues of wanting to increase the total business with a well-known customer such as Volvo. For instance, Schulz was 'pushed' in terms of the paint shop approval, so that business could continue with them.

This is an example of Volvo's strategy in developing their suppliers, which often results in more business also with other potential automotive customers. It also benefits Volvo in terms of innovativeness and new ideas. So partly, the willingness has been pushed for, but also partly the desire to increase business has driven the suppliers towards development. Nonetheless, as most projects are developed in collaboration with the suppliers, mutual orientation can be seen to develop and contribute to willingness.

In reference to the relational aspects and willingness generation, it has been said that: "It may be though, that a willing supplier is better than a capable

[336] Dias da Silva 2003
[337] Andreazza 2003

one."[338] This may refer to the fact that if supplier is capable, but not willing, Volvo has to pursue them to gain trust and commitment; to a degree this means that the supplier needs to be convinced and has the power to say no to the proposal to export. In line with this may well be that when a supplier is willing, but does not have the capability, therefore Volvo may find it easier to teach the supplier the Volvo way, ultimately calling the shots for the development. This again shows the importance of the willingness factor in the transfer of the export process.

As we have seen the supplier's relationships to Volvo has generated mutual orientation so that there is evidence of willingness to start exporting directly at the case suppliers. Where on one side this may be due to the desire to increase business and keep Volvo as a customer, it also seems to be due to the scarcity of information or knowledge of the requirements of the process on behalf of some suppliers. However, the basis for the direct export process transfer in relational terms seems to be in place. In the next section, we will evaluate the VdB determinants as factors in the process transfer and identify potential distances in the interaction between the involved parties, the suppliers, VdB, VTC and VLC.

7.4.2 The Nature of the Business Relationships

We have found that in sourcing decisions, much seems to be cost driven. Therefore, it may be said that to a degree, the cost aspects also drive the formation of closer relationships. At times we felt that our assumption on the importance of the relationships based on trust and commitment and on the transfer of the export capabilities was not as obvious as we had expected. The sourcing decisions seem to be based on hard mathematics, however, translating that into operational terms we feel this is seen in the form of partnership relationships that Volvo has with local suppliers. However, during the empirical research in Brazil it became obvious that VdB was encouraging its suppliers to cooperation. This, we think, cannot be assumed from any supplier if there does not exist a relationship based on long-term trust and commitment. We strongly believe that knowledge transfer from one player to the other cannot take place if these relationship factors do not exist. All business is based on relationships and social interaction.

[338] Berndstton 2003

In terms of our own model (in Section 3.3.5), we have only included the willingness factors as factors partly determining the facility of process transfer from VdB to suppliers. Our findings ascertain us that willingness development occurs over time in the customer supplier relationship. Further, as has been found in the determinants, the role, age and autonomy of the foreign affiliate are determining factors for developing and pushing local suppliers to a level where global sourcing is made possible. Without the role given to VdB and VdB's social relationships with it suppliers as well as the knowledge of the market, sourcing from Brazil to Volvo units worldwide could be difficult.

Further, we think that the strength of the relationship is now being tested as VdB, pushed by 3P and global purchasing, is actively looking to transfer the export process to the suppliers. As a buyer clarified to us during our trips to the suppliers, VdB 'pushes its suppliers to develop'. However, it seems that while the goals and the desired outcome of the process transfer are fairly clear, it still seems that there is no clear 'road map'. Volvo seems clearly to be of the view that there is no turning back as the suppliers are aware of the fact that not living up to Volvo expectations may jeopardise the business relationship.

This might sound like a rough strategy, but in our opinion the examples found where this strategy has been used have been a direct response to market changes as detected by Volvo. With this, we mean that in most cases where the supplier has followed the development process initiated by Volvo, it has been evident that at the end of day this has been vital for the continuity of the supplier's business in general. So it may be said that to a degree Volvo pushes suppliers for the supplier's own good, but principally is guided by market conditions globally.

7.4.3 Roles & Interaction between Volvo Units

In the new direct export, the 25 target suppliers may be challenged in doing business with international partners instead of a domestic one (VdB). These partners include VTC, VTNA and also VLC, in the case that suppliers choose VLC as their LSP. This change will create challenges as business will be directly conducted with the Brazilian supplier, not VdB, so the process (including quoting and requirements) needs to be clarified for each party.

Considering the aspect of a more holistic, big picture view to the situation, it may become difficult to attain this view in the situation where there are various companies involved as all companies have their own interests at stake. This requires that the parties are willing to compromise in order to maintain stability in the consequences that an actor's removal may have on the flows (goods and communication). This emphasises the need to evaluate the implications of removing a link in the chain when sourcing from an emerging market with many relatively small suppliers.

As mentioned before, the Volvo units have been encouraged to quote directly from Brazilian suppliers with precaution, as the requirements may not be clear (partly because of contradicting terminology and understanding of global suppliers). If not done carefully, quoting directly may create further issues in the costs of sourcing from Brazil. In addition to communicating the requirements carefully, it seems to us that the new situation will have implications in the communication interfaces as new contacts need to be created and roles of Volvo units need to be clarified.

VTC purchasing saw the need to communicate only with the supplier's commercial side, they negotiate and make the new contract and the interaction that follows is between the end-users, pick up point and the supplier. However, there is a need for VdB to also keep track of the volumes purchased by other units to analyse the purchase impacts on business. Therefore, in the new direct quote process from VTC and VTNA to Brazilian suppliers, VdB still needs to be involved in the communication. This means that in practice the communication flow will need new loops and therefore the need for communication is likely to increase.

What these factors show, in our opinion, is that VTC and VdB have differences in their business realities and therefore interpret the new situation in different ways. We think that this is just one example of the fact that the host-country realities affecting the daily operations of other Volvo companies are not clearly understood in other units and vice versa. When it comes to the above discussed increase of communication, an interviewee stated: "We have all the tools needed for successful communication but we have to learn to use them more

effectively."[339] This refers to the matrix organisation, among other factors, and the reporting routines established in the purchasing organisation. In the matrix organisation, part segment owners and regional managers are in contact but also an additional position, global purchasing manager (GPM), has been established to enable more efficient communication globally between the buyers. However, what the buyers, GPM's and employees of organisations such as Volvo, may not be prepared to, is adding more communication to an information overload as it is. An example of this was a comment by the VTNA buyer: "I may receive two hundred and twenty e-mails a day of which I may be able to answer fifteen due to daily routines that I need to handle at the same time."[340]

Lastly, as has been seen the direct export process transfer involves the target suppliers, VdB, VLC and VTC respectively. All the parties have interest as well as risks to consider and all parties will be affected by the change of exporter from the Brazilian end, switching from VdB to the suppliers. However, what we have found is that to understand the process transfer and requirements, a more holistic 'big picture' view needs to be analysed so as to see the total changes and demands on the parties. Otherwise, we feel that the effects of one decision (3P, global purchasing) for another party to respond to (supplier) may make the acting of another in between (VLC) not profitable, causing further problems for the decision target (supplier). So in a sense, the removal of VdB from the flow has a snowball effect on the other players, communication and routines.

In short, doing the SEM maps the supplier capability in terms of the local foreign affiliate with the indirect assumption that the SEM rated suppliers either use the local Volvo affiliate as a channel in exports or that the suppliers have the export capability required when delivering to other Volvo units. We feel an additional tool is needed.

As we have so far discussed, the internal interaction of Volvo units and VLC and their implications on the suppliers when outsourcing the export process from VdB to selected target suppliers, we will further discuss the nature of the

[339] Jagino 2003
[340] Pizzurro 2003

relationships between VdB and the suppliers as well as the respective relationships that the Brazilian suppliers have with VTC and VTNA.

7.5 Additional Discussion on Findings

In this section we will discuss the additional findings from our field research that are closely related to our study. These areas include the ad hoc nature of the process initiation, discussing the knowledge transfer aspects in terms of our case context, the consolidation aspects in the supplier base as well as the overall viability of EMS as a competitiveness sustaining strategy in sourcing.

7.5.1 Knowledge Asset Transfer

In the case of export process, it may be questioned if in fact in the case of VdB this is considered as a knowledge asset. In this case, it seems that the export process is more of a liability than an asset for VdB. However, the theory of knowledge asset transfer has been used as base of understanding organisational learning. Clearly, VdB needs to maintain their export competence in-house in terms of CBU export purposes.

It is fairly clear that the parts exportation and related administration seem a liability in terms of efficiency and cost, and even if the parts exportation accounts for nearly 20-million USD worth of business (16.5), it is nonetheless not VdB's core business. Additionally, while the goods flow may have been considered effective, the related cost aspects of the administration are more of a burden. That is why it seems maybe that the transfer of the export process is more of a liability transfer in the perspective of VdB or Volvo.

