

Supplier Portfolio Management of the MNCs and Its Implications to the Finnish SMEs in the Machinery Industry

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Abstract

The objective of the study was to understand the dynamics of MNCs' supplier portfolio management in the Finnish machinery industry. In addition, and accordance to the title, the second objective was to draw the implications of the supply management to the Finnish SME suppliers. The study was conducted as a qualitative research in the context of machinery industry in Finland. The data was collected through interviews from three different sources: The first group of Finpro consultants provided background to the research, the second group of four MNCs provided information on the supplier management aspect, and the third group of six SME suppliers provided the information on how the management affected them.

The results of the study indicate that MNCs' supplier portfolio management is not only a result of strategic planning, but a combination of three factors: 1. Historical reasons, 2. Strategic decisions and 3. Convenience reasons. Thus the actual management of the portfolio only takes place in the last two sections. These results were presented in a pyramid model. The study notes, how the supplier's position in the pyramid model is the most critical factor in determining the implications of supplier management to the SMEs. In addition, the overall international strategy of the MNCs affects greatly the management of the SMEs, and position of local suppliers.

Lastly, the study suggests a model on how the SMEs should create an own strategic response to the supplier management. The response starts from understanding the environment and positioning oneself, and ends with a creation of own customer portfolio, to hedge against the risks of changing business environment.

Keywords supply management, supply networks, supplier portfolios, supplier portfolio management, Finnish machinery industry, SME, MNC,



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Työn nimi Alihankkijaportfolioiden hallinta suuryrityksissä ja sen seuraukset suomalaisille pk-yrityksille raskaanteollisuuden alalla

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Tiivistelmä

Tutkimuksen tavoitteena oli ymmärtää miten suuryritykset hallitsevat toimittaja-portfolioitaan raskaanteollisuuden alalla Suomessa. Tutkimuksen otsikon mukaisesti tutkimuksen toisena tavoitteena oli ymmärtää näiden menettelytapojen seuraukset suomalaisille pk-yrityksille. Tutkimus suoritettiin laadullisin menetelmin, ja tutkimuksen kontekstina oli suomalainen raskasteollisuus. Tutkimuksen materiaali kerättiin haastatteluin kolmesta eri lähteestä: Ensimmäinen haastatteluryhmä oli Finpron konsultit, jotka toimivat kyseisellä alalla. Näiden haastatteluiden pohjalta luotiin taustatieto tutkimukselle. Toinen haastatteluryhmä oli neljä suuryritystä, näiden tulosten avulla tutkittiin toimittajien hallintatapoja. Kolmantena materiaalin lähteenä oli kuusi suomalaista PK-yritystä, joiden haastatteluiden pohjalta kerättiin tietoa toimittajien hallintatapojen seurauksista.

Tutkimuksen tulokset osoittavat, että suuryritysten toimittaja portfolioiden hallintaa ei suoriteta ainoastaan strategisin perustein, vaan portfoliot ovat kokonaisuus kolmesta eri tekijästä: 1. Historiallisista syistä, 2. Strategisen suunnittelun tulos, 3. Käytännöllisistä syistä. Näin ollen käytännön portfolion hallinta on riippuvainen vain kahdesta jälkimmäisestä tekijästä. Tulokset esitettiin pyramidimallina. Tutkimus myös osoittaa, että toimittajan asema pyramidimallissa on tärkein tekijä määritettäessä toimittajahallinnan seurauksia suomalaisille pk-yrityksille. Lisäksi suuryritysten yleiset kansainväliset strategiat myös vaikuttavat paikallisten toimittajien asemaan toimittajaverkossa.

Tutkimuksen lopuksi esitetään vielä malli pk-yritysten oman strategisen vastineen kehittämiseksi. Vastineen kehittäminen tulisi aloittaa oman ympäristön tarkastelusta sekä yrityksen tarkasta asemoinnista, vastineen kehittäminen huipentuu oman asiakasportfolion luomiseen, jonka avulla voidaan suojautua ympäristön muutoksia vastaan.

Avainsanat alihankkijoiden hallinta, toimittajaverkko, alihankkijaverkko, toimittajaportfolio, suomalainen raskasteollisuus, PK-yritys, kansainvälinen suuryritys

Contents

1. INTRODUCTION	1
1.1. Research Problem	1
1.2. Research Gap	3
1.3. Research Objectives and Question.....	4
1.4. Definitions.....	5
1.5. Limitations of the Study.....	7
2. LITERATURE REVIEW	8
2.1. Introduction.....	8
2.2. Definition of Supply Management.....	9
2.3. Supply Networks.....	13
2.4. Supplier Portfolio Management.....	19
2.5. Supplier Perspective - Customer Portfolios.....	23
2.6. Management of Supplier Portfolios.....	24
2.7. Theoretical Frame of Reference.....	31
3. METHODOLOGY	34
3.1. Research Method and Process	34
3.2. Research Design.....	37
3.2.1. Data Collection	37
3.2.2. Analysis and Interpretation.....	40
3.3. Validity and Reliability of the Study	42
3.4. Context of the Study	43
4. FINDINGS.....	45
4.1. Adapted Literature Review - International Strategies of MNCs	45
4.2. Data and Results	48
4.2.1. Key Industry Informants.....	48
4.2.2. The MNC Interviews	55
4.2.3. The SME Interviews	65
5. DISCUSSION & ANALYSIS	76
5.1. Completed Context	76
5.2. MNC's Portfolio Management	79
5.2.1. Transactional Management.....	80
5.2.2. Relational Management	81
5.2.3. Conclusions.....	82
5.3. Supplier's Response.....	84
5.3.1. Understanding the Environment and Needs	84
5.3.2. Creation of Own Strategy	86
6. IMPLICATIONS	89
6.1. The Future of the Industry	89
6.2. Limitations of the Study.....	93
6.3. Implications for Future Research.....	95
7. REFERENCES	97
8. APPENDIXES	106

List of Tables and Pictures

List of Tables

Table 1 Research Objectives of the Study	4
Table 2 Summary of main issues and authors of the literature review	9
Table 3 Detailed Theoretical Framework	33
Table 4 Rates of Conducted Interviews	39
Table 5 Summary of the MNC interviews	61
Table 6 SMEs' everyday problems concerning MNCs as customers.....	69
Table 7 Summary of the SMEs' response to supplier portfolio management.....	73
Table 8 Future of the Machinery Industry in Finland.....	91

List of Pictures

Picture 1 Simple Context of the Study.....	2
Picture 2 Relation of the Basic Concepts.....	13
Picture 3 Tier-model	17
Picture 4 Matrix model by Ollsen & Ellran	22
Picture 5 Theoretical Framework of the Study	31
Picture 6 Abductive Theory Building.....	37
Picture 8 The I/R framework	46
Picture 9 The Pyramid Model.....	63
Picture 10 Completed Context of the Study	77
Picture 12 The Pyramid Model as a Tool for SMEs.....	87

1. INTRODUCTION

The changing environment of the globalising world has changed the perspective on supply chain management, as it has for many other fields of business as well. The globalised economy has driven supply chain management towards the strategic centre of multinational companies, as resources are hunted from further and further away in order to cut the costs. Since multinational corporations (MNCs) are linked to hundreds of other companies in their supply chain, in the complex global business environment, managing these relationships has become a crucial part of company's success and a competitive advantage in the markets. Hence, supplier portfolio management has become a strategically important asset for many globally operating companies.

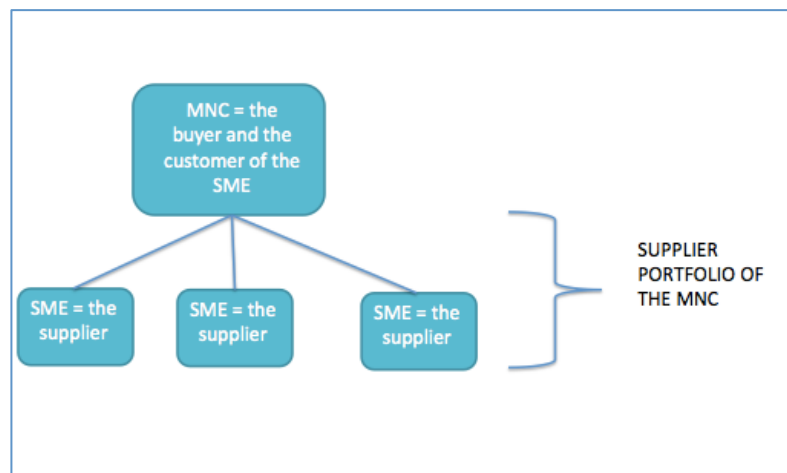
As a management tool of the MNCs, the suppliers, the objects of the management, are also affected by the actions of their customers. Especially volatile is the position of the small and medium sized suppliers, who can be very dependant on only few customers and their strategies on how to manage the suppliers. The global competition of the MNCs, drives the companies to move their operations to less expensive locations, influencing thus to the entire industrial network. This kind of a structural change has already taken place in the electronic field as well as around the pulp and paper industry in Finland. Jobs have been lost from both MNCs as well as from their suppliers. The machinery industry in Finland has been under lot of pressure during the last years, and the same change is now taking place there. This thesis aims at studying the supplier portfolio management in this context, looking at the phenomena from two perspectives: How do the MNCs manage their supplier portfolios, and how does it affect their suppliers, and especially SME –suppliers.

1.1. Research Problem

This study was initiated by an interest towards the position of the Finnish SMEs in the machinery industry from a state-own consulting company Finpro, which aims at

improving the internationalisation of the Finnish SMEs. The research was conducted in cooperation with Finpro as well Aalto University School of Business. The Picture 1 below illustrates the simple context of this study, where the MNC is depicted as the buyer and thus the customer of the small and medium sized enterprises (SMEs). The SMEs, on the other hand, are suppliers for the MNC. The suppliers all together form the *supplier portfolio* of the MNC, which then must be managed correctly. This research takes two viewpoints to study the supplier portfolio management – the first one is the MNC’s view, trying to answer a question such as “How do the MNCs manage their supplier portfolios?” The second view is the standpoint of the SMEs, and answers a question such as “How does the supplier portfolio management affect you?” From this setting the thesis tries to unveil the overall situation between the local suppliers and MNCs in the machinery industry in Finland.

Picture 1 Simple Context of the Study



Many of the Finnish SMEs have supplied for their customers for decades; however, because of the changing globalised world, their position in the supply network has changed, and today the positions of the local suppliers are at stake. Therefore, this study aims at understanding the MNCs’ current trends and practises at supplier portfolio management in order for the SMEs to better align their strategies with their customers and to develop along the changing world. Ideally knowledge on this matter would convey into better and more effective cooperation with the SMEs and MNCs, not just in

Finland but also globally, and thus make also Finland more competitive. From this setting this thesis aims at unveiling the overall situation between the local suppliers and MNCs in the machinery industry in Finland. Thus, this research does not only settle for trying to find out “WHAT” but also “WHY” and “HOW”, since it not only studies the concept of supplier portfolio management, but looks for reasons behind it and how does it influence the current business environment.

1.2. Research Gap

The literature around the issue of supplier management is wide and diverse, as Saunders (1995) have noted that even the terminology is confusing and overlapping. In the field of International Business, there is especially an abundance of studies conducted around cultural factors relating to the subject (such as Salmi, 2006). In general, the popularity of the supply chain management literature has risen among academics recently, and so has the supply chain management literature widened extensively (Mentzer et al, 2001). In addition, the literature has matured to see the concept in a more holistic manner, instead of separate functions of e.g. logistics and purchasing. This study has especially drawn on the studies of the International Marketing and Purchasing group (researchers referred in this study such as Håkansson, Gadde and Dwyer), which has especially focussed on the strategic importance of the supplier management. However, even though the growing importance of the SMEs in the global business environment has substantially affected the amount of literature around the phenomena (Coviello & McAuley, 1999), the viewpoint of SME’s in the supply management is still very much intact and therefore provides a fresh setting for this study. Especially, the unique set-up and possibility to view both the MNC and the SME perspectives will be one of the major contributions of this study.

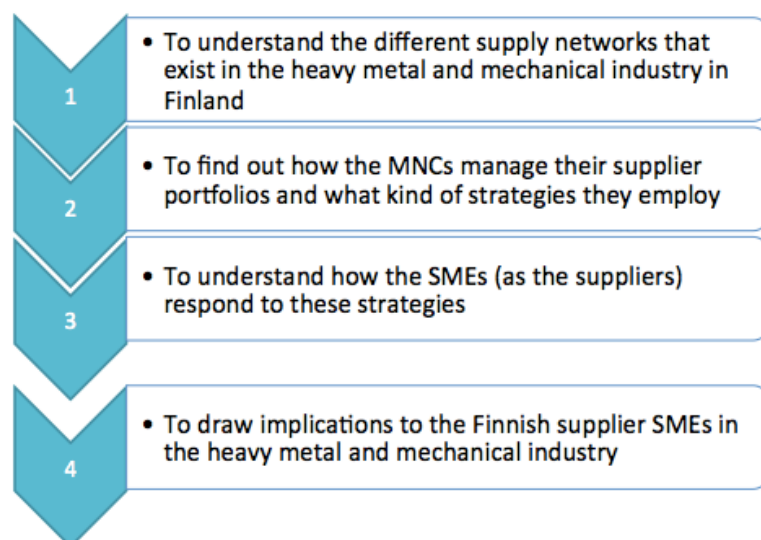
In addition, this study is conducted in the context of Finnish machinery industry, and therefore contributes especially to the literature around this specific field. Although some of the results of this study, especially regarding the MNC perspective, are indeed generalizable, it should be remembered that the unique history and characteristics of the

Finnish business environment affect the results of this study. Hence, this study contributes to the gap in the academic literature around implications of supplier management especially to the SMEs in Finland.

1.3. Research Objectives and Question

The research objectives and the actual research question for this study are drawn from the research problem and the current gap in academic research. As mentioned, since the nature of this study includes both the perspectives of the SME and the MNC, also the research objectives follow this direction. The research objectives of the study have been compiled to the table 1 below. The first objective is to answer the interrogative *what*, and thus to understand what kind of different supplier networks there even exists in the field of Finnish machinery industry. The second and third objectives are interrelated, as the second one answers *why* the MNCs manage their portfolios as they do, and the third one *how* this affects the supplier SMEs, and how do they possible respond to the management. The last research objective does not focus on so much the academic research of this study, but more on the analysis and implications of the results. The final objective of the study is to draw implications from the findings to the Finnish SMEs, and thus its focus is heavily on the future of the SMEs, and on their strategic development.

Table 1 Research Objectives of the Study



Finally the main research question of the study is derived from the objectives and is:

What influences the supplier portfolio management of MNCs in the machinery industry in Finland, and what are its implications to the Finnish SMEs working as their suppliers?

1.4. Definitions

Before diving into the academic literature of the subject, few definitions around the field will provide some firsthand information on the subject and clarify the academic literature. The definitions include both basic concepts as well as few theories used in this study to explain the competition between multinational companies.

Small and Medium Sized Enterprises

The Statistics of Finland (2012) defines the small and medium sized companies with two different criteria: They must have fewer than 250 employees, and an annual turnover less than 50 million euros. The Finnish definition was chosen, since the SMEs in this research are only studied in the Finnish context.

Multinational Corporations

Multinational Corporation “consists of a group of geographically dispersed and goal-disparate organization that include its headquarters and different national subsidiaries” (Bartlett & Ghoshal, 1990). More explicitly stated, a multinational corporation must be registered in more than a one country, and it will sell or buy goods / services from different countries (ibid).

Supplier Portfolio Management

The original portfolio theory was created for equity investments by Markowitz in 1952, thus being strongly associated with risk management. The use has widened to various business management purposes such as strategic planning. In the context of supplier relationship management the portfolio models emphasise especially “different kinds of strategies to different kinds of suppliers” (Ahonen & Salmi, 2003, p. 2).

Network Theory

The network theory defines a MNC through its relationships. As the clichéd statement goes *no firm is an island*, but a MNC is part of an “inter-organizational network that is embedded in an external network consisting of all other organizations such as customers, suppliers, regulators, and so on, with which the different units of the multinational must interact.” This definition is by Bartlett and Ghoshal (1990).

Transaction Cost Approach

Transaction cost approach views the organisations through its transactional, i.e. economic decisions (Grover & Malhotra, 2003). As noted by Williamson, (1981, p. 548), a leading researcher in the field, transaction cost approach “regards the transactions as the basic unit of analysis” As portfolio theory, this theory is also one of the basic elements of risk management, since its main assumption is that a cost of doing something should never be bigger than the risks (Grover & Malhotra, 2003). In this study, one often used phrase is also “a transactional decision”, this refers to a “economic decision” where the costs, risks and revenues are easily measured, such as a simplified decision to choose over cheaper or more expensive supplier.

Machinery industry

This study takes place in the Finnish machinery industry. The Federation of Finnish Technology Industries separates these fields as the metals industry and the mechanical industry. However, the common factor for all the companies interviewed for this study has been that they process metals in different ways, either further to mechanical goods or to more simple metal bodies. The federation estimates the mechanical engineering to be the biggest technical employer in Finland with around 125 000 employees. The total turnover of both industries is 33,9 million euros (The Federation of Finnish Technology Industry, 2013).