7.5.2 Encouraging Consolidation

As it was mentioned prior, Volvo, as are many other TNC's, is pushing their suppliers to consolidation. In order for Brazilian suppliers to maintain their competitiveness in the world market (EMS), we find that some consolidation has to occur. Joint ventures and M&A have taken place and are likely to continue. However, we find that there may be other alternatives for the smaller suppliers to consolidate. As mergers and acquisitions are time consuming and in many (if not most) cases they fail in the human aspects of finding synergies

and generating a unified spirit, it can be questioned whether this really is the only way.

Instead, we believe that there is a more gentle way of finding synergies. These are the alliances, such as the ATA, that are being formed by smaller suppliers. These alliances, in our opinion, allow the suppliers to retain their own business and serve as forums for sharing information and knowledge transfer, and they also enable several suppliers to offer a multifaceted service compiled of a variety of expertise through association. This association is also a means by which the suppliers may gain power in the eyes of the often larger buyers. The alliance also develops the supplier base which means that the suppliers competitiveness may be enhanced in the eyes of the buyers, making them more attractive partners for TNC's as the association may also increase their potential as a global supplier.

However, what the association aspect has not (in our knowledge) addressed, is the point that many TNC's that wish to export to Europe, Volvo for example, would much prefer that a supplier sets up a warehouse, joint-venture or plant in the vicinity of the end user or a hub. Nonetheless, if the association may provide competitiveness in the Brazilian market we do not see any hindrances for a similar setup in Europe. Another aspect of the alliance is the fact that as they are not a 'legal entity' and the association members all stand for their own invoicing, this may cause troubles, as the association may assist in the shipping related matters, but all the costs of the shipments are the responsibilities of the suppliers themselves, not the associations.

In addition, we found, that in accordance with the theory and the trends in purchasing today, Volvo is narrowing down the local supplier base. This we believe is partly to establish deeper relations with selected suppliers to ensure the development opportunities and supply; this was supported by a quote "It may be though, that a willing supplier is better than a capable one."[341] This also shows that it is in Volvo's interest to sustain relations and the willingness of the supplier to cooperate by promoting trust and commitment.

[341] Berndtsson 2003

7.5.3 The Cyclical Pattern of Relationships

It seems that communication and interaction are most intense and frequent when negotiating the purchasing agreement, quoting for the parts, conducting joint projects and developing new tooling. As the relationship proceeds to a more developmental stage and stable stage, it seems that less interaction is needed between the parties. This pattern has mostly been associated with the relationship stages from new to stable and later phasing out. However, in the cases where the relationship is of a long-term nature, these interaction episodes occur as new parts are designed, new tooling is needed or such. From this we deduce that partnership relationships and the interaction episodes occur in a seemingly cyclical fashion.

When the business runs smoothly and deliveries take place according to the delivery plans, one buyer stated, "I use to say to my suppliers that a sign that everything is going well is when we do not need to be in touch."[342] This statement emphasises, in our opinion, the fact that in a normal and well functioning supplier relationship, the communication should take place between the supplier's outbound and the receiving pick-up point and further with the receiving plants inbound logistics. However, as our previous analysis of the relationship confirms, the relational basis generates trust and commitment and mutual orientation so the process may run smoothly. It seems therefore, that as problems or developments occur, the interaction becomes 're-instated' and the host buyers get involved in the process.

7.5.4 Competitiveness of emerging market sourcing

The problematics in sourcing from emerging markets seem to be like a two-tipped sword. On one hand, it is reasonable to have a foreign affiliate to channel the parts from the emerging market to the end users, but on the other hand the presence and utilisation of such a 'channel' may in fact obscure the real costs the exporting. As exporting is outsourced, the 'real' costs of exporting become visible and the accumulated costs (due to geographical distances and handling costs) may, question the long-term viability of sourcing from long distance emerging markets. Whereas solutions for this include the supplier setting up and having a warehouse or partner or joint- venture near to

[342] Björn 2003

the end-user, this requires considerable investments from the suppliers. These necessary investments further highlight the concerns for local smaller suppliers in having a fair chance to become global suppliers and again emphasising the underlying financial factor (price and cost).

It seems, in our opinion, that Volvo started sourcing from Brazil to other Volvo companies on a more case-by-case basis, primarily responding to a demand and achieving hedging benefits. This contributed to the fact that as there was a need for the parts and as VdB was in the middle, the actual requirements for global suppliers did not become visible. As has been said, the suppliers supplying via VdB were also considered 'global suppliers' by many. However, a statement regarding this aspect reveals another perspective to global suppliers: "Suppliers without the capability to export should never even be considered as global suppliers."[343] As the indirect export of parts from suppliers to other Volvo companies via Volvo do Brasil started prior to the acquisition of Renault Trucks and Mack and therefore prior to the creation of the Volvo Global Trucks and the 3P organisation, it seems that the sourcing from Brazil was not initially a planned part of an EMS strategy but more a solution made on a case-by-case basis. Most probably these ad hoc-decisions made on a hectic business climate did not leave time for analysis of the further implications. We therefore think that the costs associated with this solution were thought as secondary.

It seems necessary, prior to questioning the sourcing from long distance emerging markets, to investigate to which level the competitive manufacturing costs compensate the high transportation costs in money and in time when sourcing from Brazil and other emerging markets. With this we refer to our opinion that in some cases the good quality and competitive costs are just not enough. It seems that Volvo is also starting to realise this as the suppliers are now quoting including the exportation costs and the 'true' costs of emerging market sourcing are becoming more visible compared to the former intra-company costs when exporting through VdB. Therefore, in our opinion, the question that Volvo, as well as other manufacturing TNC's, has to continuously asses is if emerging market sourcing generates competitiveness in the very end or if it is done just following the general trend in the industry.

[343] Rutting 2003

Now that the intention is to leave VdB out of the channel in order to maximise the cost-efficiency when sourcing from emerging markets, the risks associated, especially with transport and logistics, must be carefully considered. For Volvo to be able to foresee and limit the risks, all the phases in the direct export operation from Brazil have to be carefully investigated. We have contributed to the situation, but this evaluation needs to be updated continuously as both the special Brazilian prerequisites and the suppliers' resources change over time. Additionally Volvo's requirements are constantly changing according to the changes in the market, which in essence is also reflected in the underlying rationale of transferring the process from VdB to suppliers.

In our analysis we have discussed the various aspects as identified in the research questions. The discussion has aimed at generating an understanding of the situation, highlighting the multiplicity of factors at play in the export process transfer from VdB to suppliers. In addition to answering our questions, we have also discussed the aspects related to the process transfer, mainly as implications on emerging market sourcing strategy, relationship cyclicality, knowledge asset transfer and the supplier base consolidation trend. In the following we will conclude what the implications may mean in terms of the process transfer and the parties included.

8 Conclusions

In this section, the results of our research will be concluded by answering the set out research questions. The main research question was:

> How do TNCs transfer export processes to their emerging market suppliers aiming for mutual gain for the parties involved?

In terms of the main research question, we can say that TNC's transfer processes (export process) to their host country suppliers through the foreign affiliate and the relationships base that the affiliate has generated over a period of time. This is so, granted that the foreign affiliate has a strategic role defined as the foreign affiliate is not only responsible for the development and selection of local suppliers for their own use, but also do the same in finding new suppliers with global ability for use of the whole organisation worldwide. Additionally, the age of the affiliate is of key importance as its interaction over time influences the development of mutual orientation which then determines the supplier's willingness to export directly.

However, another aspect to this is the aim for mutual gain while transferring the process. This is so as TNC's such as Volvo want to cut costs and get back to their core business, and therefore 'pushes' the suppliers with the help of the affiliate to develop, so that both parties may benefit. For Volvo, it means supply chain efficiency and to the supplier it is an opportunity to increase business with Volvo, gain visibility in the eyes of the end-user and also attract new potential customers with the added service.

8.1 Sub-problem question A

What does the export process look like at present when Volvo sources globally from the Brazilian market?

As has been shown, the current parts exportation process (in Section 6.1.2) whereby VdB was taken on by VdB, was as a response to demand from other Volvo units and to achieve hedging benefits. Since the initiation, additional suppliers accumulated and this is no longer a profitable business. Therefore, VdB, pushed by the global 3P organisation, is looking to transfer the parts exportation to the suppliers themselves to achieve savings and supply chain efficiency. The process transfer is clearly driven by cost factors. Whereas the current situation is quite safe for the local suppliers, simultaneously it offers limited opportunities to the supplier internationally. Therefore, while challenging, this may allow increased business opportunities for suppliers with global ability.

8.2 Sub-problem question B

How is the export process being transferred from Volvo do Brasil to target suppliers?

When regarding the process implementation itself, however, it seems to have occurred on a more 'learn by doing' basis. Our findings confirm that the export process implementation has proceeded in a trial and error manner, as the implementation has only been done in the case of one supplier. This explains why routines had not been planned beforehand, but were first discovered as the process was being implemented.

Our view of the process implementation is based on the experiences of Schulz and the other case suppliers Alpino, Proxyon and Unipac. We found that the export process implementation has proceeded in the order of quoting, structures establishment, contacts establishment, routine set up and lastly delivery:

1. Quoting (including export costs, all included)
2. Structure (organisation at supplier set up or present)
3. Contacts establishment (new interfaces)
4. Routine establishment
5. Delivery

It is fairly clear that the suppliers need more information prior to process implementation. It seemed to us that Alpino and Proxyon were unaware of all the requirements and details related to direct export to Volvo units, but nonetheless a quote had already been made. This means that export process implementation has been initiated with the quoting without the necessary information of the Volvo units' requirements concerning the use of VLC. In some cases the quote has been made without the knowledge of who approves the quote, who the end users may be (when exporting) and where and who checks the quality of the parts. Therefore, we believe that open communication of the demands from the very beginning can make the process transfer and implementation smoother and possibly less time consuming.

As there are clearly various parties and various and diverse interests in the process of exporting from Brazil to Europe, we find that there is a need for a more holistic view and approach to the implementation and its effects on the parties, information and communication flows as well as physical flow aspects.

We feel that the implementation of the export process at other suppliers of the target group will continue. However, there are aspects that need to be considered by a TNC, or in this case Volvo. These will be discussed next in the recommendations.

From our study, we can conclude that the export process is made up of the documentation and handling processes and the delivery process. In order for the supplier to succeed, the requirement of both Volvo and Brazilian governmental regulations needs to clear. From our findings we can say that the main responsibility of Volvo in the implementation is the clarification of Volvo specific requirements. When it comes to the Brazilian local regulations, we can say that this is the suppliers own responsibility. Volvo advises on the sources of information and funding available. However, at the point where the supplier

handles the exporting independently, it is up to the supplier to keep updated on the Brazilian regulations, for this Volvo recommends keeping the documentation and material handling in-house.

As mentioned earlier, the Volvo requirements should be made clear prior to process implementation and quotation. The lack of information and planning of the implementation may be partly explained by the rapid response of VdB to the push for cost reduction and finding synergies in the supply chain detected by 3P and the global purchasing organisation. Additional factors underlying the lack of information given to the supplier prior to the implementation are partly explainable through the different perceptions of quoting directly or indirectly, and the lack of understanding and awareness of the market realities (HQ and foreign affiliate).

8.3 Sub-problem question C

What factors affect to the transfer of the export process from Volvo do Brasil to the target suppliers?

As our analysis indicates, there are two sets of determinants that establish the ability of a supplier to respond to a TNC's sourcing related process development in an emerging market context. We have named these determinants willingness factors and capability factors. These factors together determine whether the supplier is able to export directly. As has been shown, the willingness factors are factors that may be affected through interaction in the customer supplier relationship. The capability factors, however, are more related to the host country context as well as the TNC's own requirements. As the capability factors are context and company specific, their degree of influence may vary.

What was also found is that the two factors, willingness and capability, are mutually exclusive. This means that having capability does not necessarily guarantee the willingness of the supplier to export directly. Therefore it is also the customer's interest to encourage or 'push' the supplier. This occurs, granted there is a relationship based on mutual orientation. Having said this, however, the relational basis and having a good relation for the process transfer does not

itself confirm that the supplier is capable for exporting directly. Therefore, both types of factors, willingness and capability need to be addressed in terms of transferring the export process from customer to suppliers.

It is important to remember that of the 25 target suppliers, the ones deemed as having potential have primarily been evaluated through a Volvo perspective (financial). We realise that this does not include the supplier's own evaluation of their capability. This is derived from both the newness of the process and the amount of information that the suppliers have received.

VdB has in essence a role of acting as an extended hand of VTC strategy wise, but nonetheless seem insufficiently informed of the Volvo unit requirements so as to inform the requirements to the suppliers. On the other hand, other Volvo units have been closely involved in sourcing from Brazil as well as in the process implementation regarding their own part needs. In this sense it seems as if the role of VdB may not include communicating the Volvo unit requirements to the local suppliers. Moreover, this causes lack of consistency not only in the demands of Volvo but also the roles of the different Volvo units in the eyes of the supplier.

When it comes to nurturing supplier relationships, VdB has been given the role and responsibility in Brazil. This is a quite natural solution considering the geographical and cultural distances between Sweden (Europe) and Brazil (South America). Therefore, the headquarter-level has seemingly less need to engage or participate in the relationships with suppliers in long distance emerging markets. These relationships may therefore be deemed as arms-length or durable arms-length relationships, while VdB maintains the partnership relationships with the Brazilian suppliers. Therefore, it is the role of the affiliate to enable competitive sourcing for the global organisation, making the transaction-based or arms-length relationship base for the headquarter sufficient and also justifying the developmental role of the affiliate.

On one hand, having a close relationship with suppliers is the responsibility of the foreign affiliate; the affiliate also has the local knowledge of the market and of conducting business in Brazil. VdB naturally has the operational day-to-day business knowledge. On the other hand, headquarters sets the standards and

expect that they are followed as prescribed. The view of the headquarters of strategy in action is more normative. This creates a rather 'classical dilemma' between HQs and foreign affiliates in terms of planning strategies and putting the strategies into action. In order to generate a more unified view of Volvo to the suppliers, the strategy set by the headquarters needs to be efficiently implemented throughout the organisation.

It can be said, sourcing from long distance suppliers in emerging markets capitalises the importance of communication between headquarters and the affiliate. Therefore, operational strategy management and the strategic market management roles for the affiliate and headquarters are of key importance. Moreover, sourcing from emerging markets also stresses the importance of cost evaluation of transport and logistics factors.

8.4 Sub-problem question D

> *How is the export process transfer from VdB to the target suppliers experienced by the parties involved?*

Generally speaking, suppliers seem willing to start exporting directly. They do not expect any particular difficulties. As we have found, this depends on the implementation state that the supplier in question is in; some are still negotiating while others have already implemented the process. This may also explain some differences in views of the suppliers of the export process itself, as the details or the requirements may yet not be clear.

For Volvo's part, Volvo do Brasil and Volvo Truck Corporation are both seemingly positive of the process transfer as savings are expected. However, there are some differences in the views of how to approach the suppliers. In addition, this is partly caused by the distances between the units and the inherent business realities of Brazil and Sweden. This partly explains the different approaches that the two units have; VdB has the partnership approach to local suppliers, while VTC has a more durable arms-length approach to the suppliers due to limited interaction. For VLC, the process transfer is seen as

positive so far, however the real effect will only become clear as the target supplier group and their respective volumes are confirmed.

8.5 Additional conclusions

Considering our findings and discussion on emerging market sourcing, we conclude that in strategy formulation for sourcing from an emerging market the focus should be in evaluating the related sourcing risks and costs, especially in areas such as transport and logistics. An additional aspect to this is the distance aspect; the distance needs to be compensated partly by increased communication and information sharing. These needs should be considered and addressed in terms of whether there is potential to generate competitiveness by sourcing from long-distance emerging markets in the very end or not. This needs to be done to ensure that the real cost structure and risks are assessed in light of sought benefits. For Volvo, it may be said that the emerging market sourcing strategy became more obvious as the sourcing from Brazilian suppliers to other Volvo units had already started.

As we have found, in transferring of the export process from customer to supplier in an emerging market context there are a multitude of features to consider. On a practical level, the process transfer is facilitated through the establishment of a partnership relationship and the interaction within. The process transfer has implications on communication not only between customer and suppliers but also between TNC units, requiring standards and protocols to be created and followed. We have also concluded that the process transfer needs to be assessed in a more holistic manner so that all parties involved (and affected) by the transfer are aware of the requirements and changes. In addition, we have also discussed the emerging market strategy and it’s viability in cost terms due to increased transport and logistics costs as well as the increased risks.

Additionally, it was found that relationships evolve cyclically. In our view, this applies to both partnerships as well as arms-length relationships. We can therefore say that the total partnership relationship occurs in cycles of increased interaction when product development, process development or process implementation takes place. It can be expected then that even in a long term

partnership relationship, the relationship fluctuates between high interaction in developmental episodes and low interaction in the day-to-day operations.

9 Recommendations

In this section we will recommend actions that can be taken when considering the export process transfer. Firstly, we will make recommendations on a more general level and secondly, recommendations will be made on the case company level. Moreover, a checklist, as requested by Volvo, will be presented. The checklist includes our input and interpretations of the critical aspects for scanning suppliers' potential in direct export. This checklist is placed in Appendix 11.

9.1 Recommendations at TNC Level

It has become clear, that a new trend in sourcing globally is developing. This trend is where the TNC's are pursuing and selecting suppliers that are able to export globally. However, in the case of emerging market sourcing, the export ability of relatively undeveloped suppliers is somewhat challenged.