1.5. Limitations of the Study

The limitations of the study concern at this point primarily the scope and context of the research. Firstly, the empirical part of the study is limited to the Finnish machinery industry in 2012 and 2013. Although the phenomenon of supplier management is extremely global, the research is defined to especially concentrate to business environment in Finland in order to also be able to draw conclusions to the benefit of Finnish companies and the Finnish economy. Secondly, the interviews are going to take place in a short period of January to February 2013, which will lead to emphasis on current issues, rather than long-term perspectives. Thirdly, the supplier perspective chosen for this study is also limited to SMEs, however to the larger end of the size scope, influencing especially the resources of the companies and thus for example the abilities to internationalise.

2. LITERATURE REVIEW

2.1. Introduction

The aim of this research is to study the management of MNC's supplier portfolios from two different perspectives: firstly from the point of view of the MNCs themselves, and secondly from the point of view of suppliers, and specifically small and medium sized Finnish suppliers – the object of the supplier portfolio management. Therefore, the literature review sheds light on the basic concepts of this issue from both of these perspectives. The aim of this literature review, in turn, is to introduce the concept of *supplier portfolio management* in the academic context. The discussion starts from exploring its relation to larger concepts such as supply chain management, and moves on to search the importance of relational management of the suppliers.

The construction of the literature review follows the research objectives of this study. Firstly, a general overview of supply chain management is presented, however this concept is only viewed as an umbrella expression for the specific terms more relevant for this research, such as *supply bases and networks*, as well as *supplier portfolio management*, and *supply relationship management*. Secondly, the motive of the first research objective is followed by exploring the concept of supplier networks in the light of the network theory, which states that a company is embedded to its external network, such as suppliers, and therefore it is not just the companies that compete against each other, but the entire networks (Bartlett & Ghoshal, 1990). The nature of the supplier networks is explored in this section in detail in regards of different roles and positions in them. These two sections thus answer the first research objective of the study concerning the different forms of supplier networks.

Thirdly, the literature review discusses how to manage the supplier networks, thus answering to the second part of the research objectives regarding the management strategies of the supplier portfolios of the MNCs. In this section the portfolio model is introduced as a management tool, and viewed as a combination of both *transactional*

management, such as more detailed decisions on supplier selection, and relational management, such as the management of dyadic relationships. The third research objective concerns the SME and supplier perspective on the supplier portfolio management. This perspective is discussed throughout the literature review, when applicable, especially regarding the *position in the network* and *the relationship management*. Table 2 below summarises the main issues as well as presents the key authors of the literature review, and presents them in accordance with the research objectives of the study. As discussed earlier, the fourth objective of this research is more concentrated on the findings than on the literature, and therefore is not included here.

Table 2 Summary of main issues and authors of the literature review

MAIN ISSUES AND AUTHORS OF THE LITERATURE REVIEW IN ACCORDANCE WITH THE RESEARCH OBJECTIVES	
1. What are supplier networks?	Main authors
Definition of Key Concepts	Lambert & Cooper, (2000); and Menzter et al (2001)
The Network Theory	Ghoshal and Bartlett (1990); various authors from the IMP-group
Structure of the Networks	Gadde & Snehota, (2000); Lambert et al, (1998)
2. How do MNCs manage the supplier portfolios?	Main authors
Supplier Portfolio Management	Håkansson, (1982); Turnbull, (1990); Ollsen & Elram (1997)
Transactional Supply Management	Spekmann, (1988); Verma & Pullman, (1998); Wagner & Johnson, (2004).
Relational Supply Management	Bouquet & Birkinshaw (2008) Nahapiet & Ghoshal, (1998), Maloni & Benton, (2000)
3. The SMEs response to the portfolio management	Main authors
Customer Portfolio Management	Ford, (2002); Salonen & Gabriellsson, (2012)

2.2. Definition of Supply Management

In order to understand the relation of the supply management to the more known management practises in the field, the definition of the concepts should first begin from a larger context. *Supply Chain Management* is the most obvious starting point for this

research, since the concept incorporates all the processes that a supplier and a buyer are connected to (Singh & Burgess, 2013). The literature around supply chain management is wide and diverse, and as noted previously that even with the extensive discussion around the definition of the concept, the term *supply chain management* still lacks a consensus (e.g. in Mentzer et al, 2001; and Burgess et al, 2006). The difficulty with the definition concerns mainly the scope of the term as illustrated by an article of Mentzer et al (2001), which presents multiple different definitions for supply chain management, starting from a very simplistic picture illustrated by Jones and Riley (1985, p. 16) as dealing “with the total flow of materials from suppliers to the end users...”; to a more management-styled approach presented by La Londe and Masters (1994, in Mentzer et al, 2001, p. 6) where the term is defined to include “.. two or more firms in a supply chain entering into a long-term agreement; the development of trust and commitment to the relationship; the integration of logistic activities involving the sharing of demand and sales data...”

A more recent definition by the Global Supply Chain Forum GSCF presented in e.g. Lambert and Cooper’s (2000, p. 66) article has a different starting point, since it includes a wide range of activities part of the process.

“Supply Chain Management is the integration of key business processes from end user through original suppliers that provides products, services, and information that add value for customers and other stakeholders.”

Developed even further from this, is the definition by Mentzer et al (2001, p. 18), which is widely used in the literature (e.g. in Singh & Burgess, 2013; Hugos, 2011). The definition is drawn from a synthesis of different definitions, and it incorporates best the breadth of the issue (Singh & Burgess, 2013), but also the strategic value of the concept to the business. Supply chain management is:

“the systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole.”

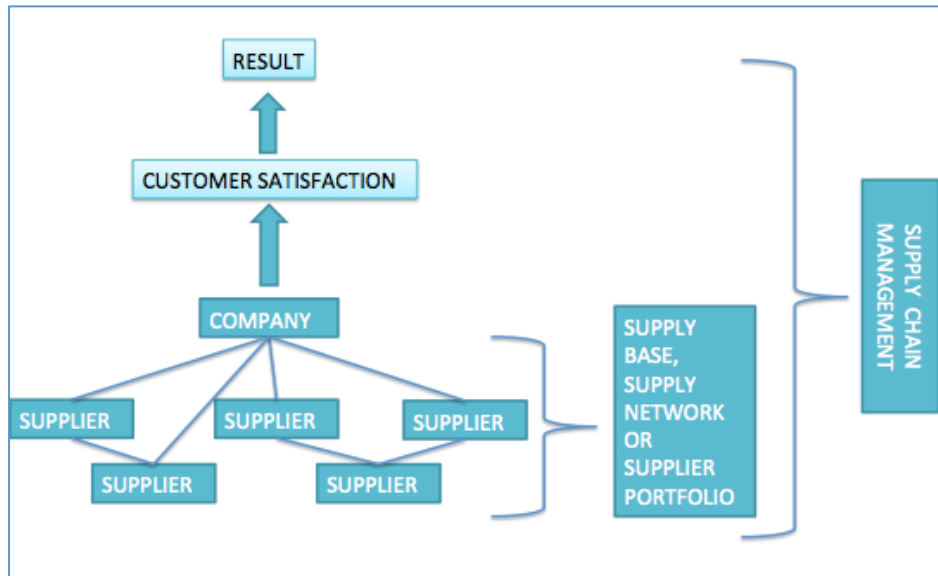
These four definitions show the development in the field of supply chain management from separate functions towards a holistic concept. It also illustrates how the previous thinking regarding procurement only as a cost has shifted towards understanding the strategic importance of supply chain management in general. In the change of the century a discussion in the academia took place concerning the strategic value of the supply chain management, and for example, Ramsay (2001) manifested with the resource-based-view the irrelevance of strategic purchasing. However, as the definition by Mentzer et al (2001) presents, Ramsay was left alone, and the strategic value of supply chain management has been proven e.g. by Carter & Narasimhan, (1996) and Mol et al (2007, p. 49), who also note how “in fact, purchasing can even be said to have become more relevant in recent years as firms have outsourced more activities and increasingly look towards suppliers to create added value.” Finally proving the criticalness of the concept was also Hult et al (2007, p. 1036) who defined supply chain management as “... not merely as a means to get products where they need to be, but also as a tool to get key outcomes”.

Since this thesis also notes the strategic value of the suppliers to a company, the use of the definition by Mentzer et al (2001) is well proven. As Lambert and Cooper (2000, p. 65) state: “Strictly speaking, the supply chain is not a chain of businesses with one-to-one business-to-business relationships, but a network of multiple businesses and relationships.” Nassinbeni et al (2013) agree on this, noting how today the entire external resources of a company have become critical to their competitiveness. Therefore, in addition on stating the strategic importance of the concept, the definition by Mentzer et al (2001) also supports the network theory, which will be introduced in

more detail later on, but where the entire effective supply networks are viewed as a competitive advantage to a company (e.g. in Ahonen & Salmi, 2003).

Before going into more detail in supplier portfolio management and supplier networks, it is important to point out the differences in the terminology of the field with the help of Picture 2. As described above, the concept of supply chain management in this thesis is defined widely to include processes from the supply base to affect all the way to the end result of the company, thus the entire picture 1 illustrates this concept. The suppliers alone form the *supplier base*, the *supply network*, or the *supplier portfolio*. Holmen et al (2007) note how the terms “supply networks” and “supply bases” are not separated or defined in the literature that well. According to the authors, the most evident difference is the emphasis on reduction and rationalisation in the literature concerning the supply bases; whereas, the supply network studies (e.g. within the International Marketing and Purchasing group, such as Gadde & Snehota, 2000) have emphasised the collaboration between the network members more (Holmen et al, 2007). Therefore, in the picture 2, the supply base would in concrete terms be just the suppliers without the connecting lines, and the supply network the suppliers connected with the lines. As the concept of supply networks is a way to view the dyadic relationships as an entity, the supply portfolios, on the other hand, are more a management tool for handling different types of relationships within a supply network. Ahonen & Salmi (2003, p.1) state that “the portfolio view stresses the need for designing the supplier network so that it considers different kinds of supplier relationships and consequently, the management of bundles of relationships” However, the term supplier portfolio is also often used in this study to refer to the supply base as an entity.

Picture 2 Relation of the Basic Concepts



2.3. Supply Networks

Since the concept supply chain management, its strategic value, and its relation to supplier portfolios and networks are now defined, the following section will concentrate on answering to the first research objective of the study on the nature of supply networks and to explore the academic literature and theories around the subject. As stated previously, the supplier network is a way of viewing the supply base as a net of connected relationships (e.g. in Snehota & Håkansson, 1995), therefore this section concentrates especially on theories which highlight the importance of connected relationships within companies' network, such as the network theory and interaction theory by the IMP group. In addition, this section explores the nature of the supply networks, specifying issues such as *different roles within the network* and *a firm's position in the network*.

Dynamic and complex networks are an important element in explaining *the raison d'être* of a firm, especially in the field of International Business. The network theory, which highlights the importance of the networks to a company, originates from sociology researchers such as Granovetter (1973), who studied economic sociology and social networks. It is one of the fundamental theories used in explaining the environment and the performance of multi-national corporations. For instance, Ghoshal

and Bartlett (1990, p. 603) determine the concept of multinational corporation as “an inter-organizational network that is embedded in an external network consisting of all other organizations such as customers, suppliers, regulators, and so on, with which the different units of the multinational must interact.” As discussed earlier when defining the concept, since *supply chain* today is viewed as an integrated processes from as far as the outsourced services affecting all the way to the end-consumer satisfaction as well as the company profits (both in Lambert & Cooper, 2000 and Mentzer et al, 2001), the network theory therefore suites well for explaining the importance of supplier networks to the company’s competitiveness. In addition, the network is a dynamic asset of the company, since the changes in the network (i.e. the changes in the suppliers,) allow the company to adapt to the ever-changing current requirements (Brito, 2001).

Thus, the network theory defines the role of the organization through its relationships (i.e. ability to interact) with other parties (e.g. in Håkansson & Snehota, 2006). In line with this, the IMP group’s *interaction theory* in the context of suppliers and buyers takes also the relationship in the centre of the attention (Jüttner & Schlange, 1996). Turnbull et al (1996, p. 45) note how a ”great majority of business purchases do not exist as individual events and hence can not be fully understood if each one is examined in isolation”. The interaction approach sees the business markets as arenas for interaction of the suppliers and buyers (ibid). Jüttner & Schlange (1996) explain how the *arena* serves as the stage of the business, and the transactions between the companies determine the structure of the network. Therefore, the interaction theory acts as an extension to the original network theory, emphasising the social ties within the network as opposed to the transactions between the companies (Turnbull et al, 1996). In addition, the model stresses the active roles of both the seller and the buyer in the market specifically in the context of supplier management (ibid).

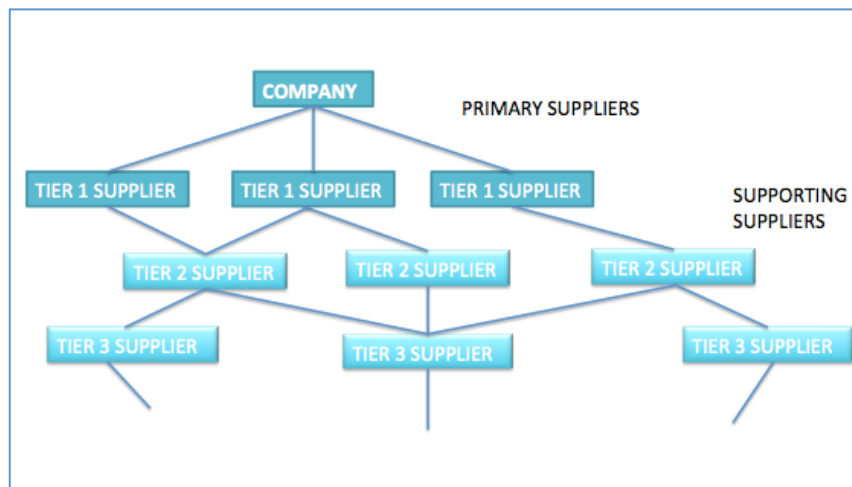
Adding on to the network theory and to the interaction theory, Dyer and Singh (1998) present a model of “Relational View”, which is based on a concept of *relational rent*. The authors define this concept as a “profit jointly generated in an exchange relationship that cannot be generated by either firm in isolation and can only be crated

through the joint idiosyncratic contributions of the specific alliance partners” (ibid, p. 662). Thus, the competitive advantage of a company may not rise from the resources within the firm (as stated by the resource-based view), but also from the resources within the inter-firm relationships (Nassimbeni et al, 2013). These resources are so called *idiosyncratic* characteristics that make the competitive advantage difficult to imitate (Dyer & Singh, 1998). Thus, in the perspective of supply networks, as the network theory highlights the importance of the dyadic relationships, and the relational view states the competitive advantage to stem from these relationships, it can be justified that (as already mentioned by e.g. Nassimbeni et al, 2013 and Ahonen & Salmi, 2003) that the supply networks are strategically important asset to a company, and contribute to the competitive advantage of it.

Since the theoretical background of networks is now presented and their strategic importance is justified, next the focus is going to be turned to the structure of the networks. As already cited, Jüttner & Schlange (1996) mentioned how the transactions between the firms determine the structure of the network. The structure on the other hand is composed of different *members* each having a *role* and a *position* within a network (Gadde & Snehota, 2000). Lambert, Cooper and Pagh, in their article “Supply Chain Management: Implementation Issues and Research Opportunities” (1998, p. 5) present a framework for evaluating the elements of the network structures. The authors found three important aspects in the network structure to be “1) the members of the supply chain, 2) the structural dimensions of the supply chain, and 3) the different types of process links across the supply chain.” Gadde and Snehota (2000, p. 305) talk about the same issue in their article “Making the most out of Supplier Relationships” and define that the strategic steps accordingly as “scope of supplies”, “configuration of the supply base” and “postures of supplier relationships.” In other words, the structure of the supply network consists of elements such as *different type of members, how these are linked with one other, and the size and shape of the network*. In addition, the different positions within the supply network are a crucial source of power, an important element in the supplier-buyer relationship (e.g. in Thorelli, 1986, and Axelsson, 1992). This aspect will be discussed later in the literature review.

Clearly, the supply networks include members such as the buyer and different types of suppliers. A more interesting starting point for the analysis therefore is the differentiation of the *roles* and *positions* of the suppliers. Gadde and Snehota (2000) divide the relationships according to the degree of involvement. Lambert, Cooper and Pagh (1998; p. 5), on the other hand, separate two different types of suppliers as the “primary” and the “supporting”. Primary members being the companies or units which have a direct relationship, by selling or performing other transactions, with the buyer, and supporting or secondary members being the ones which only supply to the primary members (ibid). Another common terminology for this type of classification is the tier-model, where different levels of suppliers are divided into tiers according to their role either as primary or supporting member (e.g. in Lambert et al, 1998; Carr & Smeltzer, 1999; and Christopher, 2005). Picture 3 illustrates the organisation of suppliers into tiers. (The image is drawn as a very simplistic version from a picture by Lambert et al (1998, p. 79). Critical in the picture is the buyer’s position in it, as noted by the same authors that the MNCs should integrate only with suppliers concerning key business processes. Thus, the tier-model highlights the importance of control in the supplier base, by interacting only with certain suppliers, the company can manage the number of the suppliers, and is able to utilise its scarce resources in the most efficient manner. Naturally the *tiering* of suppliers results also in cutting the total number of the suppliers in the supply base (Ulaga & Eggert, 2006). In the perspective of the suppliers, this means that only by differentiation will the companies be able to keep their relationships and thus the supplier status (ibid).