In our opinion, TNCs need to evaluate the competitiveness and viability of an emerging market sourcing strategy given the risks and costs associated. This should be done taking into consideration the geographical distances and related transport and logistics costs. This evaluation should include the possible costs and risks with both direct and indirect exporting. This means that in sourcing from emerging markets or long distance suppliers in emerging markets, a TNC needs to assess the 'real' costs and risks and assess whether there is long-term sourcing potential.

With the real costs is meant transport, logistics and handling related costs. The real cost calculation means including the above costs and evaluating their subsequent impact on the price. Further, the prices need to be reviewed and it needs to be determined whether they are competitive in comparison to sourcing from other markets. However, in this recommendation we acknowledge that in emerging markets there may be instabilities in the economy, which may be a variable that can be accounted for in the forecast with certainty. In short, the following needs to be done:

- ❖ Careful analysis and investigation of EMS markets to assess the competitiveness and factors that may influence the future competitiveness of the EMS suppliers in future strategy considerations
- ❖ A holistic view of sourcing from emerging markets and subsequent communication routines establishment, i.e. what can be done to enhance the shared view and common understanding of the transfer process, goals and objectives.

In addition to the above emerging market sourcing considerations, TNC's also need to consider the relational aspects and responsibilities of the foreign affiliate, the communication flows and the role division between the headquarters level and the foreign affiliate. These aspects are of crucial importance in supplier development.

This means that the units (headquarters and foreign affiliate) should strive for developing and understanding the differences in market realities and their influence on standardized processes used. The awareness should also generate an understanding of the differences between headquarters and the foreign affiliate in planning and operationalising strategy. This rather classical set up requires establishment and standardisation of communication routines and processes so that they support not only the headquarter's strategy but also support the foreign affiliate's role in operational terms. This could be achieved by encouraging interaction through meetings and visits. We realise that this results in additional costs, but we feel that face-to-face communication is crucial in establishing an understanding of different business realities.

While there are additional actors in the sourcing from distant emerging markets, we believe that a 'big picture' view to the sourcing needs to be achieved and this ways any loopholes may be identified. This should not only be done to achieve cost efficiency in the supply chain, it should also include an evaluation of potential consequences to the proposed changes. This could be made possible by composing a team consisting of representatives from all parties involved in the sourcing process. The tasks of the team would be to analyse and calculate the effects of the process transfer in real cost terms and then evaluate the potential of the strategy in long term and its future sustainability.

Volvo Specific Recommendations

In the case of Volvo it is possible to make more specific recommendations related to the case and the export process transfer. We will make recommendations pertaining to:

- Direct export process implementation
- Role clarification of Volvo units
- Communication aspects

Lastly, we will identify key critical factors relating specifically to successful export process implementation. The requested check list of critical factors (as desired by the case company, is found in Appendix 11), as it can be considered a by-product of this thesis.

9.1.1 Export Process Implementation

As was found, the export process implementation was done in an order starting with quoting and ending with delivery, and it was pursued in a trial and error manner. This contributes, in our opinion, to the lack of standardised processes. In our opinion therefore, the implementation process could proceed as follows:

1. Informative meeting of the process and requirements for quoting
2. Quoting
3. Export functions (administrative structures for documentation and logistics responsibilities set up selection)
4. Contacts establishment (new communication interfaces)
5. Delivery (supplier representative at hub when first delivery arrives at hub, an equivalent of resident engineer)
6. Follow-up (meeting of Volvo buyers and supplier's commercial and logistical reps)
7. Establishment of routines

In the first step, we recommend that the buyers from VTC/VTNA and VdB meet together with the supplier to share information on quotation requirements and the implementation plan. The plan should include LSP policy and new contacts that need to be formed. After sending the quote to Volvo, the supplier

needs to then establish new contacts such as the LSP and plants inbound logistics and establish the communication interfaces.

The export structure requirements for the supplier need to be discussed and evaluated. As was seen in Schulz's case, a position for outbound logistics was created, handling the responsibilities for the DElins materials management and delivery system. A decision to either contract an external party for documentation needs to be made by the supplier. At the first delivery, we feel it is necessary to have a meeting again, at the hub, with buyers and logistical staff from Volvo and the supplier to review the delivery in terms of packaging and labelling. After that, a follow up meeting should be made identifying routines that have been established and routines that need to be developed.

9.1.2 Role Clarification

There are clear contradictions of the roles of the Volvo units in supplier development and the export process transfer and in the usage of VLC. These are seen in the lack of quotation routines (who quotes and who needs to know).

While at times it seems that Volvo is to appear as one single unit, in practical terms the requirements vary for each unit, creating confusion when considering the demands on the supplier. This applies also for VLC usage as it has become clear that the views of VLC's priority as LSP vary. Therefore we recommend that the roles of the Volvo units need to be clarified and also the policy on using VLC needs to be unified. This requires giving out a more consistent view of Volvo to the suppliers and also taking a more holistic approach to the export process transfer.

9.1.3 Communication Aspects

Critical in our opinion for the quoting here however, is primarily to establish communication routines that clarify the requirements of the process to the supplier in terms of the various end actors and users. This means that the communication between Volvo units should support the role division between VTC and VdB so that VdB may operationalise the strategies as developed by VTC on the local level. This, in practical terms, means utilising the matrix organisation potential for communication fully through the generation of communication routines maintain consistency of standards and processes and responsibilities. We feel that the responsibilities overlap and that the distances

between the headquarters and VdB may contribute to the differing views of conducting business. Therefore, the communication should be aimed at improving the understanding of the differences of the business realities for VTC and VdB. These distances could be minimised through increased interaction and communication.

In cases where the supplier is not willing but is able to export directly, Volvo should arrange a meeting for several of the case suppliers that will be implementing the process shortly also including some suppliers that already export. This meetings purpose would be to generate an understanding of the suppliers concerns and then formulate a strategy how to continue implementing the export process. In a way it would also enable networking among the suppliers. The emphasis should be highlighting the positive aspects of exporting in discussions with other suppliers but also include discussion on the process implementation challenges and risks.

However, as time is always scarce, the discussion forum could also be arranged via an e-community for the suppliers, similar to the Volvo's supplier portal. This would require training and familiarizing the suppliers to use this system (in Brazil only three use it as pilot-versions). This would make the supplier portal a more knowledge-sharing focused forum, where suppliers could share their experiences and also add their insight so to advise others in the same situation.

However, as the instructions made on the process steps and critical factors have been made by us, we have to remember and admit that during our field study we learned that strategy in action and strategy on paper are not the same and they are not pursued in a sequential and planned manner. In conclusion, we feel that the utilisation of IT-based solutions and the matrix organisation to generate communication routines will contribute to the standardisation of processes and generate communication routines that are needed. We also feel that it will help in the role and responsibility clarification and acceptance as the knowledge of headquarter and foreign affiliate business realities are increased. Further, we believe that the realities will contribute to an understanding that will promote future strategy implementation.

10 Future research proposals

During our research in the field and throughout the thesis writing process, we found related areas that would be interesting to investigate further. These include:

- A study of networking in Volvo's Brazilian supplier base: current trends.
- Single sourcing vs. double sourcing
- Global and continental sourcing benefits and challenges
- Price effects of phasing down a supplier in the global sense but maintaining the local supply to the local plant
- The competitiveness of an emerging market sourcing strategy in the long term strategy formulation
- Supply-base consolidation of TNC's in M&A
- Global sourcing – The future of local suppliers vs. follow-source suppliers
- The effect of globalisation on small & medium sized suppliers in emerging markets

Appendices

Appendix 1: Interview Guide: 3P Purchasing Management

Please tell us a bit about your job description and history.

Global purchasing:

- What parties make the global purchasing contracts? Is it the foreign affiliate closest to supplier or Volvo centrally (SWE)?
- Is it possible that there are two parallel contracts with the same supplier (between VdB and supplier, and also between Volvo Truck Corporation (in SWE) and Brazilian supplier)?
- What is your understanding of the strategic/operational role of the foreign affiliate when purchasing from the foreign affiliate's suppliers globally?
- What is Volvo's definition for 'global supplying'?

Sourcing from emerging markets:

- How do you see the chain of events when purchasing directly from Brazilian suppliers or purchasing via VdB? What are the main challenges for each option?
- How much of the global purchasing is done in emerging markets when compared to developed markets? What are the contributions of each market respectively?
- What is the general development trend for Volvo in sourcing globally from emerging markets (as it has been said that Volvo is looking to increase the global supplying from emerging markets)?
- If the trend is increasing, what is the main rationale? What potential pro's and con's can you identify?
- What are the main challenges for sourcing globally from Brazilian suppliers?
- How dependent is Volvo at present on the Brazilian suppliers on a global scale?

Supplier relations

- What is Volvo's general policy on dependency on suppliers?
- What is Volvo's stand on hedging contracts with suppliers?
- Are there at present any hedging contracts between Volvo-Unipac or Volvo-Schulz?
- What is their effect on the roles and purchases made directly from Volvo in Gothenburg and the purchases made by VdB locally?

Appendix 2: Interview Guide: Buyers

Supplier relations

- How long has supplier been a supplier to Volvo (VTC/VdB)?
- Who is contact person/s at supplier?
- How frequent is the contact (VTC/VdB buyers)?
- What medium is used in communication?
- Have they met personally?
- How did supplier perform in the last SEM?
- Which areas is supplier performing well in?
- Which areas are subject to development ?
- Joint development projects conducted with supplier?
- Experiences from those projects?
- Future joint-development projects?
- Dependency of supplier on Volvo purchases?
- Joint-investments made?
- Supplier portal usage and functions?
- Key factors in the future of the supplier relationship?

Export process

- Has the process implementation started, if so how?
- What steps will follow?
- When did exporting begin with the supplier to other Volvo units?
- How was the supplier informed?
- How was the supplier prepared?
- What main challenges and risks are there in exporting in general?
- What possible challenges are there for the particular supplier and why?
- What benefits are there for VdB in externalising the export process to suppliers?
- How is the supplier taking the export process transfer?
- What is the estimated supplier capability to take on exporting?
- What does the delivery process look like at present for this supplier?
- What are the loopholes in the flows (communication, goods and money)?
- How long has the export process implementation taken?
- What changes will the export process bring to the flows (information, goods, money)?
- What stages (phases) are there in the implementation process ?
- Who is involved in the process?
- Which areas did the supplier need most assistance in

implementing the automotive parts exportation directly? 2/2

- Policy in using VLC as LSP for suppliers ?
- What % of the purchase price is constituted by the logistics and transport costs?

Ownership of goods and associated risks

- What does the 'Ownership of goods' mean in practice and what risks are involved?
- How are the risks perceived by the supplier and what extra resources may it require (capital, currency risks, know-how, communication network setup, etc.)?
- How does the ownership affect the parts exportation
- Are there other alternatives to work around the issue of ownership?
- If ownership of goods is not transferred, what other risks are involved and what other responsibilities are associated?
- When does the supplier receive payment for the goods (VdB/VTC/VTNA)?

Roles & communication

- Whom does the buyer report to?
- What is the contact frequency between the buyers?
- What information do the buyers (VdBand VTC) exchange?
- What is the day-to-day need of information for the buyer?
- What is the role of VdB when VTC sources from Brazil?
- What does the information and goods flow look like?
- Will this role change when exporting is done directly by suppliers?

Appendix 3: Interview Guide: VLC and VLdB

VLC

- How long have you been working at VLC?
- What are your main duties?
- What services does VLC render to their customers?
  - Reworking
  - Warehousing
  - Materials management
- Does VLC have any customer's goods in consignment?
- What about the ownership of the goods? Does VLC own the goods for any of their customers? Under what conditions?
  - VdB's
  - VdB'direct exporting suppliers
- Is there a written or an unwritten policy that 'intra-group' (Volvo Group) or intra company transport and logistics provider is automatically VLC?
- What criteria does VLC have for their customers?
- What are your personal views on the direct export process of Brazilian suppliers to VTC?
  - Challenges?
  - Opportunities?
  - Risks?
- What do you know of the current status of VLdB? What about the future commercial status of VLdB?
- What possible solutions do you see available for the commercial status situation?
- What is VLdB's role in Brazil?

VLdB

The direct export process implementation at Schulz

- What has been the time frame of the implementation process, from initial negotiation to first shipment → from first shipment to delivery to end-user?
- When was your direct export process to Volvo initiated? Who initiated it?
- What have been the steps in the process of implementation?
- In which steps of the implementation process did Schulz need support from Volvo?
- As Schulz already exports (air compressors) and also to VTC, what were VTC requirements?
  - Developing the export organisation
  - Selection of LSP
  - Stocks and warehousing

- Ownership of goods 2/3
- Meeting authority requirements

- ❖ What are the benefits for Schulz exporting directly to Volvo?
- ❖ What do you see as the main risks?
- ❖ Has the option of having a commercial agent in Sweden (like in North America) been discussed in the case of Schulz?
- ❖ If so, is it Schulz's responsibility to find one? May Volvo be of assistance?
- ❖ As Schulz has already made several steps to implement the process of direct export, are there still things they need to do prior to January 2004? If so, what?
- ❖ What was the most difficult in the implementation process? For Volvo? For Schulz?
  - Authorities
  - Transportation/ stocks
  - Negotiation with LSPs
  - Ownership of goods
- ❖ What do you see as having been the most challenging part in the process for Schulz? Did they experience any surprises?
- ❖ What kind of surprises may they still face (before January 2004)?
- ❖ What kind of support did you provide to Schulz? In which areas was there the most work to be done?

Direct export process in general

- ❖ What factors (finance, stock, LSP, communication, cash flow slowdown, export organisation), do you see as direct hindrances for the implementation of the direct export process at other potential direct exporting suppliers?

Logistical Service Provider

- ❖ What were your requirements for the possible LSP? For Schulz? For Volvo? Was an OLE conducted with Givens?
- ❖ Was VLC recommended by VdB? What others were considered?
- ❖ What are the benefits for using VLC?

Financial issues

- ❖ What is the price difference in quoting now compared to quoting before direct exporting?
- ❖ What has been the total investment that Schulz has had to make?
- ❖ What were the biggest costs in the process?
- ❖ How does the Brazilian government support exporting companies (PROEX)?
- ❖ Describe the flows of goods, money and information prior to the direct export to VTC and after?

Process transfer 3/3

- How have you perceived the process?
- What has Volvo learned during the transfer of the process (something that you did not know before)?
- What do you see as the main challenges for smaller suppliers in starting direct export the way you did?

Appendix 4: Interview Guide: Case Suppliers

Relationship with Volvo

- Contact person/s at Volvo (VdB/VTC)?
- Contact frequency and medium?
- Time of contract/relationship with Volvo (VdB/VTC)?
- Visits to other Volvo units/plants?
- Joint development projects done with Volvo?
- Future joint development projects?
- Perception of Volvo involvement in projects?
- Which Volvo units are supplied to at present?
- Experiences of supplying via VdB (advantages, disadvantages, challenges, opportunities)?
- Experiences of supplying directly to other Volvo units (relationships to other Volvo units)?
- Expectations of supplying directly to other Volvo units (advantages, disadvantages, challenges, opportunities)?
- VLdB/VLC contacts?
- Export experience in years (general)?
- Automotive export experience in years?
- Export department existence and duties?
- Possibility in utilisation of the export department in automotive exports?
- Contracting an external partner for documentation (trading company/commercial agent/customs broker)?

Export experience and structure

- Export sales of total sales (automotive)?
- Challenges in exporting from Brazil in general?
- Benefits in exporting via VdB?
- Benefits in exporting directly to Volvo units?
- Risks in exporting directly to other Volvo units?
- Brazilian government support for export?
- Knowledge of international trade regulations and documentation needs ?
- Impact of exporting in financial perspective?

Preparations made for export process implementation 2/2

- When and how has the implementation process been initiated?
- Information and awareness of the future export implementation (how/what)?
- Contacts establishment or existing (VTC, VLC, VTNA)?
- Awareness of requirements in direct export to other Volvo units?
- VLC or other LSP contact and negotiations?
- External trading company contracted or commercial agent?
- Support from Volvo in which areas?
- Perception on Volvo support (now/future)?
- Experience of the process implementation so far?
- Expectations of the process implementation?
- Investments made to export?
- Investments needed to start exporting (financial, HR or other)?
- Surprises/difficulties faced in implementation?
- Supplier attitude toward exporting?

Appendix 5: Relationship research model

Relationship component	→ ←	→ ←	→ ←
Trust	Verbal agreements are honoured. Trust limited to day-to-day transactions	Willingness to enter into co-operative arrangements and trust that the other party will not take advantage of our vulnerability	Benevolence, willingness to re-enter into new co-operative arrangements
Communication and information exchange	Limited to transaction specific issues	Frequent and consistent communication about the business outlook and relationship issues (both technical and commercial aspects)	Communication, which supports building of trust, co-operation and mutual learning.
Co-operation	Limited to buying and selling	Early involvement, in e.g. product design and joint manufacturing process development. Some joint problem-solving.	Joint goal and strategy setting (including role specifications). Working together for mutual goals. Problems are solved co-operatively, keeping in mind the long-term benefits of the b2b relationship
Risk/Reward sharing	No joint risks are taken, thus no risk/reward sharing are in place. Traditional performance metrics: costs, delivery, accuracy and quality	Co-operative projects are initiated (i.e. risks are taken), yet risk and reward sharing principles and metrics are not jointly established. Each party aims to minimise its risks and maximise its profits in the short term.	Risks and rewards of the business are shared between partners in a win-win principle
Commitment	Involvement limited to operational level only (e.g. buyers/sales agents). Short-term perspective	Long-term perspective. Involvement from all relevant companies.	Serious top-management commitment to the business relationship. Relationship-specific investments possible.