Picture 3 Tier-model



A classical example of the suppliers tier-modelling comes from the Japanese auto industry and especially how Toyota has organised its suppliers. (Toyota's supply network is described e.g. in Monden, 1983; and in multiple examples in text book by Christopher, 2005) The supply network by Toyota is well documented and researched for another reason as well. Japanese companies have created a special (common in Asia) type of networks called *the keiretsus*, and the supplier network of Toyota is an example of this. Lincoln (1992; 561), who has studied the phenomenon, defines *the keiretsus* as "clusters of interlinked Japanese firms and the specific ties that bind them." In addition to being effectively organised networks, the keiretsu member firms possess a competitive advantage through reduced costs, easier communications and ensured reliability, for example (ibid). The keiretsu networks are therefore a perfect example of the idiosyncratic characteristics within networks that create a competitive advantage for the company and thus become difficult to imitate.

Both the buyer and seller's positions in the network are crucial parts of their resources (Turnbull et al, 1996); however, the supplier's position in the network is heavily influenced by the buyer's strategy. For the buyer, its strategy affects the structure of its network; but for the supplier, its position in the supply network is affected both by the buyer's strategy as well as its own. This means that for the supplier, different positions in the network usually imply different sized contracts and thus

different returns. The simplest example of this being the tier-model, where only the suppliers in the first tier are able to even have a relationship with the buyer (Christopher, 2005). Therefore, the first important notion regarding supplier's position is that since all the individual relationships contribute to a company's position in the network, the supplier's business strategy must involve dynamic relationships with other members in order to achieve always better network positions (Ford, 2002).

Secondly, in addition on interacting with other members of the network, multiple authors (e.g. Doz & Hamel, 1998; Handfield & Nichols, 1999; Ford, 2002) have stated how the primary key to successful supply management is awareness of each party's specific role in the network. This is especially important for the supplier, whose position is dependent on the business deals with the buyer. Misconceptions regarding the objectives of any transactions may lead to larger misunderstandings regarding the supplier's position, for instance, "offering a full package of activities for a customer who is only interested of the minimum level systems maintenance", is a waste of resource for both the supplier and the buyer (Helander & Möller, 2006; p. 720). Closely related to this, is the importance of suppliers to align strategic objectives with the buyer, in order to gain the best results (ibid). Helander & Möller, (2006) have conducted research on the roles of the buyer and supplier and concluded that the "the customer's strategy and the supplier's role for the customer are interdependent" (ibid; 722).

In addition, it can be stated that the buyer's strategy and aligning the objectives is becoming more and more important to the supplier's survival, as the tightening globalised competition has especially diminished the role of local supplier networks (Thomas & Barton, 2006). A study in the context of Italian industry clusters by Tunisini & Bocconcelli (2006) noted the same issue, how the traditional competitive advantages of Italian suppliers, such as lower costs and product quality, are losing their meaning because of competition from emerging countries. However, there are still advantages of being local, as noted by Porter (2000) in his study of clusters. He states that because global sourcing does not necessarily create advantages, but is more concentrated on avoiding disadvantages (such as immediate costs), therefore "distant sourcing normally

is a second-best solution compared to accessing a competitive local cluster in terms of productivity and innovation” (ibid, p. 32). All in all, understanding one’s own position in the supply network is becoming more and more crucial for the suppliers, as the complexity of the global networks diminishes the natural position of the local suppliers.

2.4. Supplier Portfolio Management

The previous section of this literature review has discussed the concept of supplier networks and their characteristics. This section, on the other hand, tries to open up the management of these networks through *supplier portfolio management*. As noted earlier, as a management tool, supplier portfolio management views the entity of the supplier base in a holistic and strategic manner, trying to offer a solution how to manage a company’s supplier relationships (e.g. in Turnbull, 1990) In the supply chain management the portfolio model can be viewed as a further development from the tier thinking - Not only managing whether to have or not to have the relationship, but also the extent and degree of the relationship.

The research on the keiretsu networks and the lifting of the relationship of the buyer and seller to the focus by the interaction theory, was (mis)interpreted at one point that the close relationships provide the ultimately best outcomes in supplier management (Bensaou, 1999). For instance Spekman (1988, p. 75) states how “traditional relationships no longer suffice; closer, more collaborative approaches are needed.” Additionally, also Sheth & Sharma (1997) stress the trend of moving from transactional thinking toward more relationship-orientated view. Gadde & Snehota (2000, p. 306) note how it appears that there is a “tendency to portray close relationships to suppliers as the superior solution.” The tier-model additionally may fool into thinking that reducing the number of relationships leads automatically to closer relationships with the first tier. Gadde & Snehota (ibid) also argue that concentrating on one type of relationship is an “oversimplification”, and the actual competence of the company lies in its abilities to manage different kinds of supplier relationships. Also Bensaou (1999, p. 36) in his management article on the portfolio management has noted how “strategic

partnerships are costly to develop, nurture and maintain.” He also states how there is no best model for a relationship but in order to gain the best results, the companies must be able to find the optimal relationships for different circumstances. According to Bensaou (2000) the key to effective and strategic management lies in the adaptation of appropriate management styles for appropriate relationships.

Even though the interaction theory lifts the relationship to focus, the theory also states that suppliers must be structured and each relationship should be controlled differently (Håkansson, 1982). Cunningham (1982) states how “having suppliers at different stages of development, or varying of sizes, is beneficial because each category of supplier requires a different level of resource commitment for effective interaction, and each may bring different types of benefits” (in Håkansson, 1982; p. 349). As a tool for managing these complex and various relationships, the wide literature in supply base management suggests the portfolio model for a solution (e.g. Turnbull, 1990; Olsen & Ellram, 1997; Gadde & Snehota, 2000).

The portfolio management was introduced originally for the field of finance, by H. Markowitz in the 1950s (Ollsen & Elram, 1997). His idea was to manage the risk and returns in a financial portfolio with careful selection process and precise observations and experiences about the future performance of available investment opportunities (Markowitz, 1952). Thus it is a tool for risk management. There has been multiple portfolio models after since, not least the growth / share matrix by the Boston Consulting Group (Ollsen & Elram, 1997). In supply chain management the use of the portfolio theories has been relatively recent, and the definitions are therefore scarce; for instance Ahonen & Salmi (2003, p. 2) state in a conference paper that the purpose of the model in a supplier-buyer context is to match the strategies of the company to its suppliers. Turnbull (1990, p. 7) defines the theory widely as:

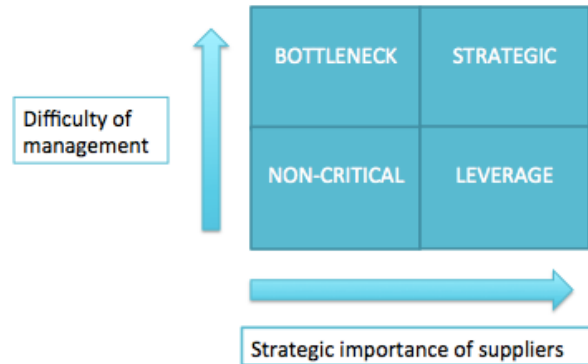
“The portfolio concept focuses on the interdependencies among the various management decision, and emphasises an integrated approach to the management of the company’s various business units to achieve long-term

objectives.... Thus, the portfolio approach is useful management tool for enforcing a discipline in the allocation of the company's limited resources to an optimal combination of business operations which will maximise long-term returns at a given level of risks.”

In order to find the correct methods for management of different suppliers', multiple tools have been created, often in matrix forms, such as the mentioned model by Boston Consulting Group. A very common example in the supply management literature is the matrix by Krajlic from 1983, which is developed for product purchasing (Ollsen & Elram, 1997). Krajlic (1983) himself states that the supply strategy of a company is dependant on two factors (and thus the axis of the matrix are): firstly the strategic importance of purchasing, and secondly, on the complexity of the supply market. Another author who has created a much-used matrix for portfolio purposes is Fiocca (in Ollsen & Elram, 1997). His framework for the matrix was customer account management (ibid). Deriving from these two models Ollsen & Elram (1997, p. 105) created a matrix to match the correct management practises for different types of suppliers (see picture 4). They divide the suppliers into four categories: *the non-criticals*, which mean that their strategic importance is low, and they are also easy to manage; *to the leverage*, which are also easy to manage but in addition have a high strategic importance; *to strategic*, which have a high importance, but are also difficult to manage; and lastly to *bottleneck suppliers*, which have a low strategic importance but are difficult to manage, meaning often wasted resources (ibid). The matrix should be used as a tool with the following steps: Firstly, to analyse the company's purchases, such as deciding which of them are strategic and which are not. Secondly, to analyse the supplier relationships, for instance understanding which relationships require more resources than others. And finally to develop action plans on the basis of the analysis and to create concrete procedures to enhance the supplier management (ibid).

Picture 4 Matrix model by Ollsen & Ellran, (1997)

Adapted from Ollsen & Elram, 1997, page 105



Lastly, an important aspect in the supplier portfolio models is that there are two schools of thoughts when it comes to the ability to manage them (Harland & Knight, 2001). The IMP group states how companies can only “cope” with the complex environment of supplier network, whereas others (such as Harland & Wensley, 1996 in Harland & Knight, 2001) believe that the portfolios are manageable. The view of the IMP group is evident especially in a statement by Gadde & Snehota (2000, p. 307) that a supply strategy is merely a “rationalization in hindsight.” Wagner & Johnson (2004, p. 717), on the other hand introduce a concept of *strategic supplier portfolio management* meaning “the management of an array of supplier relationships, each having various characteristics and each serving the firm in different ways.” Even though Wagner & Johnson (2004, p. 719) notice that the supplier portfolios usually evolve naturally to include a variety of firms and relationships, the strategic supplier portfolios, specifically, are “*deliberately structured*” according to the company’s standards in order to attain their strategic objectives. However, whether viewing the process more deliberately managed or only coping with the environment, the strategic portfolio approach provides the companies a holistic approach, as opposed to a dyadic relationship management, to view the supplier networks as a central tool for sustaining or attaining their competitive advantage

Although giving a straightforward overall picture of the relationship management, the portfolio models have also received some criticism for their simplistic strategies, and moreover, the practise of categorizing different relationships without seeing the possible interdependencies between the items (Olsen & Ellram, 1997). In addition, it has been criticised that the portfolio models provide different strategies, but no guidance on how to choose between them (ibid). Furthermore, not only the portfolio model, but the model of tiering suppliers has also received some critical counter arguments. Choi and Linton published 2011 an article in the Harvard Business Review, called “Don’t Let Your Supply Chain Control Your Business”. The main argument of the paper was that putting too much effort on first tier relationships diminishes company’s control over finances, sustainability and even product innovation, thus making it actually working against its original objective – risk management.

2.5. Supplier Perspective - Customer Portfolios

In a similar manner to supplier portfolios, also the supplier’s customer bases can be viewed as portfolios. The customer portfolios, such as supplier portfolios, are originally formed from natural differences in product offerings for different customers. This leads to different types of relationships within the customer base (Ford, 2002). As the portfolio theory states (in very simplistic and concrete terms) to *not to put all your eggs into one basket*, different kinds of relationships are also important for the survival of the supplier. Thus, the customer portfolio management is, or should be, part of the supplier’s strategy (Sanchez & Sanchez, 2005).

A great example of the importance of customer portfolio management is provided by Salonen & Gabrielsson (2012) who have studied the relationships between Finnish suppliers and Nokia in the peak of Nokia’s success (from the late 90s to the early 2000s). They found out that while the position of the Finnish suppliers changed as Nokia’s growth rates decreased, the suppliers’ dependency to Nokia remained the same. The authors note that “even though Nokia did not make formal guarantees related to the level of orders or the time length of cooperation, the suppliers were ready to make

customer specific investments and to rely heavily on the Nokia account” (ibid, p. 158). The poor customer portfolio management by the suppliers lead to financial problems in the end, when Nokia was forced to cut their orders from the Finnish suppliers. Generally speaking, companies, whether customers or suppliers, need to be able to dynamically search for new strategies, meaning: “effective ways to organize activities and deploy resources *and work with others*” (Ford, 2002, p. 231). Therefore, portfolio models can be viewed as strategic tools to develop these consistent market strategies, and guide in the allocations of efforts and investments (Ford, 2002; and Sanchez & Sanchez, 2005).

2.6. Management of Supplier Portfolios

The supplier portfolio management can be divided into two different aspects, to the transactional management and to the relational management, each being important parts of the entity of *portfolio management*. The transaction cost theory explains the organizational changes through an economic lens (Williamson, 1981). Its basic premise is the idea that the cost of business transactions should never exceed the risks of the environment (Grover & Malhotra, 2003). Thus the transaction cost theory explains the rationale of financial decisions in supply portfolio management, such as the criteria of selection, which is discussed in more detail in this section. On the other hand, relationships are important glue in the networks, and relationship management is therefore a vital part of portfolio management as well. Therefore, in addition to the transactional thinking, the portfolio management requires also interpersonal capabilities. This section starts with a discussion on the MNC’s transactional decisions on supplier portfolios. The relational management is presented in the second part of this section, in discussion of concepts such as social capital and power.

Transactional Management

With only limited amount of resources available, the prioritization of relationships is an important aspect of the supply network management. Because of this, and as noted before, the company should integrate only with suppliers, which are members of key business processes (Lambert et al., 1998). Related to this, Pardo et al. (2011, p. 854) present that the concept of *key supply management*, (a close relative of key account management), which refers to “a set of practices, put in place by certain companies, that allow certain suppliers (here called key suppliers) to receive a special, adapted treatment (i.e. different from the one usually used for other suppliers).” Hence, prioritization of relationships should be conducted in a strategic manner, and in order to correctly prioritise the relationships the benefits of inter-firm relationships should be measured accurately. Specifically regarding the benefits of supplier relationships, Gadde & Snehota (2000, p. 308) distinguish the “cost benefits” and the “revenue benefits” which accordingly mean the “savings in various cost operations that can be related to collaboration with suppliers” and “the economic consequences of supplier relationships that are related to the income side of the financial statement.” Sheth and Sharma (1997) contribute to the prioritisation of relationship conversation, by stating that only relationships that bring value to the company should be sustained, enforcing the tier-thinking further.

The supplier selection should also be conducted according to the principles listed above, since the prioritisation of the relationships is most effective, if done as early as possible (Pardo et al., 2011). The literature discusses about a concept called *strategic supplier selection*, which is nearly a synonym for the prioritisation of the relationships. Gadde & Snehota (2000, p. 307) state how “the impact of a specific supplier relationship depends on how it fits into the operations and the strategy of the buying company and how other supplier and customer relationships are affected.” Consequently, Gadde & Snehota are not the only authors talking about the importance of strategic supplier selection, as Spekman (1988, p. 79) whose article “Strategic Supplier Selection: Understanding Long-Term Buyer Relationships” stated that “part of the partnership-selection process is a determination of those strategic resources that would benefit from the advantages of

closer ties with a single supplier.” Spekman (ibid, pp. 79-81) describes the selection process to have multiple stages. Firstly he suggests an evaluation phase in order to establish threshold level for becoming a strategic supplier, after this a screening and analysis of the candidates would be made to estimate the partnership commitment. A tool to help this process is a set of questions such as “How early into the design stage is the supplier willing or able to participate?” “Is the supplier's senior management committed to the processes inherent in strategic partnerships?” “How much future planning is the supplier willing to share with us?”

Especially the order of the selection criteria has sparked multiple studies (e.g. Choi & Hartley, 1996, Verma & Pullman, 1998, Ho et al., 2010) Ho et al. (2010, p. 22) noted in their literature review study that generally the price or costs are not the most important criterion, but overall the quality factors play a more significant role. The authors explain the reasoning of this result being that “the traditional cost-based approach cannot guarantee that the selected supplier is global (sic) optimal.” Choi and Hartley (1996, p. 341) did an empirical study in the auto industry and their key findings included as well that the price factor has relatively low weight among the selection criterion; however, potentiality for cooperative and long-term relationship play more significant roles to all parties in the auto industry. The most important factor in the supplier selection, according to Choi and Hartley’s study, was a concept that the authors called “consistency” which included quality and delivery.

Thus, multiple authors and studies have concluded that *quality* and *distribution issues* are the most important factors in the supplier selection process. However, most of these studies have concentrated on *the perceived importance of the selection criteria* (criteria stated in the company policies) and not on the *companies’ actual actions* (Verma & Pullman, 1998). Surprisingly, Verma & Pullman’s empirical study on the actual used criterion for supplier selection proved that when choosing the suppliers in real life, managers put more weight, not on quality, but on cost and on-time-delivery. Thus, there is a clear gap between the perception and actions (ibid). Related to this, Blombäck & Axlesson (2007) have studied the importance of corporate branding in the supplier

selection process, and concluded how it has a great impact in the subcontractor market. The result was explained with four reasons; firstly, the subcontractors are very homogeneous; secondly, the buyers' have limited resources in researching the candidates; thirdly, the risk management; and finally, because the selection process are rarely fully formalized (ibid).

In addition to the selection criteria for an individual company, a firm may also set targets of special characteristics for the entire supply base (Wagner & Johnson, 2004). These target variables may include e.g. the number of the supplier, certain ownership factors, a preferred level e.g. environmentally certified suppliers, or the company may want to control the "regional dispersion" of its suppliers by setting criteria for this (ibid; p. 719). As discussed earlier concerning the size of the supply base, the recent trend seems to be to reduce the number of the supplier in order to reduce costs (ibid).

Relational Management

In addition to making the transactional decision concerning a supplier or the entire portfolio, the buyer companies must be able to manage the subtleties of individual supplier relationships as well. Ford (2002, p. 231) states how "strategic management of a portfolio of relationships must cope with varying types and rates of return on the company's investment in different relationships as well as with considerable uncertainty about how each relationship will develop." Thus, the importance of dyadic relationship management is an essential part of the supplier portfolio management (Atkin & Rinehart, 2006). However, since the purpose of this study is to draw a holistic picture of the supplier portfolios, this literature review will not go into too much detail in relationship management. The academic field is abundant of research related to dyadic relationship concepts such as intercultural communication issues (e.g. Kim) and knowledge sharing (e.g. Nonaka). Nevertheless the importance of the issue is highlighted with a discussion on the concepts of *social capital within networks* and *power asymmetries*.

The dynamics in a relationship can be conceptualised in different manners. Bouquet & Birkinshaw (2008) viewed the issue as divided into two aspects - to the weight factor and the voice factor. The original framework for this model was a headquarter – subsidiary relationship, though the concept works in other contexts as well. The *weight* factor represents the “structural position” of the subsidiary and in a supplier-buyer relationship this would mean for instance the size of the supplier (ibid, p. 577). The *voice* factor, on the other hand, symbolises the subsidiary’s own abilities to gain attention (ibid). In the context of supplier-buyer relationship this influence could be demonstrated for example as long traditions of a certain company to supply to a MNC. This model provides a clear framework for analysing the power relations in a relationship. However, since the weight-factor for SME suppliers is relatively stable, due to the naturally small size of the firms, a more detailed framework for evaluation in a supplier- buyer context is provided by the concept of *social capital*.

Social capital explores the subtleties of the voice factor. The concept refers to the social resources embedded in the network of relationships (Nahapiet & Ghoshal, 1998). Hence, it is closely linked to the network theory, by viewing the competing entities in the market as networks, instead of individual companies. Nahapiet & Ghoshal (ibid) state that either an individual or a larger social unit can possess social capital. The authors continue how social capital is an essential part of any relationships and the social structure of the relationships, in addition part of the nature of the social capital is that it is difficult to trade or to pass on to another person (ibid). Additionally, social capital allows achievements that wouldn’t be possible without it (ibid). A concrete example of this would be the personal networks of a SME owner, which can help a small company to gain access to a large buyer. Handfield & Nichols (1999) also stress the importance of the personal relationships and interpersonal skills in regards of the supply network. Sometimes personal dynamics can play a surprisingly large part in a negotiation process (Atkin & Rinehart, 2006), and especially for smaller companies, the personal networks play a more important role, than for large organizations (Shaw & Conway, 2000).

In a corporate context social capital includes dimensions such as *social interaction between companies, trustworthiness, and a shared vision* between company partners (such as a buyer and a supplier) (Tsai & Goshal, 1998). The positive correlation between this sort of assets and value creation in inter-firm relationship is tested in multiple studies (e.g. Tsai & Goshal, 1998; Nahapiet & Goshal, 1998). Additionally, social capital facilitates “the development of new forms of association and innovative organization” (Nahapiet & Goshal, 1998, p. 245). Thus some companies have integrated the increased collaboration into their processes through written policies. This type of “forced” social capital nurturing has especially positive impacts for SMEs (Cooke & Wills, 1999), who have a naturally lower position in the relationship, i.e. less weight. Even though social capital is linked to multiple positive effects in value creation, it is not “universally beneficial resource”, since for instance, in a supplier-buyer context, strong relationships can cause “collective blindness” e.g. in strategy development or innovation (Nahapiet & Goshal, 1998, p. 245).

In addition to social capital also the concept of power defines the relationships between suppliers and buyers. Axelsson (1992, p. 191) notes how “within inter-organisation networks, power is clearly a vital concern”. A regularly used definition of power by Emerson (1962) describes power “as the ability of an actor to influence another to act in the manner that they would not have otherwise” (in Hingley, 2005, p. 553). Depending on its source, power can influence both the *weight* and *the voice* –factors. For example, coercive power, meaning the ability to mediate punishments, can really only be exercised by an actor holding authority, thus having weight (Maloni & Benton, 2000). In contrast, a SME holding expertise power does not necessarily need a special position to exercise its abilities, and therefore can contribute to the voice-factor of supplier’s social position (Hingley, 2005). In addition, the different sources of power affect differently to the long-term relationship between the supplier and buyer, for example the use of coercive power has been proven to be less functional in the long run, than the use of expertise (e.g. in Maloni & Benton, 2000). Because there is a natural imbalance of weight in a SME supplier – MNC buyer relationship, another important concept is the *asymmetry of power*, meaning a situation where the power is not equally distributed

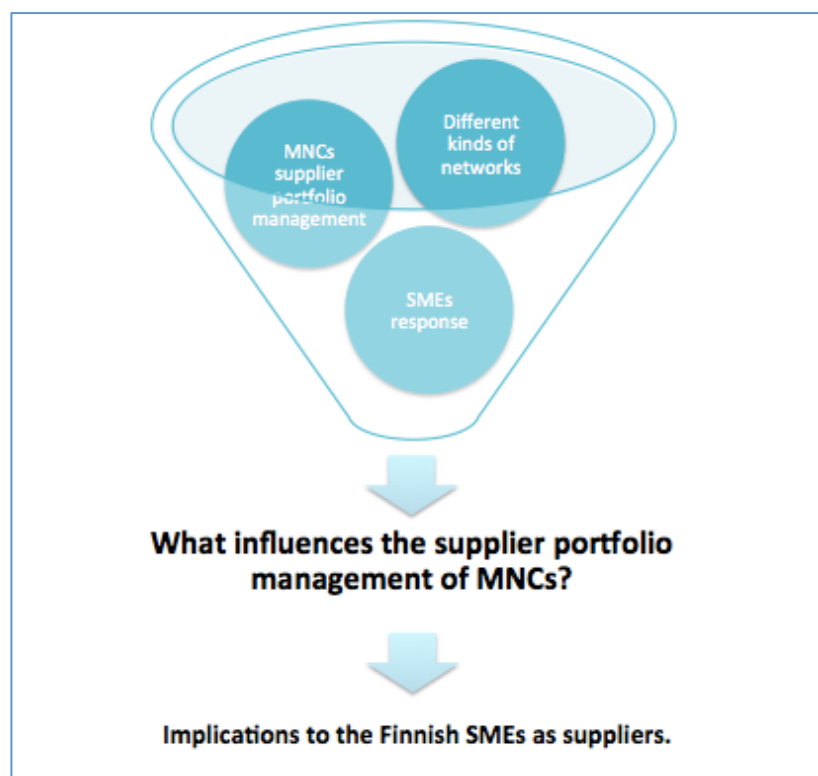
(Maloni & Benton, 2000). This may lead to a dependency relationship. Maloni & Benton (ibid) have noted how relationships with more balanced use of power are recorded to have better performances.

Thus, in any business relationship, in order to maximize performance, power must be managed. Cox (2001) notes that by understanding the existing power balances buyers and suppliers can manage relationships in the most appropriate manner. Again, the example from Salonen & Gabrielsson's study (2012) on Nokia's suppliers is drawn to demonstrate this situation. The authors concluded in their study how power asymmetries in close relationships can lead to over-dependency on the MNC, and especially in a situation where the supplier is tied to a single customer, power could take control of the relationship (ibid). Although, it should also be pointed out that "the presence of power imbalance does not mean that it is always explicitly exercised in supply chain relationships" (Hingley, 2005, p. 553). Also Salonen & Gabrielsson (2012, p. 148) noticed, "how the consequences of relationship are situation dependent" and thus it is crucial to recognise the circumstances where power can affect positively and where negatively to the relationship.

2.7. Theoretical Frame of Reference

The simplified theoretical frame of reference for this thesis is illustrated below in Picture 5. The core of the study is the first part of the research question of this study *“What influences the supplier portfolio management of MNCs in the machinery industry in Finland?”* The answer to this stems from three sources, which are derived from the research objectives of this study: The different kinds of networks that exist in the field of Finnish machinery industry; The Management practises of MNCs towards supplier portfolios; and The SMEs responses to these. The final and fourth objective of this study was to draw implications of the current situation to the Finnish SMEs in the machinery industry, and thus it answers the second part of the main research question (*what are its implications to the Finnish SMEs working as their suppliers*).

Picture 5 Theoretical Framework of the Study



If described in a more detailed manner, the bubbles in the funnel of the theoretical framework include more complex and specific elements. The listing of these is illustrated in a Table 2 below. Firstly, as this literature review was initiated with a discussion on the strategic importance of the supplier networks, the different structures of the networks play an important role in the competitiveness of the companies, not just for the MNC, but also for the SME supplier. This discussion was supported by especially the authors of the IMP group, such as Turnbull et al, (1996) and Håkansson & Snehota, 2006). The second bubble describes one of the key aspects in this study – the actual portfolio management of the MNCs. As presented in the literature review by e.g. Gadde & Snehota (2000), this issue can be divided roughly into transactional and relational management of the suppliers. The transactional management includes decision regarding e.g. the size and scope of the supplier portfolio, thus the process of becoming a supplier, is often a very transactional process (described in the literature review e.g. by Spekman, 1988). The relational management, on the other hand, includes issues such as power management (e.g. by Cox, 2001), and importance in personal relationships (social capital). The last bubble in the funnel represents the SME perspective in this study. As discussed in the literature review by Ford, (2002), the alignment of their own strategy starts with understanding their position in the portfolio. In addition the SMEs can respond to the supplier portfolio management by having an own customer portfolio, which diversifies their own risks. The SMEs' response includes also relational management, since as discussed in the literature review, the personal relationships are often the most important capital for an entrepreneur (Shaw & Conway, 2000).

Table 3 Detailed Theoretical Framework

What kind of networks there exists?	How the MNCs manage their portfolios?	The SMEs response to the management
<ul style="list-style-type: none"> • The entire networks part of the competitive advantage of the MNC • The different structures (e.g. tiers) • Position of the SME affecting to its competitiveness 	<ul style="list-style-type: none"> • Transactional Management <ul style="list-style-type: none"> • Supplier selection • Size and Scope • Relational management <ul style="list-style-type: none"> • Power management • Importance of personal relationships 	<ul style="list-style-type: none"> • Understanding one's own position in the portfolios <ul style="list-style-type: none"> → Alignment of own strategy → Own customer portfolios • Relationship management <ul style="list-style-type: none"> • Management of power asymmetries • Creation of social capital

From these elements this study tries to create a holistic picture on the supplier portfolio management in the Finnish machinery industry in 2013. The elements described in the previous chapter will be the core of the analysis of the empirical results, and at this stage of the study formed the basis for the interview questions. Lastly these elements will provide the foundations, where the implications to the SMEs' future can be drawn.

3. METHODOLOGY

This section of the thesis clarifies the research methods chosen for the study. It breaks down the decisions taken for qualitative case study and explains the entire research process. In addition it evaluates the validity and generalizability of the results and finally specifies the context where the study took place.

3.1. Research Method and Process

The study was conducted as a qualitative research, because of two reasons, firstly, the object of the study is a broad problem and the research questions set were looking for answers more to the reasons and meaning of the issue, rather than for measurable objects such as frequency. Thus the nature of the study object would have been extremely difficult to study in only numerical terms. Secondly, the choice of only using qualitative data was dependant on availability of the data, since there was little quantitative information available on the supplier portfolios in the Finnish machinery industry, the qualitative interviews were a natural choice for the main source of data. In addition, the qualitative research method, which according to Marchen-Piekkari & Welch examines “organisations and societies ‘in their own terms’ ... [and] takes a more holistic approach to the research object and studies a phenomenon in its context (2004; 8), was considered the most suitable for the objectives and purposes of this study.

In order to comprehend and get a accurate picture of the MNC buyer and SME supplier business field in 21st century Finland, specifically in the context of heavy industry, a very broad objective to the study was needed. According to Tesch’s (in Eriksson & Kovalainen, 2008, page 4) categorisation of qualitative research approaches this objective implies to *phenomenology* research, concerning distinctively research on meaning. Often these types of studies are conducted in a specific context or as case studies. Additionally, since all the critical data retrieved was from personal interviews, the method of analysing the information can be stated to be *hermeneutic* (ibid).

The thesis process started from the research of relevant literature and theories for the study. The research plan including the research questions and objectives were written in the early stages of the process; however, these were revised several times. Writing the literature review in the beginning of the project provided insight to the subject and allowed the researcher time to familiarise herself to the issues. The initial framework of reference was drawn already before starting the empirical part of the research. After the empirical research, both the literature review and the research questions were revised to match focussed scope of the study, as well as to response to the emerged issues from the interviews, for example some irrelevant theories were removed from the literature review. The biggest addition to the theory was the emergence of the MNCs internationalisation theories as one of the major issues affecting the supplier portfolio management. This section was written as a separate addition to the literature review, and can now be found in the beginning of the findings. After the interviews were conducted, the findings and the analysis & discussion were written.

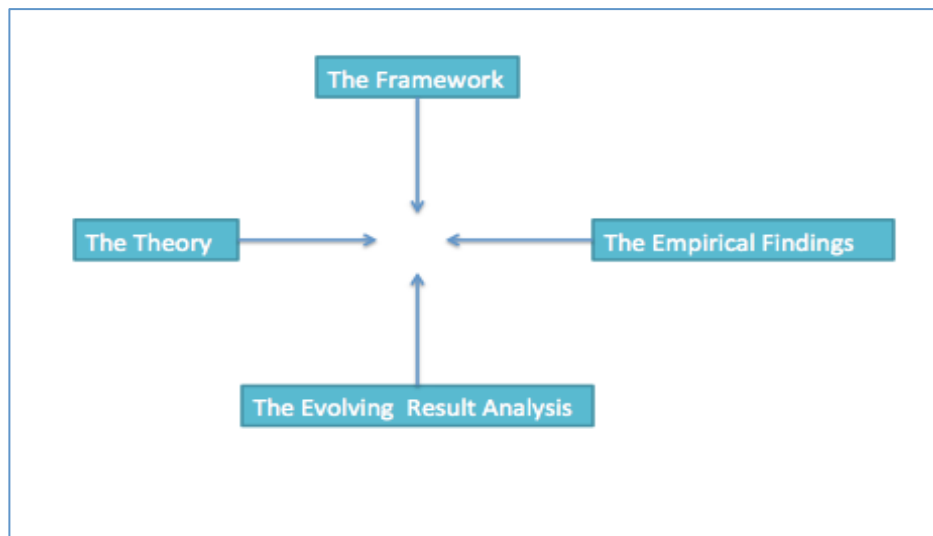
As Dubois & Gadde remained that “the main objective of any research is to confront theory with the empirical world” (2002; 555), the next step in this research process was to combine the theory and the empirics. The model of theorizing that has been used in this research is called *abduction*, some times also referred to as *systematic combining* (Dubois & Gadde, 2002; Kovács & Spens, 2005). Kovács & Spens, (2005, p. 138) note in their paper on abductive research in logistics how “abductive reasoning emphasizes the search for suitable theories to an empirical observation”. Dubois and Gadde (2002, p. 554) on the other hand state that “systematic combining is a process where theoretical framework, empirical fieldwork, and case analysis evolve simultaneously”. Although this research does not use the case-study method per se, the term case analysis in this situation can be replaced with concepts such as *study* or *result analysis*. Thus, abduction is a gradually evolving process of studying empirics and the theory, and finally concluding by answering to the research questions in an appropriate manner (Richardson & Kramer, 2006).

Kovács & Spens (2005) note, how the need for abductive research has been initiated by the fact that the real scientific advances are never purely inductive or deductive in their nature, but something in between. The complexity of the phenomena of this research supports this view of not using inductive or deductive methods per se. In addition, as stated by Dubois and Gadde (2002) that abductive research “builds more on refinement of existing theories than on inventing new ones” (2002, p. 559), thus it is also aligned with the objectives of a graduate thesis. In line with the quote of Gadde & Dubois (ibid) and also due to the nature of a qualitative and phenomenology research, the aim of this study was not so much on creating new theories, but firstly to understand the phenomenon of supply portfolio management and its implications to the suppliers, and then to compare these results to the existing literature on matter. In addition, the second purpose was to gather the *tactic* knowledge on the matter from three different groups interviewed for this study – the MNCs, the SME suppliers, and the consultants working around these issues.