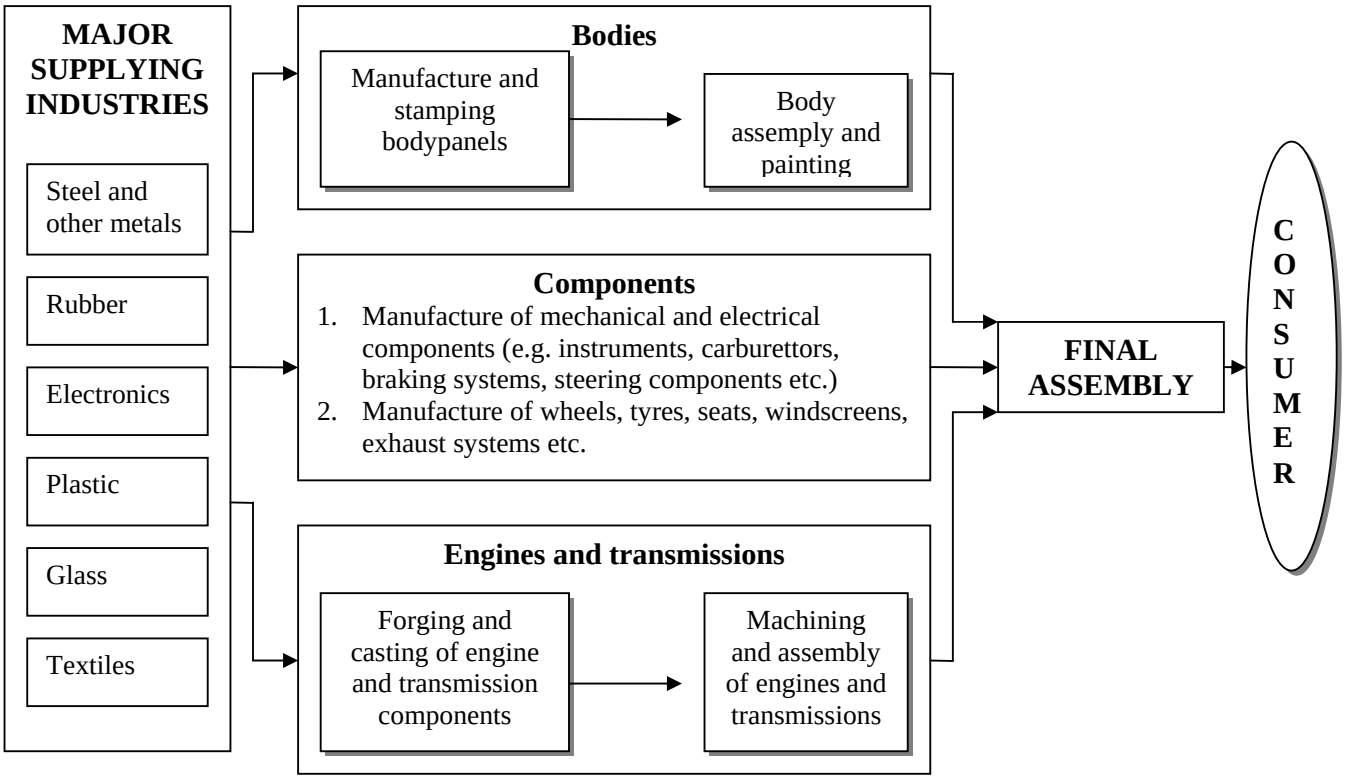
Source: Seppälä 2001

Appendix 6: Four categories of knowledge assets

Experiential Knowledge Assets Tacit knowledge shared through common experiences ❖ Skills and know-how of individuals ❖ Care, love, trust and security ❖ Energy, passion and tension	***Conceptual knowledge assets*** Explicit knowledge articulated through images, symbols and language ❖ Product concepts ❖ Design ❖ Brand equity
Routine knowledge assets Tacit knowledge routinised and embedded in actions and practices ❖ Know-how in daily operations ❖ Organisational routines ❖ Organisational culture	***Systemic knowledge assets*** Systemised and packaged explicit knowledge ❖ Documents, specifications, manuals ❖ Databases ❖ Patents and licences

Source: Nonaka, Konno and Toyama 2001

Appendix 7: The automobile production chain



Source: Dicken 2003

Appendix 8: SEM evaluation summary

VOLVO

Supplier Evaluation Model

Evaluation summary

Supplier PARMA code	
Supplier name	
Evaluated at (location)	
Evaluated by (Volvo company)	
Date	
Evaluation team	Leader: Team:
Volvo business (business with the following Volvo companies)	

Evaluation result

Grading is determined by total average

Grade	total average	average lowest criteria
B	62%	33%

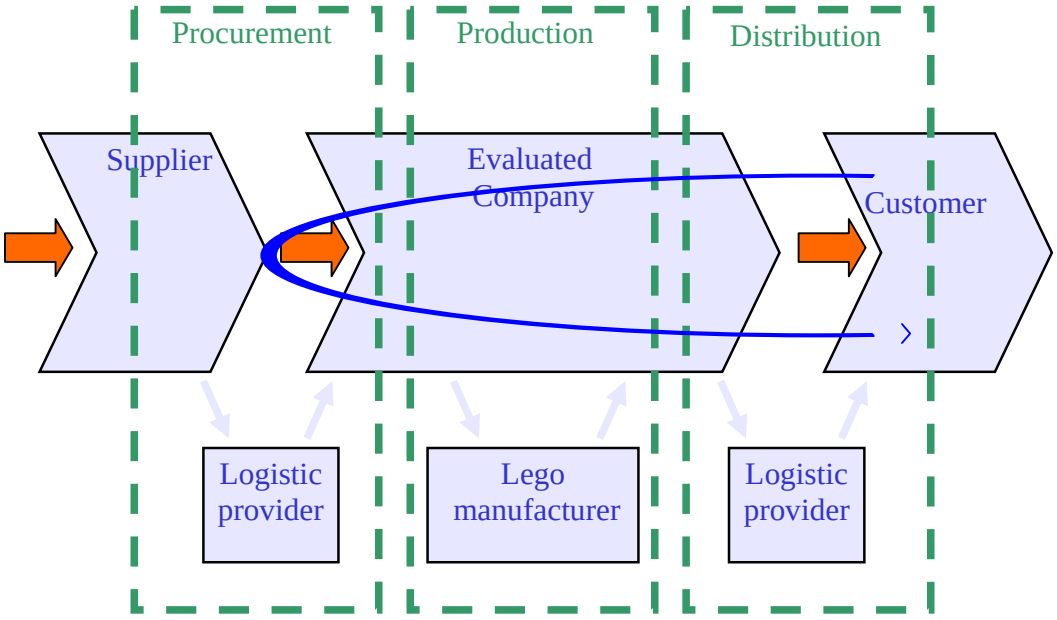
Requirement for entrance level is minimum 1 pt in marked parameter and min. 50% total average →

achieved points of stopping parameters	
parameter 1.1	
parameter 4.1	
parameter 4.3	
parameter 5.2	
parameter 7.2	
parameter 9.1	

Grading:		
A	**excellent**	**> 80%**
B	**good**	**50-80%**
C	**not acceptable**	**< 50%**