The process of abductive research can be tedious, as the method is not as straight forward, and often the data is collected simultaneously with the theory development (Kovács & Spens, 2005). Gadde & Dubois (2002) acknowledge also this matter, by noting the importance of analytical framework in the abductive research process. By revising the analytical framework after every phase of the study, the author is compelled to rethink the focus of the study as well as the structure of the work (ibid). Also Richardson & Kramer (2006) emphasise the *central role* of the analytical framework in the process. Personally, I found the analytical framework one of the most powerful tools to construct the holistic picture, since it was an easy to conceptualise the results. Dubois & Gadde, (2002, p. 555) have suggested a model for the theory building in abductive research, which I revised for the purposes of this study. The Picture 6 below illustrates the process of theory building for this thesis. “The Theory” refers to the literature review of the study, and to the models presented there. The “Empirical Findings ” refer to the results of the interviews. “The Evolving Result Analysis”, on the other hand, is the analysis of the interview results. This process was one of the slowest as it took time to figure out the most important issues from the results. The last arrow on the top of the

picture is then “The Framework”. As mentioned, for me this was a critical tool in understanding the larger picture of the subject, and how different elements from the literature and the empiria were linked together to form the holistic picture. All in all, the final results of this study came out as a combination of these four factors.

Picture 6 Abductive Theory Building, adapted from Dubois & Gadde, (2002, p 555).



3.2. Research Design

3.2.1. Data Collection

The empirical data for this research was collected in two different ways. Most of the information was retrieved through personal interviews as primary data, but additionally secondary sources such as company websites and news archives were used to offer an additional perspective to the study. The interviews, however, were chosen as the main source of information, since they allowed the researcher to gain the most up-to-date knowledge on the subject. Additionally, since the subject was bound to the context of Finnish heavy industry the access to (and amount of) secondary sources or written documents were limited.

The primary data was retrieved from three different pools: Firstly from the Finpro consultants (*Key Industry Informants*); secondly from the MNC interviews; and thirdly

from the SME interviews. All the sources of the information were analysed separately, and the possible linkage between the different parties was not revealed to the researcher. The Key Industry Informant position of the Finpro consultants meant that the interviewees all had experience from the industry, and many of them had knowledge of both sides of the business. This pool of information therefore provided the most *objective view*. The consultant interviews were conducted first in order to give a good basis for the rest of the interviews, and their most important objective was to provide background information to the study. The key industry informant group could be further divided into two; to the consultants living and working in Finland, and consultants in the export-centres around the world. The interview questions for the consultants abroad concerned more on the position of Finnish SMEs when trying to become global suppliers, whereas the questions for the consultants working in Finland concerned both the view point of portfolio management of MNCs as well as customer portfolios of SME.

Even though the consultant interviews are stated here to provide an objective view, it is important to notice that this should not be taken without some source criticism. The consultants work mainly for assignments of SMEs, which requires a close contact with them. This means a less objective view on the SMEs performance, than on the MNCs. There is a short discussion on this matter in the findings –section, where the consultant interview results proved to be somewhat negative on the SMEs' performance.

The main findings of this study are provided by the MNC and SME interviews. Their goal was to answer the research objectives of the study. The MNC pool and the SME pool provided clearly more *idiosyncratic views* on the portfolio management issues, than the key industry interviews. The MNC interviews usually started with a brief outlook on the sourcing organisation of the company. They then proceeded to the current situation of the company's supplier portfolios and to the reasons behind them. Lastly, there was a discussion on the on-going or future trends in the business, and how the interviewees saw this affecting the industry. The MNC interviewees all worked in the sourcing departments of the companies, some in global teams and some in national

teams. The interviewees were titled either sourcing managers or directors, but for convenience reason sometimes in this thesis the MNC interviewed are simply referred to as *supply managers*. The SME interviews followed a very similar line than the MNC interviews, first starting with more general issues and then proceeding to more company-specific topics. In most of the cases, the SME interviews were less constructed than the MNC interviews. This was perhaps due to the more personal stories of the SME interviewees.

A total of 21 interviews were conducted for this study. The Table 3 below presents the key figures concerning the interviews. The rate of participation of the contacted interviewees was high, as only 5 people either did not reply or declined the interviewing possibility. In one of the MNCs, two sourcing directors were interviewed, with partly different focus. Otherwise the company interviews were conducted by interviewing the responsible manager.

Table 4 Rates of Conducted Interviews

Interviews		
1) Key industry Informants	2) MNCs	3) SMEs
Finpro consultants in Finland	TOTAL = 4 (companies)	TOTAL = 6
TOTAL = 6	PLANNED = 5	PLANNED 6
PLANNED = 8	RATE = 80%	RATE = 100%
RATE = 75%	AMOUNT OF INTERVIEWS = 5	FACE-TOFACE = 5/6
FACE-TO-FACE = 6/6	FACE-TO-FACE = 5/5	
Finpro consultants abroad		
TOTAL = 4		
PLANNED = 6		
RATE = 66%		
TOTAL AMOUNT OF INTERVIEWS = 21		

The interviews conducted face-to face were recorded and partly transcribed. One interviewee (from Finpro) wanted to answer by email, and for distance reasons all of the interviewees with the Finpro consultants abroad, as well as one of the SME interviews, were conducted by phone. The purpose was to collect most of the data face-to-face, and this goal was reasonably well reached. All of the interviews were conducted as semi-structured, because as Patton (2001, p. 278) has stated “the purpose of interviewing is to

find out what is in and on someone's mind” the interviewing technique had to be suited for the purpose of the study as well the situation and people in question. Therefore the semi-structured interview was thought to be the most suitable one. Semi-structured interviewing refers to a technique, where the themes of questions are outlined, but the sequence of them or the emphasis might change from interview to interview (Eriksson & Kovalainen, 2008). There were four different sets of questions for all the different groups of interviewees. All the interview questions can be found from the Appendix. The reasons for using semi-structured questions were especially justified for the company interviews, since this allowed the researcher to modify the questions for the interviewee’s own company context and to let the interviewee to tell their “stories” from the standpoint of their own organizational culture. However, in order to maintain the possibility for comparison, the basic aspects of the interviews remained the same. In the findings section, the key results of the study, meaning the MNC as well as SME interviewees are also presented in summarising tables.

Since the aim of the interviews was both to gain basic information on the development of both supplier and customer portfolios, but also to understand the meanings and reasons for the progress, the position of the interviewer can be stated to be both a *positivist* as well as a *constructionist*. Hence, the questions were set up for answering both “what” as well as “how”, as a positivist interviewee is more focused on facts, and a constructionist on reasons and meanings (Eriksson & Kovalainen, 2008). In addition, the possibility to interview people in three different perspectives, allowed the results be even more completed, and to offer a larger picture.

3.2.2. Analysis and Interpretation

Attride-Stirling (2001) points out that especially in qualitative research there is a growing need for opening up the analytical process in order to prove the validity of the study. In addition for increasing the transparency of the analytical process of this thesis, the vast amount of interview data retrieved for this research also required some analytical tools in order to gain most out of the information. As mentioned already, the

analytical framework (the framework of reference) proved to be an excellent tool in structuring the most important themes of the findings. Furthermore, a *research diary* was used to note the progress of the research as well as to collect thoughts down. In addition to these instruments, also *thematic networking* was used as a tool to analyse the vast amounts of interview data retrieved. The term refers to a model presented by Attride-Stirling (2001), and it is essentially just mind map summarizing the main themes of data. In other words, it is a tool for organising all the information. In thematic networking, the emerging themes of the data are divided into three different levels: to the global theme, to the organising themes, and to the basic themes (ibid). The analysing process started from developing the specific basic themes, and then moved on to the larger scale issues and to the construction of the organising and global themes. Below Picture 7 presents a snapshot of one of the thematic networks used to analyse the Finpro interview results.

Picture 7 Example of Thematic Networking



The green bubbles are the *basic themes*, which were written down first. After this, the common factor among the basic themes was searched and the yellow *organising themes* were thus created. These became the two main titles of the Finpro interview findings. Lastly, the final common factor between the two organising themes the orange *global*

theme was created as the heading of the interview results, and this way compiling the results.

3.3. Validity and Reliability of the Study

Before presenting the context of the study, a discussion on the validity as well as reliability of the study are in place. As stated by Schwandt (2001) “In principle, to be able to say that research findings are valid is to say that they are true and certain (in Eriksson & Kovalainen, 2008). The question of the validity of the research thus comes from the trustworthiness of the methods used in this study. As a method, the interviews are in their nature subjective, since the idea of them has been to find out the different perspectives. Therefore, the validity of this thesis does not come from the interviews per se, but from “triangulation of the data”. This term refers to a validity check of the data, by using multiple empirical sources to “cross-check information” (Eriksson & Kovalainen, 2008, p. 293). In the case of this thesis, since three different perspectives on the matter on supplier portfolio management were interviewed, the validity of the results is well proven. Lincoln and Guba (1985) have also introduced four concepts that prove the validity of qualitative research. These are credibility, transferability, dependability and conformability of the methods and results. The functionality of these terms in this study is somewhat difficult to be evaluated by the researcher herself, but will be tested later on by the future readers. However, what can be stated is that the purpose of this study has been to fulfill these objectives of a trustworthy study, which is proven by e.g. the high number of interviews conducted for this thesis.

The reliability of the study is often referred to as the ability to replicate the study in a new context or by new authors (Golafshani, 2003). Therefore the reliability of this study is guaranteed by for example providing the exact interview questions in the appendixes. This, as well as the tables of summarized main findings, will provide a tool for future researchers to test the reliability of the study. In addition, in this section it should be mentioned that although the interviews and findings are presented as anonymous, the aim for this has been to guarantee the access to the data as well its trustworthiness and reliability.

In addition to being a valid and reliable study, this thesis also aims for generalizability of the results. Eriksson & Kovalainen (2008) introduce a concept of analytic generalization, in which the empirical results are compared to a theory developed previously. As this thesis was conducted in a very specific context of Finnish machinery industry, most of the results are generalizable merely to this specific context. However, since some of the results concern especially multinational companies, the generalizability of these could be widened to a more global scene of machinery industry. For example, as will be introduced in the findings of this study that although the theories presented in the literature review state that companies should build their supplier portfolios strategically, all of the MNC interviewees noted that their portfolios are actually result of a historical process.

3.4. Context of the Study

Finally this section proceeds to describe the context of this study, before the introduction of the empirical results of the interviews. As mentioned above, the most characteristic to this study is the context of the study in the machinery industry. In addition to the current state of the field, also the history plays an important function in the development of the current supplier portfolios. The growth of Finnish machinery industry since the 1860s has been one of the fastest in Europe in total (Hjerppe, 1988). Although very dependant on the global development, such as the world wars and the oil crisis in the 1970s; since the late 70s, Finland benefitted greatly from the steady relations to the Soviet Union and the share of manufacturing industry increased more than in an average European country (Hjerppe, 1988). This created good conditions for larger companies as well as their suppliers to develop in.

Perhaps due to the geographical location in the periphery of Europe, the Finnish heavy and mechanical industries were also able to develop on their own terms. It is surprising how little change in this scene has taken place in the last 150 years. E.g. Fiskars, a Finnish a metal and consumer brands company, famous for its orange scissors, was originally established already in 17th century (Fiskars, 2013) and Wärtsilä, a power

source manufacturer in the 1830s (Wärtsilä, 2013). Today, both of these companies operate globally with hundreds of millions of turnovers per year. Only in the 1980s and 1990s the big merger boom reached Finland, and old companies such as Enso Oyj, a paper and pulp manufacturer, merged with a Swedish Stora to form Stora Enso; and Kymmene Oy, from the forest industry was merged with other players in the market to form UPM Kymmene, one of the biggest paper companies in the world (Stora Enso, 2013 and UPM Kymmene, 2013). As the foreign direct investment to the Finnish heavy and manufacturing industry was originally so low (Hjerppe, 1988), the foreign competitors did not threaten the market share of the old players, and the status quo in Finland for years. Additionally, the Finnish companies were able to build their own “ecosystems” to Finland and this way employ local smaller companies as their suppliers – an especially interesting point regarding this study.

However, the current situation has been changed dramatically since the golden years by the globalization in the 1990 and in the first decade of the new millennia. During 2001-2006 the average yearly growth rate of the industrial production dropped to less than 3 %, as it previously had always been closer to 6 % (Statistics Finland, 2013). The international economy has always had a heavy impact on Finnish manufacturing industry, since most of the products have been exported, due to small national demand (ibid). This partly explains the drastic drop in the growth rates. According to an editorial in Kauppalehti 28th December, 2012, more than 60 000 jobs have been lost in Finland in the manufacturing sector since 1990 until 2010 (Ahosniemi, 2012). At the moment, the Federation of Finnish Technology Industries (2012) estimates that the turnover of Finnish mechanical engineering is 24,4 billion euros and it employs around 125 000 people. Therefore the environment where this study took place is literally in the mode of change. As can be seen in the coming section, this has had, and will have, a profound influence also to the supplier portfolio management of the MNCs.

4. FINDINGS

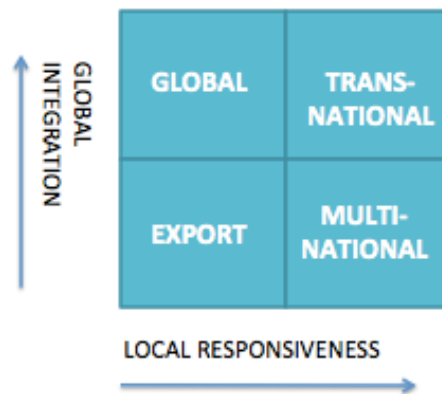
As was established in the context part of the methodology of this research, it has become obvious that the machinery industry, as all manufacturing industries in Finland, are in a transition stage due to tightening global competition and better access to less expensive labour abroad. During the interviews it became evident that this factor, as well as globalisation in general, had a great impact on MNCs strategies, and this again influenced to the supplier portfolio management. As part of the nature of abductive research to go back and forth between the theory and empiria, at this stage of the research more theory on global strategies of MNCs was required. Thus, the next section will provide a brief insight to the theory on internationalisation of MNCs. After this the actual data and results of the interviews are presented.

4.1. Adapted Literature Review - International Strategies of MNCs

There is an abundance of literature on the internationalisation strategies of MNCs, this matter being one of the corner stones of International Business research. One of the most used frameworks to illustrate the international strategies used by multinational companies is the integration- responsiveness matrix. Introduced by Prahalad & Doz (1987) and Bartlett & Ghoshal (1989) the four-field table illustrates the two main challenges faced by MNCs: The vertical axis, (on Picture 8 named the “global integration”) measures the need for cost reductions and global effectiveness (Peng, 2006). Thus, a fully globally integrated strategy would mean that operations are located around the world, depending on the most economical or effective solution. A classical and simplified example would be to take all the production to China, and market a single product for the entire market. The horizontal axis (in Picture 8 named the “local responsiveness”) on the other hand measures the requirements of local adaptation when acting in the global scene (Peng, 2006). The more responsive the company’s strategy is, the more it is adaptive to its market. In consumer business, the classical example of local responsiveness is to alter the product according to local customer needs, e.g. to sell different kinds of hamburgers in different markets instead of just one and the same.

Although most of the literature writes about the framework in the context of consumer marketing, the matrix illustrates the conflict of these two forces also in the business-to-business context and supplier management. For instance, Peng (2006, p. 406) states how the pressure for local responsiveness is reflected in all three factors, which are “1. Consumer preferences, 2. Distribution channels, and 3. Host country demands”. In addition, e.g. the outsourcing of call centres (and thus outsourcing a function to a supplier) is a classic example of global integration and cutting costs worldwide (ibid). High global integration in supply chain management would in concrete terms mean the least expensive and most reachable location of suppliers, regardless of local advantages. High local responsiveness on supply chain management on the other would mean e.g. more emphasis on local networks, which are more flexible and perhaps meet the local requirement better.

Picture 8 The I/R framework, adapted from Prahalad & Doz, (1987); and Bartlett & Ghoshal, (1989)



Picture 8 illustrates the I/R framework and the four different modes of internationalisation strategies, which are 1. *Export* 2. *Multinational* 3. *Global* and 4. *Transnational*. The exporting, or the “home-replication” (Peng, 2006) strategy is situated in the lowest left corner, having the least of local responsiveness and global integration, and thus it merely replicates the competencies of its home country (ibid). The multinational strategy also does not emphasise global co-operation or integration,

but is more sensitive to local responsiveness. According to Peng (2006, p. 408) it “focuses on a number of foreign countries/regions, each of which is regarded as a stand-alone “domestic” market worthy of significant attention and adaptation.” The two strategies left are reactive towards the global cost competition and thus integrate their operations for global efficiency. The “global strategy is the opposite of multi-domestic strategy (ibid, p. 409) seeing the world as one big market and looking for resources where they are the least expensive. The transnational strategy on the other hand is often mentioned as the *ideal solution* for MNCs to cope with the two forces (e.g. in Devinney et al, 2000). (Ideal – but perhaps not reachable – since it is very difficult to attain the maximum of the both ends.) In the 21st century, it can be generalised that most of the companies acting globally are already aware of the global economy in a level, which makes them to have either the *global* or the *transnational* strategy.

Especially course book literature extends this strategy framework to a larger concept, and notes that creating a strategy itself is not enough, but the entire company must be able to adapt to it. After a research of Barteltt & Beamish’s “Transnational Management” (2011) and Peng’s “Global Strategy” (2006) a conclusion can be made that in addition to developing the overall strategy for internationalisation or globalisation, the course books suggest that companies must also adapt at least their:

1. Form of Organisation
2. Leadership
3. Subsidiaries’ competitiveness
4. Networks of alliances

Meaning that the form of organisation must match the global strategy, e.g. in choosing a matrix organisation or not; the leadership abilities of the company’s managers and directors must meet the requirements of the new global/international operations; the subsidiaries must have a specific role in the strategy; and finally that the company must be able to use its networks to enhance its strategy further.

4.2. Data and Results

After the addition to the literature review, it is finally time to move on presenting the data, thus the results from the interviews. As one of the contributions of this study is to present three different accounts on the supplier portfolio management, this section is also divided into three separate parts. As discussed already, the key industry informants are the first results to be presented in order to provide background for the main results of the study – the interviews with the MNCs and SMEs (presented in the respective order.)

4.2.1. Key Industry Informants

The interviews with the Finpro consultants were conducted first in order to get a broad picture of the industry and some first-hand information regarding the current situation of supplier portfolio management. Thus these interviewees can be described as *key industry informants*, as discussed in more detail in the Methodology section. The results of these interviews can broadly be divided into two parts. Firstly, as discussed in the previous section and in the context of this study, it became very evident during the discussions that *the MNCs' strategies* and especially the global business environment have a great impact on the supplier portfolio management, as being more globally integrated or locally responsive affects e.g. where to look for new suppliers. This issue will be further discussed in the light of examples from the interviewees. The second part of these findings is really a consequence of the first part, since it discusses *the unpreparedness of the SMEs* to face the development of the MNCs strategies in the global economy. Thus the second section examines the opinions of the interviewed Finpro consultants on the needs of progress of the SMEs in Finland.

The new global strategy of the MNCs

The discussed strategy changes and their impacts on supply portfolio management were very apparent in the Finpro-consultant interviews. Especially substantial global integration causes problems to small suppliers. The consultants see the global companies' portfolio management itself almost a tool against the smallest suppliers, as the companies divide the SMEs into different categories according to their value as well

as their performance. Naturally, this set-up makes it less likely for a small company to gain a good position in the network than it does for larger suppliers. In addition the consultants noted how today the trend seems to be to cut the number of suppliers according a tier model, which was also presented in the literature. As companies want to buy bigger entities, small-part suppliers are pushed to the second or third tier. Therefore, as the MNCs try to compete globally and become more efficient (i.e. execute *global-strategy*), the effects of these strategies become polarized especially to the SME suppliers that cannot respond to the changes. This was especially visible in one of the interviewee's example on Nokia, which used a lot of Finnish suppliers in its early success years. However, as the competition toughened the smaller local companies were the first to go from the supplier portfolio. As another consultant stated "Not everyone needs to become a global supplier, but in the long run they are the ones that fit to the strategies of the MNCs the best."

The discussion on SMEs' poor abilities for responding to the structural change was also noted by a study conducted by Deloitte in fall 2012. The results were published in Kauppalehti 6th November 2012, (Jouslehto, 2012). The study focussed on the development of the SMEs in Finland as the decision-making of the MNCs is moving to where the market is – in Brazil and in China. It noted how Finnish SMEs are not prepared enough to meet this change, and even small changes in the organisation towards a more global structure might change the position of the supplier. The same issue was also noted by one of the interviewed Finpro consultant who told a story of a Finnish company whose sourcing director was changed to a non-Finn. The change of manager's nationality brought also drastic changes to the company's supply strategy, which, in much to the dismay of the local Finnish suppliers, meant more global competition.

In addition to the strive towards global efficiency, also the conquest for new areas and requirements for global coverage of MNCs has influenced the Finnish suppliers. In the I/R matrix, this would mean heavier requirements on more local responsiveness. For instance, the consultant from Brazil told firstly how the Finnish maritime cluster is an

important strategic partner to the Brazilian counterpart; however, the success in the area requires adaptation as the Brazilian local content acts require the companies operating there to manufacture a certain amount (usually 60%) of production in the country. This means that more local suppliers must be used, and in turn might lead to a reduction of Finnish suppliers in the portfolio. Although in the same time, the situation creates possibilities for manufacturing in Brazil, and opening for new facilities even for the Finnish SMEs. In addition, the consultant from China mentioned how Finnish MNCs might not even want the Finnish suppliers to export to China, since the local production is often better and less expensive.

The changes towards more global strategies affect especially the companies, which have least experience in the global scene and thus are least prepared. The ability to respond to the new global needs naturally requires resources, which for SMEs are scarce and thus need prioritisation. The lack of resources, and therefore the unpreparedness of the SMEs to face the consequences of the new global economy was a dominant theme in most of the discussions with the Finpro consultants, and thus the next section will open up the reasons for this theme.

The unpreparedness of the SMEs

The SMEs discussed in this study have, according to the definition of the EU, a turnover between ten to fifty million euros per year. All the companies have very different histories and strategies and thus their performances vary too. Later in findings, we will analyse the performance of the SMEs, according to the interviews conducted with them. This section, however, focuses on the opinions and feelings of the Finpro consultants working in this field. According to them, the small resources of the companies are not targeted correctly, which results in poor preparedness to face the new challenges, and most importantly to change. Although, many companies have managed to do well in the global competition, it is obvious that the failures are the ones that stay in the mind of the consultants, and thus the problems in the SME development that were discussed in all of the interviews can be listed as follows:

- a) Lack of marketing and sales efforts and knowledge
- b) Lack of understanding one's own position in the supply network
- c) Lack of own customer portfolio management
- d) Lack of expertise

a) Lack of marketing efforts and knowledge

The theme of lacking marketing knowledge and investments in marketing was mentioned in all of the interviews with the key industry informants. Especially the consultants abroad mentioned that often Finnish SMEs try to internationalise with minimal marketing budgets. Also one interviewee stated how the entire culture in the industry does not support investments in marketing, as for instance, just the name of the government funding - "the R&D -fund" – suggests. Several interviewees thought that this lack of marketing and sales knowledge was due to the old situation and habits in the industry where most of the suppliers of Finnish based MNCs came from Finland. Additionally, the poor marketing experience becomes emphasised in the foreign markets, as selling is very often tied to cultural peculiarities. For example, the consultant from Italy noted that without proper connections in Italy it is extremely difficult to even get the telephone number of the buyer. The answers on the questions whether Finnish suppliers are favoured by the Finnish MNCs divided the opinions of the interviewees, but generally the attitude was that it is not anything the companies should depend on, and the deals are broke with purely sales and negotiations skills. Additionally, technology based selling, also named as "the selling with excel" was mentioned as one of the major problems in the selling habits of the SMEs. New innovations should not be sold as half done, but as ready-made service packages that meet the needs of the MNCs.

b) Lack of understanding one's own position in the network

The second problem that aroused from the interviews was the lack of understanding of one's own position in the supply network. This was illustrated by the consultants e.g. as too high dependence of one supplier, which, in the end, might not have considered the supplier relationship important at all. However, a question was also raised whether the MNCs provide any information on their SME supplier's positions, as it is only the large

suppliers that are able to get special attention such as invitations to supplier days. Open communication is thus needed from both parties. The poor understanding of one's position in the network is also related to the marketing and selling, since without proper knowledge of the situation correct marketing resources cannot be matched with relationships.

c) Lack of customer portfolio management

Third relevant factor contributing to the unpreparedness of the SMEs is their lack of own customer portfolio management. As majority of the consultants noted the customer portfolio management is almost none-existent in many SMEs, although the low available resources make this understandable. However, both the lack of own customer portfolio management, as well as lack of understanding one's own position in the network are related to the modest understanding of MNCs' strategies and planning of one's own strategy. This kind of living from contract to contract makes the suppliers very vulnerable to changes. In addition to poor overall understanding in their customer portfolios, the consultants also noted the bad customer relationship abilities of some Finnish SMEs, as many smaller companies are not used to everyday communications with the customers. The relational management is especially crucial in building trust. As one of the consultants mentioned "The companies do not have any goals when it comes to creation of relationships, the only goals are in sales, although it is exactly within the relationships that the trust is measured." In addition, also the lack of depth in the contacts was mentioned as problem concerning the SME's customer portfolios. According to the consultants companies often think that having one contact person in the firm is enough to establish a relationship. However, more deeper and wider (i.e. larger number of contacts) network of relationship is usually needed to secure the position in the long run.

d) Lack of expertise

Lastly, the lack of expertise is related to SMEs' strong entrepreneur-driven strategies. The consultants noted that even though the companies often exist only because of the personal efforts of the owners, the entrepreneurs cannot be experts in everything. As

discussed above, the loose strategies and poor visions are examples of this, but also the lack of marketing efforts can be caused e.g. by a very technical owner. The problems can arise also in language issues and in cultural understanding when starting to internationalise. A combination of small resources and a strong leader can result in a situation where outside help is not wanted, and thus the development of the company is left on one man's shoulders. As one of the consultants stated that "the difference between a successful and unsuccessful SME often lie in the business abilities of the manager, (hence usually also the owner), since successful managers and leaders understand the strategic game of the business and can adapt to that." Especially the problems with cultural awareness are tackled easily with shifts in generations. However, in order to gain more strategic knowledge, the only solution would be to hire outside help, such as new managers with specialities in international sales. Understandably, this is easier said than done, since the restraints are set not only by the company resources but also in finding the new staff to work for a SME.

Conclusions

A great example of lack of SMEs' development abilities and strategic understanding is the discussion on the concept of Finnish quality that I had with few of the consultants. Two of the interviewed consultants abroad noted how "Finnish quality" seems to be a sacred concept in Finland, although little is done in order to enhance it, and at this very moment for instance multiple Chinese suppliers are able to produce better quality than the Finns. At the same time, the consultants working in Finland noted how it seems difficult for the Finnish SMEs to know which level of quality is needed for a certain supplier, and this often results in over-quality, which is a total waste of resources. Both of these opinions reveal the SMEs poor knowledge on of the competition and overall business environment. The second story also supports the point of the first one that not enough is done for enhancing and developing the business knowledge of the SMEs to be in a globally competitive level.

All in all as concluded by one of the interviewees, the success lies in a combination of knowing the end customer and having a clear own business focus. In order to attain this,

constant development for better is required, but most importantly in the correct issues. The question is really not about weak companies or ignorance, but about scarce resources that are not grown magically. Thus, the underlying problem is correct prioritisation of one's scarce resources, and this way steering of the development to the right direction. Despite the negative discussion above regarding the problems and issues with the SMEs' and their questionable abilities to cope with the current environment, multiple companies have managed to become globally very successful, and all of the interviewees agreed that generally the outlooks in future are good for the SMEs. As interviewing internationalisation consultants, the internationalisation was naturally mentioned as the key for survival. Therefore a small caution in the biasness of this source can be maintained.

4.2.2. The MNC Interviews

The MNCs interviewed for this study were all global companies, which operated in Finland, either as a subsidiary or as headquarters. The aim of the interviews with the MNCs was one of the core objectives of this study – to understand the dynamics of supplier portfolio management of multinational companies in the machinery industry in Finland. Since all of the companies were operating globally according to the I/R framework their strategies could be stated to be either global or transnational. In addition, the companies can be divided to operate either in project management or in line production. Both of these factors contributed to the differences in their supplier portfolio management, and will be described in more detail later in this section. The structure of this section follows the analytical framework, and the second research objective of the study “How the MNCs manage their portfolios?” Therefore, first the transactional management and the relational management of supplier portfolios of the MNCs are presented with examples from the interviews, after that the results are drawn together and illustrated in a model concluding this section.

Transactional decisions

This section explores the transactional decisions of a MNC when it is managing its supplier portfolios. It starts as most of the interviews with the supply managers started, with a discussion on the organisation structures of the MNCs. After that the transactional decisions on size and scope of the portfolio are presented and then proceeds on the supplier selection process. As discussed extensively previously, the global needs of MNCs and thus their strategies how to operate affect considerably to the ways on how MNCs manage their supplier portfolios. However, the interviewees noted how the more systematic approach inline with the global strategy of the company is a rather new phenomenon in the company and therefore has only recently changed the way of doing everyday routines dramatically. The level of global coordination as well as the common guidelines within a company varied extensively from one company to another, depending on their international strategy and how the operations were organised globally; however, all of the companies were moving towards more and more

global coordination in sourcing. The global strategies of the companies were visible already in the way the organisations were structured, for example three out of four companies interviewed said they had some sort of category management in place¹. In work related terms, the category management meant that all of these companies had global coordination in their sourcing, and that overlapping in purchasing was minimised in this manner. In addition, majority of the interviewees (3/4) stated that they had separate operational and strategic sourcing, meaning that they had separate organisations to the actual purchasing and to the strategic planning and acquiring of new suppliers.

The sizes and scopes of the supplier portfolios of the interviewed companies varied considerably, however two interviewees noted that most of the supplying comes from very few, large “main suppliers”. All of the interviewees admitted that they avoid supplier relationships with very small companies, since the required documentation as well as some other criteria might be too heavy for a very small company, making the match between the supplier and the buyer very difficult. In addition, it was mentioned that the size of the order should not be too large compared to the company’s turnover, and thus make the production and delivery too risky for the supplier. The MNCs’ preferred range of the minimum turnover varied between 3 to 10 million euros, especially when talking about Finnish suppliers. Additionally, single sourcing, meaning buying only from one supplier, is not well looked upon for risk management reasons as well. Generally it is notable how critically dependent all of the MNCs are of their suppliers these days, since the amount of own production in majority of the interviewed companies, with one exception, was less than 20%.

Rather surprisingly, all the interviewees stated that their supplier portfolios are formed over historical reasons, every supplier joining the base in different times and therefore also with a bit different criteria. However, the strategic decisions do affect the size and

¹ Category management refers to a way of organising business so that the products of the company are grouped into categories according to the customer’s needs, thus into “products which customers see as reasonable substitutes for each other” (Pradhan, 2006, p. 221).

scope of the portfolio as well, the interviewees noted how they get orders from the headquarters which often follow the new strategic outlines, and which aim at increasing the company's competitiveness and to reduce risks. For example, majority of the interviewees stated that they had at least in some level a strategic goal to increase the number of suppliers from LCC countries. In concrete terms, this means that if comparable with other measures, the supplier from an LCC country is favoured over the others². On the other hand, one interviewee still stated how they do not buy from China, "because it is China", but because of overall expenses. Additionally, few interviewees also stated that they had either headquarter's set or their own goals to cut the total number of suppliers. As one interviewee put it "The smaller amount of suppliers is a way for better economies of scale, it also improve prediction of quality". This requires more concept suppliers, and tier modelling in order to organise the portfolio again with fewer suppliers in it.

Although the number of the suppliers seems as an easy target to cut the costs, it is notable how in two occasions the interviewees noted how they did not regard the lower number of the suppliers as a simple means to more effective portfolios. One interviewee stated: "I find it a bit scary idea that we should be only concentrating on the amount of the suppliers, instead of the total costs." Another one noted how more intermediates will always also mean more costs in the end. "We could buy everything from a one whole seller, but in the end we would have to pay a lot of extra in doing so." For instance raw material prices would have large premiums if bought second-handed.

The interviewed managers noted, how the process of becoming a supplier starts almost always from the need of the MNC, rather than from a sales call from a supplier. The selection process itself for all the companies was a bureaucratic and tedious procedure, including numerous different steps, such as auditions. An entire thesis could be written just on these processes; however, a more interesting point of view in this issue is the

² It should be noted that each company defined the concept of LCC in a somewhat different ways. Some companies considered Estonia to be low cost, as some thought the price level there is rising too fast to be worth investigating. Also, Brazil in some contexts has been viewed very expensive, although the WTO defines it as a LCC.

level of global coordination of the evaluation in each of the interviewed companies. In two occasions the interviewee's showed me evaluation forms that was used in an entire category or function. In one company, the interviewee told that they are just about to develop this kind of a global tool, and in the last company, the entire sourcing organisation was still so young that common tools were not yet developed, but everyone used their own reporting styles. (The evaluation forms were in most cases questionnaires in excel sheets, where points were given on the performance of different sections such as quality, operational systems etc.) The interviewees with the global tools noted that this kind of a more systematic approach allows objective comparisons between the suppliers; however, even though they have intrinsic guidelines on how to act on each result of the evaluation, there is a much more in the process than just filling up an excel, and often included multiple visits and personal contacts.

When discussed the priorities of selection criteria on the suppliers, all of the interviewees' agreed on the order of "quality – distribution issues – price", which was also mentioned in the literature. However, few managers noted how the quality and supply time in general can be measured only to a certain level in the screening process. Especially in project business, it is very difficult and expensive to test the supplier beforehand, therefore the companies are forced to trust the quality assurances of the suppliers. Thus, if the minimum quality and supply time are assured, by e.g. global standards, the price negotiations will then be the breaking point of the deal.

After selection to become a supplier, continuous improvement of the effectiveness of the supplier overtime is also crucial for the MNCs. One interviewee stated that their "goal for the improvement projects is always to develop the operations and productivity so that the supplier's competitiveness improves". For instance the interviewees saw that price lifts are never accepted, but the improvement can mean for instance improving the effectiveness of operations and this way lowering of prices would benefits both parties – making the supplier more competitive and cutting costs for the buyer. Two of the interviewed four companies also stated that they do state these kinds of continuous improvement clauses in the frame contracts. Continuous improvement of the supplier

can also be stated to be a signal of a deep and sustainable relationship, and next we will discuss the relational management of the MNCs.