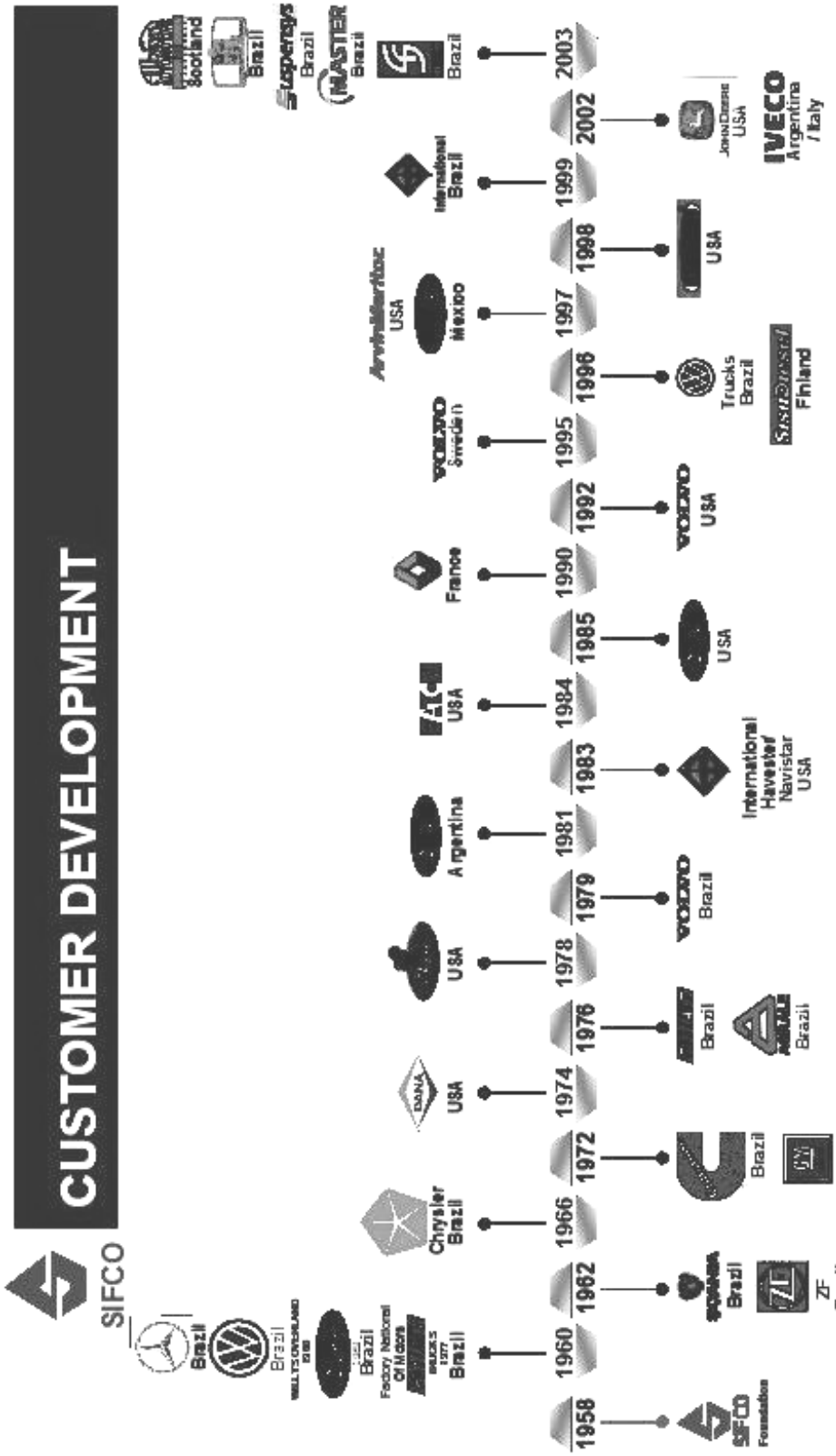
Source: Company material 2003

Appendix 9: Logistics evaluation areas



Source: Andersson 2003

Appendix 10: Customer development of Sifco



Source: Sifco S.A. (2003)

Appendix 11. Supplier Export Evaluation Checklist

As our thesis focused mainly on the relational aspects and the host country context in terms of technology and process transfer, our recommendations did not include the critical factor list as requested by Volvo from us.

Therefore, during our field work we gained an understanding of the requirements in global suppliers with export capacity and we have therefore generated a checklist, as an extension to the SEM and OLE. Whereas some areas may overlap with the SEM or OLE parameters, we have attempted to maintain an export focus. This export-focused checklist should be seen as a tool that facilitates the evaluation of suppliers export potential prior to implementing the direct export process.

In our research it became evident that the following factors are critical in determining the export potential of suppliers. Therefore, a successful candidate for direct exporting to other Volvo units should fulfil the following criteria:

Critical Areas in Supplier Export Evaluation

1. Financial resources
   1.1. Initial investment capital
   1.2. Access to finances

2. Production flexibility
   2.1. Ability to respond to volume changes
   2.2. Raw material stocks and access

3. Export structure and experience
   3.1. Export sales department
   3.2. Documentation and international trade policy knowledge
   3.3. Logistics and material handling systems
   3.4. Access to warehouse/joint-venture partners on other continents
   3.5. LSP contact

4. Human Resources
    4.1. Management's willingness toward exporting
    4.2. Management attitude for continuous improvement and learning
    4.3. International ability (language capability and international experience)

This list is should be considered as an extension of the SEM, focusing particularly on the export-related areas. This checklist could be utilised both by Volvo as well as the supplier, evaluating the potential to export directly in terms of the factors. Then the rating of the parameters should be determined by Volvo, but a scale range from 1-3, as in the SEM, could be used. The results should be evaluated and verified. In the event that supplier doesn't meet the requirements, a development plan should be made.

In this evaluation we also have stopping parameters. These are the financial resources and the willingness of the supplier. With a willing supplier, a development plan focuses more on the financial resources, human resources and export structure related aspects in development. With a capable supplier, the willingness may be developed through increased interaction between Volvo and the supplier as well as among the suppliers themselves.

References

Monographs

Barney, Jay (2002). *Gaining and Sustaining Competitive Advantage*, 2nd ed. Pearson Education Inc., New Jersey, U.S.A.

Dicken, Peter (2003). *Global Shift: reshaping the global economic map in the 21st century*, 4th ed. London: SAGE

Egan, John (2001). *Relationship Marketing*, Pearson Education Limited, England.

Ford, David et al. (1998). *Managing Business Relationships*, John Wiley & Sons Ltd., England.

Grant, Robert M (2001). Knowledge and Organisation. *Managing Industrial Knowlegde – Creation, Transfer and Utilization*, Ed by Nonaka, Ikujiro and Teece, David.

Humphrey, John et al. (2000). *Global Strategies and Local Realities – The Auto Industry in Emerging Markets*, Macmillan Press Ltd. U.K.

Håkansson, Håkan and Gadde, Lars-Erik (2001). *Supply Network Strategies*, John Wiley & Sons Ltd. U.K.

Lamming, Richard (1993). *Beyond Partnership – Strategies for Innovation and Lean Supply*, Prentice hall International, U.K.

Merriam, Sharan B. (1998) *Qualitative research and case study applications in education*, Jossey-Bass, San Francisco.

Olsson, J.C., & Moberger, H. (2002). *Volvo 1927-2002-75 år*. Norden Media. Tryck Grunditz & Forsberg, Lindköping, Sweden.

Olsson, J.C., (2001). *Volvobussarna förr och nu*. Norden Media GmbH.

Seppälä, Timo (2001). *Buyer-Supplier Relationships and Sourcing of Strategic Components*, Turku School of Economics and Business Administration, Gradia Oy, Turku, Finland.

Slack, Nigel and Lewis, Michael (2002). *Operations Strategy*, Pearson Education Ltd. Essex, England.

Teece, David (2001). Strategies for Managing Knowledge Assets: the Role of Firm Structure and Industrial Context. *Managing Industrial Knowlegde – Creation, Transfer and Utilization*, Ed by Nonaka, Ikujiro and Teece, David.

The Economist Intelligence Unit Limited (1999). *Automotive sectors in Latin America* pp.50-116.

Articles in Scientific Journals

Cox, Andrew (1996). "Relational competence and strategic procurement management – Towards an entrepreneurial and contractual theory of the firm". *European Journal of Purchasing and Supply Management*, Vol. 2, No 1, pp. 57-70.

Fusco, Jose P. and Spring, Martin (2003). "Flexibility versus robust networks: the case of the Brazilian automotive sector", *Integrated Manufacturing Systems* 14.01.2003. MCB UP Limited. pp.26-35.

Gadde, Lars-Erik; Huemer, Lars and Håkansson, Håkan (2003). "Strategizing in Industrial Networks", *Industrial Marketing Management*, Vol. 32, pp. 357-364.

Hamel, Gary and Prahalad, C.K. (1990). "The Core Competence of the Corporation", *Harvard Business Review*, May-June, pp. 79-91.

Ivarsson, Inge and Alvstam, Claes G. (2003). "Technology Transfer from TNCs to Local Suppliers in Developing Countries- A study of AB Volvo's Truck and Bus plants in Brazil, Mexico, China and India." *Working paper.*

Johanson, Jan and Mattsson, Lars-Gunnar (1987). “Interorganizational Relations in Industrial Systems: A Network Approach Compared with the Transaction-Cost Approach”, *International Studies of Management and International Organization*, Vol. 27, No. 1, pp. 34-48.

Krajlic, Peter (1983). “Purchasing must become supply management”, *Harvard Business Review*, September-October, pp. 109-117.

Laplane, Mariano F. and Sarti, Fernando (1997). “The Restructuring of the Brazilian Automobile Industry in the Nineties”, *ACTES du GERPISA*, Nr.20, Pays émergents et firmes internationals, May 1997, pp.31-48.

O’Keefe, Thomas and Haar, Jerry (2001). ”The impact of Mercosur on the Automobile Industry”, The North-South Agenda-papers-fifty-September 2001, *The North-South Center*-University of Miami. pp.1-19.

Salerno Mário S., Zilbovicius Mauro, Arbix Glauco & Carneiro Dias Valèria, Ana (1998) "Changes and Persistences on the Relationship Between Assemblers and Suppliers in Brazil", *ACTES du GERPISA*, Nr.24, December 1998. pp. 51-66.