Relational Management

In addition to the transactional decisions to manage the supplier portfolio, the relationships with the suppliers also seem to affect greatly to the supply base. An example was given by one interviewee, who told how in their company the project leaders have a large power in the purchasing decisions, and for instance if the manager has had experiences from one supplier in a previous project, it is unlikely that the same supplier would be chosen again. On the other hand, in a tight schedule trust to an old supplier might play an extremely important role in the selection. In many occasions the interviewees mentioned how some of their supply-relationships are decades old and the supplier has grown with the buyer company over the time. These long relationships are easy to manage because of the trust that has grown between the parties, and the familiarity of operations both ways. In addition, it was mentioned that in Finland the knowledge of good suppliers often moves mouth-to-mouth, so relationships matter also when trying to find new suppliers. Even though new deals are in most occasions written only for a specific needs of the buyer, the relationships to the supplier might determine to whom the tender is sent to.

Although having much longer relationships with the Finnish suppliers than perhaps any others, none of the interviewees said that they would consciously favour a Finnish supplier over others, only because of their nationality. However, two stated that cultural issues such as language, and proximity issues, such as the costs of visits and logistics, might affect positively to a choosing a Finnish supplier over the others. However, it should be noted that two of the interviewees stated that the cultural issues have no relevance any longer. Long relationships with suppliers are also an important part of the risk management of the MNC, since especially in a tight schedule, it is much less riskier to rely on a trusted supplier than to start the process of selecting a new unfamiliar supplier.

In addition to the discussion on nationalities of the suppliers, the topic of responsibilities was present in all of the interviews. Majority of the interviewees admitted straight that their responsibility in the relationship is very minimal. One interviewer stated that the buyer's responsibility is simply to deliver the drawings, order the item and pay for it, everything else belongs to the seller. Another interviewee emphasised the buyer's responsibility to honesty and openness. However, for example helpful tools for the suppliers, such as volume forecast, are virtually impossible to be given because of the nature of the project business. Only one of the interviewees said that they do give them, the rest agreed on their importance but emphasised on the impossibility of the issue. The discussion on the responsibility matter will continue in the section of the SME interviews.

When it comes to strategic evaluation of the depth of supplier relations, each company had somewhat different practises. In two occasions I was introduced to a model, which was used in practise, where different types of relationships were matched to different suppliers. In all of the cases the division of suppliers was done according to the sales volume and criticalness of the product. None of the interviewees said they would use a matrix, such as introduced in the literature review of this study, where e.g. the strategic position of the supplier would have been determined by the easiness of handling the relationship versus the criticalness of the suppliers. All in all, the segmentation of the suppliers came through every day practises and experience of the sourcing managers. Therefore, according to the managers' views on the criticalness of the supplier, the relationships do differ greatly from supplier to another. For instance, non-critical parts suppliers are most likely to have a more transactional- based relationship, in other words an arms-length relationship. In concrete terms, this might mean that no personal contact takes place during the process, but for instance electronic bidding is used to find the best supplier. In the other extreme, the MNC might be intact daily with the supplier, who also takes part in the technical planning of the production. In this case, the relationship between the buyer and the seller usually becomes strategically important for both.

To conclude the discussion on the relationships between buyer and seller, all of the interviewees acknowledged the importance of personal relationships in many spheres of business; however it is notable how all of them mentioned that everything is still based on facts, and how the on-going development towards more global coordination, and more objective evaluation tools supports this fact based decision-making. Opposite to this opinion, the interviewed SMEs on the other hand all emphasise, first of all, how business is based on man-to-man relationships. “It is humans, in the end, that do the business together.” (More on this issue later in Discussion and Analysis – section.)

The main results regarding both the transactional as well as relational management of MNC’s supplier portfolios are summarised below in Table 4. The next section will conclude the results and provide a model to view the supplier portfolio management of MNCs in the Finnish machinery industry.

Table 5 Summary of the MNC interviews

	Answers (rate in x/4 interviewed companies)	Comments	Comments
Basis of the Supplier Portfolio	1. Historical development (4/4 companies)	"The portfolio has been created historically, only now have we been started to think it more strategically and systematically."	
Current Strategies on the Supplier Portfolios	1. To increase the number of LCC suppliers (3/4 companies) 2. Cutting down the number of suppliers (2/4 companies)	"Goals for the portion of suppliers from LCCs, and to cut 30% of the suppliers, (doubts in numerical goal). Currently in need of more variability, and bigger component suppliers."	"We don't buy from China, because it is China, but because of the overall expenses."
Order of the Selection Criteria	1. Quality is the most important (3/4 companies) 2. Everything depends on the project (1/4 companies)	"Quality is the corner stone of the criteria, if we trust that the quality is in place, we don't need to discuss it further with the supplier."	

	Answers (rate in x/4 interviewed companies)	Comments	Comments
Favouring of Finnish suppliers	1. No, not because of their nationality (4/4 companies)	"Only the fact of being Finnish is no criteria, however lead time is, this sometimes works in favour of the Finnish suppliers."	"As long as there is a common language, distance is not a problem. We have a very selfish way of finding the best quality in the cheapest way."
Responsibility	1. Supplier has all the responsibility of its products (4/4 companies)	"The supplier has the full responsibility to deliver the quality it has promised. The buyer's responsibility is to deliver the drawings, order the item and pay for it."	
Commitment to volumes	1. We can never commit to any volumes (2/4 companies) 2. We would like to give volumes forecasts, but it is difficult (1/4 companies) * In one interview, there was no discussion on the volume forecasts	"We have an aspiration to aim for giving forecasts, but in concrete terms it is difficult to attain this. "	

Conclusions

All in all, the portfolio management of Finnish multinational companies in the machinery industry is everyday risk management in very different forms. The individual decisions, regarding either the relationships or the size and scope of the portfolio, are conducted always for the best of the multinational. However, it was evident that rather than being a result of heavily coordinated strategy, supplier portfolios are formed more on individual decisions, minimising the risk at the specific time and place for the company. Thus the supplier portfolios are more of a result of historical development – different criteria are emphasised at different times, and individual events or projects might also bring their own contribution to the supplier lists. This was also evident in the interviews, since two of the interviewees mentioned how trends in supply management simply “come and go”. Therefore, a model of the current supplier portfolios can be drawn on three different factors, already touched in the previous sections: the basis is

created by the historical reasons, and changes to this pool are made by either 1) strategic decision or 2) convenience reasons. Picture 9 illustrates this model below.

Picture 9 The Pyramid Model: Supplier portfolio management of MNC in the machinery industry in Finland



The historical reasons mean that in most of the cases, the actual network of suppliers has build up of different suppliers, joining the portfolio for various reasons and in various stages of the development, and thus also having different criteria of entry. In project business, it is impossible to held competitive tenders for every single particle, therefore the majority of the suppliers are often chosen because of the historical reasons. In addition, the historical reasons often reflect the relationships of the buyer and the seller. E.g. a supplier that has been supplying for a MNC since the 1960s will have a very different basis for the relationship than a company that is only at the moment trying to sign a contract.

The strategic decisions, which influence the supplier portfolio, can either be taken by the units themselves or they can be orders from the corporate level that must be fulfilled. These decisions or guidelines are dependent on the needs of the international company and its *global or transnational strategies*, and therefore are mostly transactional in their nature. Examples of these might include requirements of the size or scope of the portfolio, or favouring a certain type of countries of origins, such as the

LCCs in supplier selection, as mentioned by the interviewees. The strategic decisions reflect thus the company's current global strategy, and are therefore more up-to-date than the historical reasons.

In addition to the historical basis and strategic decisions, a third factor, especially characteristic to project work, was also noticed to influence the portfolio management. Since most of the companies interviewed for the study were in project business, issues like the schedule and changing teams affected the supplier selection as well. In the pyramid model, the last reasons behind the current supplier portfolios of the MNCs are called the *convenience reasons*, though in real-life terms, this concept could also be called *the hurry*. In the interviews, reasons such as tight schedule, customer's personal requirements or the trust between the old supplier and the buyer had a big role in making the decisions concerning the supply base. The convenience decisions on suppliers are often done during a project, making them even more up-to-date than the strategic decisions, and thus answering often best to the current needs. As the examples of the convenience decisions showed, the relationship often plays an important role in them too.

All in all, this means that the actual management of the supplier portfolio takes place only in the sections of strategic as well as convenience decisions. The historical reasons create the basis for the supply portfolio, and the changes take place only if the environment changes too. However, as the environment always changes, the supplier portfolio management, and especially the strategic and convenience decisions in it, are a way to control one's risks and thus one's ability to function and succeed in the industry. The different levels in the model allow the companies to respond to different kinds of challenges from the environment. Therefore, this result does not imply that supplier portfolio management would be somehow passive. Rather, every decision taken for it is risk management of the company, and the pyramid model merely presents the reasons behind the decisions.

4.2.3. The SME Interviews

Six SMEs who work as suppliers to the MNCs were interviewed also for the study in order to gain a full picture how the supplier portfolio management functions. These findings focus on two issues: firstly to the business environment that the MNCs supplier portfolio management creates for the SMEs, and secondly to the strategic responses of the SMEs to this situation, thus answering especially to the third research objective of the study “How do the SMEs respond to the supplier portfolio management?” An important factor that should not be ignored at this point is the effect of the 2008-2009 recession to both the current business environment as well as to the strategy changes of the SMEs, which naturally go hand-in-hand. Most of the SMEs interviewed stated that the drop in sales during 2009 was definitely a propellant factor in the process of responding to the MNCs supplier management more efficiently. Additionally, it also affected the relationships of the suppliers and buyers, as cost savings were prioritised over long-term relationships.

As mentioned, the first part of SME findings focuses on everyday problems and challenges working with MNC customers. The second part, on the other hand, focuses more on the strategic development of the SME suppliers. The focus of the recent development in the SMEs strategies is strongly linked to the problems raised by the Finpro consultants, which were 1) Lack of marketing and sales efforts and knowledge; 2) Lack of understanding one own position in the supply network; 3) Lack of own customer portfolio management and 4) Lack of expertise. According to the sample interviewed for this thesis, the SMEs seemed very aware of these flaws, and had either already made critical changes, or were focussing on developing these issues further.³ The discussion for further development of the strategic response to the MNCs’ supplier portfolio management continues in the discussion & analysis –part. However, we will start with a discussion on the problems concerning the relationships of SME supplier and MNC customers. These issues can be roughly divided into three categories: the

³ It is important to note that the sample of the companies in this study might have influenced the result, as all the contact information for the SME interviews were given by Finpro, and thus the companies interviewed might have a bigger focus to develop. Therefore, this result should not be generalised for the entire machinery industry in Finland.

problems concerning the differences in organisations; cultural issues, and the problems concerning the imbalance of power and risks in the relationship.

Everyday problems in the relationship of SME supplier and MNC buyer

Most of the problems in the every day management of multinational companies as customers were due to the size differences between the companies, and to the fact that it is difficult to respond to requirements of the MNC when the SME is lacking an equivalent function within its organisation. Also the size differences caused concrete problems in the customer management. None of the interviewed managers thought that the criteria and process of becoming a supplier are in any way impossible to achieve for a SME; however, they felt that some of the requirements for e.g. in documentation were oversized for their size and abilities. The size differences were also obvious in the process of finding a contact and trying to sell for a MNC. One of the interviewee mentioned, how especially abroad it is much more difficult to get in touch with the correct persons, since the organisations are so vast and complicated.

In addition to the size differences, the concrete differences in the organisations also cause worry to the SMEs. For example, related to the poor selling and marketing abilities of the SME, few interviewees raised their concern on how the ever-changing organisations of the customers require the supplier to build the personal relationships again and again. This means losing resources and making the previous efforts virtually worthless. Additionally, the concern over lack of technical knowledge within MNCs' procurement seemed to bother few interviewees, since they felt that the recent development has been moving towards more commercial procurement, diminishing the role of technical know-how.

The second theme in everyday problems concerning the suppliers and buyers were the cultural issues. Only one interviewee stated that international sales were business like any other, all the others admitted that cultural issues and distance made it much more difficult than selling in Finland. One of the interviewed noted how foreign sales were much more demanding also time- and resource-wise, since foreign customers require

more communications and updates on the production than Finnish customers. Also the way of doing business was much more “on skin”, meaning the relationships were formed much more on personal issues than on business. Although cultural differences were mentioned several times as a hurdle to doing business, a company that was furthest in the internationalisation, was building facilities abroad and had a sales office in Asia, noted that the differences in culture were much more problematic and visible within the company, than within the relationships of a supplier and a customer. He stated that:

“Peculiarities and unfamiliar behaviour is much more accepted within customers than within our own workers. In the end it is the customers who pay our salary, and thus are always right. But when it comes to foreign employees inside the company, the differences are not as well understood.”

Additionally, it should be noted that the basis for the internationalisation, such as language skills, was in place in all of the companies. For example, in family-run businesses outside managers had been hired in order to increase the knowledge levels.

In addition to the problems of cultural differences, two of the interviewees discussed how it seemed to them that in markets such as Norway and Germany, local suppliers are favoured a great deal more than the Finnish suppliers in Finland. This makes the entry to these countries more challenging, while in the same time in Finland old customers are looking for less expensive options outside the borders. This notion is supported by the conclusion from the interviews with the MNCs, where all of the interviewed agreed that being from Finland is not a criterion of selection for them. Thus it can be concluded that the local networks are not as appreciated in Finland, as they are elsewhere.

The third and last big theme in the conversations was the imbalances of power and risk management in supplier-buyer relationships. These issues were especially obvious in the negotiation process. The SMEs felt that the MNCs try to roll up the responsibilities and risks to their suppliers without correct reasons. The interviewees noted, how even just the attempts to put larger liability and financing clauses in the agreements eat the

trust in the relationship in the long run. One interviewed SME manager noticed, how for instance in Sweden the public talk against the financing clauses has been much more vocal, and for instance the local unions are backing up the SMEs. The issue was also raised in the public press in the Finnish Kauppalehti (Mauno, 2013). The article notes how the Swedish government is making a law on the maximum payment period to be 30 days, which would include private entrepreneurs as well. In Finland there has so far been only little public support on the SMEs in these issues. Even though the Kauppalehti article also points how the financing clauses are an everyday problem to the SMEs in the country.

The problems related to risks grew in the industry substantially during the 2008-2009 financial crisis, which created a lot of volatility in the market. The most prominent effect of this has been the MNCs' lack of forecasts to their suppliers. Only one interviewee said that they do get estimations in the first place. The problems arouse especially regarding decisions on future investments, since without proper forecasts the risks grow substantially. In addition, one interviewee mentioned that since the MNCs require them to have a turnover less than 10 % it is getting harder and harder to grow, which in turn is a requirement in order to keep up with the MNC. All in all, as one interviewee stated, "the industry has been harshening recently. Since one cannot trust in future any more as one used to, there is no room for lying still." As multiple interviewees noted, one needs to be constantly developing and moving forward in order to keep up with the global market. This statement brings us effortlessly to the next section of these findings – the responses of the SMEs to supply portfolio management. However, before that the results concerning the everyday problems the SMEs face when dealing with MNC customers are summarised in Table 5.

Table 6 Summary of the SMEs' everyday problems concerning MNCs as customers

	Answers	Comments	
Size differences	<ol style="list-style-type: none"> 1. We cannot match the resources of the MNC (2/6 companies) 2. The customer's organisations are too large (1/6 companies) 3. Our organisations do not match (1/6 companies) 4. Separation of technical and procurement people (2/6 companies) 5. The MNC changes their organisation too often (2/6 companies) 	"The biggest problem is the size difference in resources - for instance when it comes to agreement negotiations or documentation."	
Cultural issues when selling abroad	<ol style="list-style-type: none"> 1. Cultural issues are difficult to managem and can be an obstacle to the sales (5/6 companies) 2. Cultural issues are not a problem to sales (1/6 companies) 	"Cultural issues are big thing in internationalisation, but maybe more in side the company than between a supplier and buyer - relationship."	"I don't think that selling to foreign companies differs that much from selling in Finland. We have experience from really large companies, and we have the language skills."
Favouring of Finnish suppliers by Finnish companies	<ol style="list-style-type: none"> 1. We are not favoured by the Finnish customers (2/6 companies) 2. Foreign companies often favour own local suppliers (3/6 companies) 3. In the rest of the disucssions the theme wasn't brought up 	"It feels like German companies are favouring only German suppliers, although in the same time the Finnish companies certainly do not favour Finnish suppliers."	
Power relations	<ol style="list-style-type: none"> 1. The power of the MNC is especially visible in contract negotiations (6/6 companies) 	"Is it really cooperation to sign a contract which in real terms is dictated by the MNC?"	"Issues such as the financing clauses undermine confidence between the parties."
Receives forecasts from the customer	<ol style="list-style-type: none"> 1. Has not received forecasts since 2008 (5/6 companies) 2. Regularly from some customers (1/6 companies) 	"After 2008, we haven't really been able to get any forecasts, this makes planning and future investements very difficult."	"Some customers do give us forecasts, which are very helpful in these. If the customer is not willing to share its future expectations, the cooperation is in vary shaky grounds."