Stephens, Mark and Cole, William E. (1988). ”The Brazilian Motor Vehicle Industry: A Holistic Approach to Project Evaluation”, *Journal of Economic Issues*, Vol.XXII No.1 March 1988, p.382.

Zilbovicius, Mauro; Marx, Roberto and Salerno, Mário Sergio (2002). “A comprehensive study of the transformation of the Brazilian automotive industry”, *International Journal of Automotive Technology and Management*, Vol. 2, No.1,pp.10-23.

Theses

Robye, Gunnar & Rosander, Joakim (2002). *Developing suppliers relationships in emerging markets; a case study of Volvo Trucks Corporation*, Masters Thesis Graduate Business School. School of Economics and Commercial Law, Göteborg University 2002:11.

Magazine Articles

Jonilson, Margareta (2003). ”En start för något stort”, *Volvo Trucks Globetrotter*, nr 4 p.9-13.

Monteiro, Paulo (2003). “VW eyes 25 percent of Brazilian truck market after its debut in Intercity Bus Segment”, *World Market Research Center*, 27th June, 2003.

Monteiro, Paulo (2003). “Commercial Vehicle Segment on the run despite expected overall weakness in Brazil’s auto sector”, *World Markets Research Center*, 2nd October, 2003.

Monteiro, Paulo (2003). “Scania, Volvo Focus in increased participation in Latin America, DCX trucks looks to expand in Mexico and Brazil”, *World Markets Research Center*, 22nd October, 2003.

Smith, Geri; Wheatley, Jonathan and Green, Jeff (2000). “Car Power”. *Business Week*. Issue 3704, p. 72-77.

Interviews: Volvo Companies

Volvo Bus

Sjöstedt, Jörgen. Global Purchasing Director.
Date: 16th October, 2003, Gothenburg, Sweden.

VdB

Andreazza, Marcus, Buyer (Sifco).
Date: 7th November, 2003, Curitiba, Brazil.

Araújo Marcos, Buyer (Unipac).
Date: 7th November, 2003, Curitiba, Brasil.

Dias da Silva, José, Buyer (Proxyon-prior Sifco buyer)
Date: 16th -19th November, 2003, Curitiba-Marilia, Brasil.

Ditzel, Alexandre, 3P supplier quality development.
Date: 27th November, 2003, e-mail.

Jagino, Pedro, Buyer (Schulz),
Date: 20th November, 2003, Curitiba, Brazil.

Ogliari, Carlos, Manager Governmental & Institutional Affairs.
Date: 20th November, 2003, Curitiba, Brazil.

Rutting, Per, Outbound Logistics department.
Date: 10th November, 2003, Curitiba, Brazil.

Santana Tschöke, Jairo, Supplier and quality development, Purchasing
Date: 12th -13th November, 2003, Joinville, Brazil.

Purchasing Management Team Meetings:
Abdalla, Dalton, Purchasing Manager, Vehicle Dynamics
Barreto, Victor, Global purchasing director, South America
Belforte, Rocco, Purchasing Manager, Chassis
Betbetz, Erodes, Purchasing Manager, Cab/EL
Santos, Antonio, Purchasing Operations & Admin Support Manager 3P
Date: 10th, 11th, 13th and 21st November, 2003, Curitiba, Brazil.

VLC

Bergström, Thanga, Material Coordinator, Logistic Centre.
Date: 2nd December, 2003, Gothenburg, Sweden.

VLdB

Andrade, Renato, Contracting.
Date: 14th November, 2003, Curitiba, Brazil.

Franksen, Morgan, Manager.
Date: 14th November, 2003, Curitiba, Brazil.

VTC

Andersson, Kenth. Manager Inbound Logistics, Logistics Tuve.
Date : 20th October, 2003, Gothenburg, Sweden.

Berndtsson, Hans. Purchasing Director, Chassis, Europe. Volvo 3P. Date:15th October, 2003 and 10th December, 2003, Gothenburg, Sweden.

Björn, Marcus. Buyer, Global Purchasing CAB, Volvo 3P.
Date: 20th October, 2003, Gothenburg, Sweden.

Blin, Bruno. Chassis Purchasing VP. Volvo 3P.
Date: 19th October, 2003, Gothenburg, Sweden.

Karlsson, Stefan. Logistics Manager, Tuve plant.
Date: 20th October, 2003, Gothenburg, Sweden.

Lagerblad, Carina, Chassis Purchasing Buyer. Volvo 3P.
Date: 23rd October, 2003 and 10th December, 2003, Gothenburg, Sweden.

Mackinovski, Dzeki, CAB and Electrical Purchasing VP. Volvo 3P.
Date: 19th October, 2003, Gothenburg, Sweden.

Rieck, Hans. Global Purchasing Manager, CAB, Volvo 3P.
Date: 19th October, 2003, Gothenburg, Sweden.

VTNA

Pizzurro, Michael, Senior Buyer (Schulz),
Date: 13th November, 2003, Joinville, Brazil.

Interviews: suppliers

Alpino

Giampietri, Manager,
Date: 17th November, 2003, Jundiaí, Brazil.

Proxyon

Gazola, Carlos Luiz, Director Administrativo Financeiro,
(also Supervisory Director of the ATA, Autoparts Technologies Alliance)
Date: 17th November, 2003, Jundiaí, Brazil.

Schulz

Borges de Carvalho, Leonir, Sales department.
Date: 13th November, 2003, Joinville, Brazil.

Schroeder, Sandrine Luciane, Export Analyst, outbound Logistics.
Date: 13th November, 2003, Joinville, Brazil.

Schwartz, Cherubin Alex, Commercial Agent.
Inter Cast (commercial agent of Schulz in U.S.)
Date: 13th November, 2003, Joinville, Brazil.

Company Presentation:
S. de Farias, Altino, Product Engineering Manager
& Valente Boff, Silvio Vinicius, Engineering and Manufacturing Manager.
Date: 13th November, 2003, Joinville, Brazil.

Sifco

Capriglione, Michele, Export Sales Manager.
Date: 17th November, 2003, Jundiaí, Brazil.

Morais de Araujo Souza, Account Manager, Export Sales.
Date: 17th November, 2003, Jundiaí, Brazil.

Unipac

Ribeiro, Marcos Antonio, Business Manager.
Date: 19th November, 2003, Marilia, Brazil.

Wabco

Lopes Neto, Albano, O.E. Order Obtainment.
Date: 18th November, 2003, Campinas, Brazil.

Hardeman Joel, Exports Specialist.
Date: 18th November, 2003, Campinas, Brazil.

Websites

ANFAVEA. Associacao Nacional do Fabricantes de Veiculos Automotivos: ”Anuário Estatístico da Indústria Automobilística Brasileira – 2003”
http://www.anfavea.com.br/Index.html

OICA. International Organisation of Car Assemblers.
www.oica.net/htdocs/main.htm

Sifco: http://www.grupobrasil.com/sifcous.htm

Schulz: http://www.schulz.com.br/index.html

SINDIPECAS. Sindicato Nacional da Indústria de Componentes para Veículos Automotores 2003, “Brazilian Autoparts Industry Performance”.
http://www.sindipecas.org.br/biblioteca/desempenho.asp

Unipac: http://www.unipac.com.br/

VOLVO Supplier Portal (continuously)

http://suppliers.volvo.com/pres/3p/index.htm

1. “Presentation; Philippe Theolier, Senior VP 3P purchasing”

http://suppliers.volvo.com/pres/index.htm

2. “Volvo Group Supplier Portal”

http://suppliers.volvo.com/supplier/requirements/index.htm

3. “Supplier characteristics we are looking for”
4. “PQP 4 - Supplier evaluation”
5. **“**PQP 12 - Logistics**”**

http://suppliers.volvo.com/supplier/selection/index.htm

6. “Global Sourcing Processes”
7. “Global Sourcing Committee”

VOLVO Intranet (07-10-2003)
www.violin.volvo.com

1. “Global inbound Principles”
2. “Global Sourcing Process-connected to GDP”

Other Sources of Information

Author not given (2003). “Volvo reports steady rise in profitability”, *Truck and Bus Builder* Vol.25, nr 8, August 2003. p.3. Somerset: Truck and Bus Builder Publishing Ltd.

Company Report (2003). ”Volvo Trucks”. 24.06.2003. *World Markets Research Center.*

De Carvalhaes, Elizabeth (29th October, 2003), Vice-president of ANFAVEA and responsible for Governmental and Institutional Affairs at VW do Brasil Ltda. Interview conducted by Luis Benito and Marina Gireva.

Global Magazine-Staff Magazine for Volvo Group Employees nr6/2003 p.9.

Governo Federal, Ministério de Desenvolvimento 2002. “*Aprendendo a Exportar”* CD ROM.

UNCTAD (2001) *"World Investment Report; Promoting Linkages"*, United Nations Publications.

Volvo Group

Volvo Group Annual Report 2002

Volvo Group Q2, 2003, ”Det första halvåret”.