Response to the supplier portfolio management

As the literature review and the consultant interviews presented, the SMEs should be able to actively respond to the supply portfolio management of the MNC, in order to maintain their competitiveness. According to the analytical framework of this study, this response should be concerned on both the strategic issues as well as relational issues. Thus, this section will present both of these in light of the information from the interviews by the SMEs. We will start with the strategic response, which is composed of four parts: a) Understanding one's position in the network, b). Aligning one's strategy, c). Creating an own customer portfolio, and d). Internationalisation.

a) Understanding one's position in the network

Starting from the first step of the strategic response, all of the interviewees agreed that finding out their position is important to them, and they all take actions in order to understand it better. The interviewees mentioned that measurements such as sales volumes and degree of involvement in e.g. development projects are good indicators for the position. Two out of six companies also used customer satisfaction surveys where their own understanding on the status of the relationship was compared to the customer's view on the issue. One of the companies used the surveys only for customers that they had close contact with, and the other used it only for companies that order more seldom from them. All in all, the understanding of the issues importance is definitively in place. The more important question, whether the estimations are correct is more difficult to find out, and thus will be revealed only through success or failures.

b) Aligning one's strategy

The second step of the response, aligning one's strategy, starts first from understanding one's own competitive advantage. The interviewees' answers on their competitive advantages can roughly be divided into three categories. The first group has decisively and strategically created a product for a niche market, which provided them customers all around the world. The second group stated that they didn't just sell their production capacity, but had focussed on also providing technical design, hence providing services to the customer that would have taken unnecessary resources otherwise. The third set of

SMEs stated their competitive advantage to lie in issues such as quality and flexibility. The groups overlapped partly, but in rough terms the division went as described. All of the suppliers stated to provide high end products and having a distinctive quality, which was nurtured by both ISO standards and own procedures. One company stated to have somewhat different strategies on different markets, so that it can provide high-end products here in Western Europe, but on the other hand compete more in the low-end market where the price competition was fiercer, such as in Asia. Thus they adapted to different needs of different markets. In addition, some companies also mentioned issues such as own local networks, as well as ability to handle red tape, as their competitive advantages.

c) Customer Portfolio

The third aspect in the strategic response to the supplier portfolio management, was according to the interviews the SMEs, own customer portfolios, although it should be mentioned that none of the interviewees really talked about their customer base with that specific term. The customer portfolios of the SMEs varied greatly due to the different sections of the industry the companies operated in. Majority of the interviewees admitted that currently only few big companies dominate the top of their customer portfolio. Also, all of them admitted that since their goal was to grow and develop, the natural step forward is to start expanding one's customer portfolio. Especially in a case, where more than 50% of sales were conducted to one or two customers, the company stated to have a clear strategy to both increase the amount of customers as well as to internationalise. In addition, two out of six companies had started to look for new customers in new segments within the machinery industry in order to increase the versatility and amount of customers.

In addition on having a some kind of a strategic look on their customer base, the marketing and sales efforts are also crucial in both acquiring new customers as well as attaining the old, as was mentioned by the Finpro consultants. For a majority of the interviewed SMEs, the sales had in fact been a focus of development recently, however the companies' efforts on this development still varied greatly. One manager told how

they did not have anyone dedicated to sales at this stage, as it was everyone's job. They had been lucky enough until very recently to be able to wait for orders that usually come by phone, and thus previously no separate sales were needed. He continued that even though this was an area they needed to invest in the future, in Finland the best marketing channel is still the reputation you have among your old customers. On the other hand, other companies had a more strategic plan on selling and marketing, especially those who could not rely on the local networks any more, but had e.g. such a niche market that brought them customers all around the world.

When asked on the goals of the relationships the answers varied depending on the type of industry where the company operated. In project business, the orders are naturally more irregular than in line manufacturing. In segments where it was possible, the companies aimed for long-term contracts usually 3 years in a time. However, the companies admitted that this was difficult to attain, since customers were sometimes unwilling to commit to such long relationships. Naturally, the best possible deal for a supplier would be to become a single supplier, but as was noticed previously MNCs rarely accept this. Additionally, one company stated to have an agenda to aim for strategic relationships, where their technical design skills would be appreciated the most. Another company mentioned to have a clear strategy and objective for each of their customer, depending on the nature of the relationship. All of the companies showed some level of strategic thinking in their demonstrations of customer portfolios, however they were all on very different stages.

d) Internationalisation

The fourth and last step in responding to the changing strategies of the MNC is the degree of SME's own internationalisation, which varied among the interviewed companies to some extent. Some were still somewhat only focussing on exporting, while others had already established production facilities or marketing and sales offices abroad. Two out of six had production facilities either ready or almost ready in Eastern Europe. Many of the companies had been asked by their customers to go to Asia to establish production there, but none of the interviewed had decided to go, mainly due to

high risks involved. Only one company had a running marketing office in Asia, although there was not yet any permanent foreign staff hired. Three of the companies had looked into possibilities of establishing sales offices especially in Asia, but had still decided to continue to work via agents. Also exporting rings were said to have been used in order to ease to process of foreign sales. Although some of the companies had started international sales already decades ago, it was obvious that the recent economic turmoil had influenced the more systemic approaches that companies had in their internationalisations.

The results of the SMEs' responses to their customers' supplier portfolio management are presented below in a summarising Table 6. Before moving on to the discussion & analysis, the relational management of the SMEs is presented shortly, answering thus to all the points presented in the framework of reference.

Table 7 Summary of the SMEs' response to supplier portfolio management

	Answers	Comments	
Understanding own position	1. Direct contact with the customer (2/6 companies) 2. Questionnaires (2/6 companies) 3. Signals such as common R&D project / sales volumes (3/6 companies) *One company mentioned two methods	"This is a crucial factor! There are two ways: firstly we always have a direct contact with our customer, we don't use middle men. Secondly, we do customer questionnaires on customer satisfaction, but we also ask what kind of a supplier are we for them."	
Competitive advantage of the company	1. Niche -products (1/6 companies) 2. Full service provider (2/6 companies) 3. Quality and Flexibility (3/6 companies)	"Flexibility, we have been in the business for 50 years. Quality is guaranteed by our company culture and professional pride."	"We are a tailor house we can provide a full service to the customers, we are flexible and our quality standards are high. Additionally our own network of local suppliers and partners makes us unique."
Own customer portfolio	1. Most of the production goes to few big companies (5/6 companies) 2. We only have few customers, but they are all very large (1/6 companies)	"More than half of our production goes to a company that outsourced a part of their production us in 2000."	"We have a very wide customer base, but still 90% of our sales comes from 10% of our customers. We do have our own A-B-C model to evaluate our customers."

	Answers	Comments	
Future expansions in the customer portfolio	1. Expansion of customer base (6/6 companies) 2. Looking for new customers outside of Finland (5/6 companies, one company had almost all of its customers foreign anyways) 3. Widening of own business portfolio (2/6 companies)	"Currently our goal is expand our customer base, in order not to be so dependant on few customers. Also, we have recently widened our business portfolio" in order to find customer from new industries."	"Most of our customers are in Finland, but lately as we have started to look for new ones, we've been forced to look outside the boarders."
4. Stage of internationalisation	1. Sales operations and production takes place only in Finland (4/6 companies) 2. Use of foreign agents (4/6 companies) 3. Production outside of Finland (2/6 companies)	"Our market has always been quite small so have have internationalised already in the 1940s. At the moment, we don't have any offices abroad, but agents who deal with our customers. Since we produce such a specific product, internationalisation is crucial for us, all the new customers are abroad. No plans for taking production abroad."	"In addition that we need to expand our customerbase, we are now looking into the international opportunities more systematically. The crash in 2008 and 2009 has been a definitive motivator to this development."

Relational Response

Lastly, in addition to responding to the strategic management by the MNC, the SMEs must also take care of the relational management of their customers. In general, all the interviewed agreed that strong relationships are key to successful business. One manager, who was working in a family firm, told how some of the old customers had become family friends, which were visited even after retirements. As another interviewee put it: "Even in b-to-b selling, it is people who sit across each other around a negotiation table, one must become acquainted in order to do anything." As already discussed, this was a notable difference to the attitude of the MNCs, who emphasised as well the personal relationships, but also the issue that all deals are always based on facts and figures. The relational management is somewhat difficult to separate from the other factors of the *strategic response*, since especially for the SMEs, where responsibilities of workers are usually wider than within MNCs, relational management of the

customers is part of everyone's work. Cases already discussed in this section such as the imbalances of power in negotiations, and cultural differences in selling are examples of relational management, which are difficult to plan forehand, but must be managed anyways in everyday business.

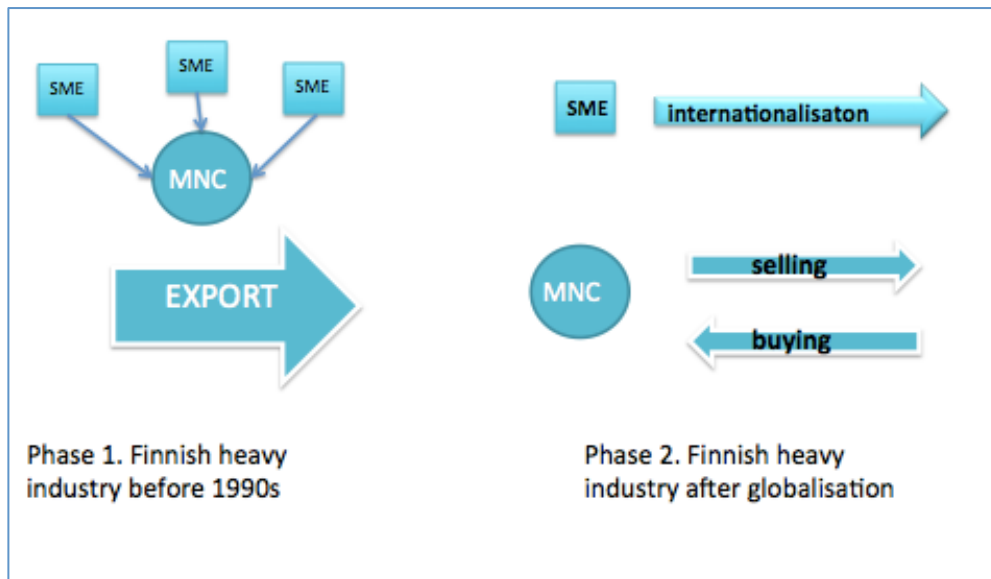
5. DISCUSSION & ANALYSIS

In line with the research question of this study (*What influences the supplier portfolio management of MNCs in the machinery industry in Finland, and what are its implications to the Finnish SMEs working as their suppliers?*), the discussion & analysis is divided into two parts. The first section concludes the answer on the first part of the research question and on the point of view of the MNCs, whereas the second section answers the last part of the research question on the point of view of the SMEs. In addition, after the discussion & analysis there is a separate part of the implications, where suggestions for enhancing the future of the SMEs in the machinery industry are made. However, let's begin with a discussion on the context of the study combined to the I/R framework. This chapter presents the importance of the changing environment to the results of this study.

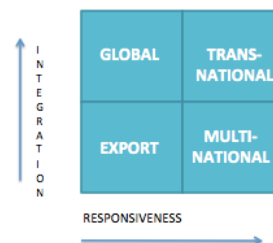
5.1. Completed Context

As the technology has developed and the globalisation has also moved forward in a rapid pace, so has Finnish machinery industry moved with it. The easier access to markets abroad, and in the same time the pressure to cut costs in the value chain have changed also the strategies of the companies operating in this field. The strategy change has not only had an impact on the companies themselves, but also to the small and medium sized companies supplying for them. Therefore, small metal workshops in Finland are not just competing against each other, but also against the inexpensive Asian suppliers that have suddenly become accessible for the Finnish MNCs as well. This issue was especially prevalent in all the interviews conducted for this thesis, but was also pointed out in the literature, by e.g. Thomas & Barton (2006) on their notion on the diminishing role of local networks because of competition from the emerging markets.

Picture 10 Completed Context of the Study



The Picture 10 above presents the change in the Finnish business environment over the increase in the pace of globalisation. The phase 1 illustrates the previous business environment in the Finnish machinery industry, which was built around large companies that bought from Finnish suppliers. Thus, at the time there was no need for the SME suppliers to internationalise, since the foreign trade was conducted via MNCs. This situation can be linked to the I/R framework presented in the adapted literature review, where the international strategy of the MNCs was described in terms of need for global integration and adaptation to local requirements. Therefore, in strategy terms in phase 1 the MNCs employed either *exporting*, or *multi-domestic* strategies from IR framework, using the local suppliers and minimal global coordination.



As the globalisation has moved forward, the phase 2 in the picture presents the new market environment where the MNCs are acting more globally, by integrating their different operations for efficiency and adapting to local needs. Hence, strategy-wise being more *global* or even *transnational*. Evidence of the global strategy is e.g. the targets for LCC suppliers, which provide means for global efficiency and thus

integration. On the other hand, some of the interviewed noted how “We don’t go to China only because it is China” or how sometimes higher price might be accepted for better quality or for flexibility of the distribution. In addition, two interviewed suppliers told a similar story, how a MNC customer had discontinued to order from them because of too high prices. However, when problems emerged with the new cheaper supplier, the customer was forced to come back to the old supplier (the interviewed Finnish SMEs), and thus increase the overall expenditure in order to get the quality needed. These are facts that support the transnational strategy, which in real life must balance in-between the global integration and efficiency, as well as local needs and thus higher prices.

It can be stated that lately the MNCs are seeing more of the bigger picture, and are able to focus more on the *overall expenses*, instead of immediate prices. The fact that majority of the MNCs interviewed were in project business also supports the transnational strategy, since individual projects are much easier to manage according to local needs, than line operations. However, it should be noted that inside the company there might be functions that are more global, and functions that follow a more transnational strategy, but because of the nature of this study as a general qualitative research, and not a case study, I am not able to analyse each interviewed company’s strategy more precisely.

All in all, whether the MNCs strategy is more global or transnational the situation has changed radically the market of Finnish suppliers, forcing them to either internationalise or change their behaviour otherwise in order to survive, as the supplier contracts today are divided by global competitive bidding. The level of internationalisation between the interviewed SMEs also varied greatly. Most of the companies were still only focusing on foreign sales, without that much of a presence in the countries. This makes their internationalisation strategies more export- in their nature. One company had both manufacturing facilities in the Eastern Europe and also a sales office in Asia, making them furthest in their internationalisation, and more towards global –strategy than the rest of the interviewed.

5.2. MNC's Portfolio Management

The network theory and the interaction theory discussed in the literature review of this study explain the competitive advantage of companies to lie in the networks and interaction between the companies. This statement was proved correct by multiple MNC interviewees, who commented on the criticalness of their suppliers to their business these days. It is too far to compare the situation to the Japanese *keiretsus*, but as the MNCs have recently focussed more on project management instead of only manufacturing, the criticalness of their suppliers has grown substantially. Thus, both the ability to innovate as a network or an effective entire supply chain can become critical factors in the MNCs' global competition, as was supported in the literature review (e.g. Nassinbeni et al, 2013 and Ahonen & Salmi, 2003). The management of suppliers is thus important in a transactional manner, regarding decisions on with whom and how many to do business, but also on the relational manner. As explained by the relational theory of Singh & Dyer (1998), in the long run, it is the idiosyncratic attributes in these relationships that create the competitive advantages to the companies, (such as the ability to innovate,) and therefore they should be nurtured in the relationships.

The division between transactional and relational management of suppliers has been a leading idea through out this study, but in the end, it is very difficult to draw the line what is relational and what transactional management. As presented already previously, one of the core findings of this study has been that not all the decisions on supply portfolios are conducted so much in a strategic manner, but for the good of the projects and the company in general. Thus, as the core of portfolio management is to *diversify*, it can be concluded that whether the individual decisions are relational or transactional the aim for MNCs is to manage risks. The next sections will discuss the transactional and relational decision-making of the supplier portfolio management in the light of risk management of the MNCs.

5.2.1. Transactional Management

The management of the portfolios can be stated to start from the scope of the supply base, and thus the first question raised is how to become a supplier to a MNC? All the interviewed agreed that the selection and auditing processes are very complicated for a SME, however this is just the MNCs way of managing its risks. Concerning the selection process, especially the discussion presented in the literature review on the order of the selection criteria embarked opinions also in the interviews. The study by Verma and Pullman (1998) presented how the perceived importance of the selection criteria can sometimes be very different on the actual order of the criteria. The SMEs agreed to this result, as they noted how sometimes the actual credits from the auditions did not seem to matter whether to be selected or not, but the MNCs choose the less expensive option anyhow. The MNCs also agreed that price is a much easier measurement criterion, and especially in project business it is sometimes difficult to test the quality beforehand, but the company must rely on the word of the supplier.

Few SMEs also noted, how the incentives of the MNC workers also affect to this process, and few interviewed MNC managers stated how they are sometimes under the pressure of new strategic decisions from the headquarters and how these might be in conflict with their own believes or practical knowledge. It would need an entire new thesis to study the reasons and implications of the measurement systems on suppliers, however the blunt conclusion made from this discussion is that quality and distribution issues affect more on long-term basis, and price, as it can be measured instantly, affect more on short-term decisions. Therefore this statement also supports the risk management aspect in a more short-term basis. All in all, it can be concluded that unless the supplier is able to provide exact measure on lowest total cost of ownerships, winning an order on a higher price seems difficult.

In addition the scope of the supply base is affected by the strategic decisions on suppliers, such as the number of the suppliers and the targets on LCC suppliers. These impact especially the small part suppliers who have not yet internationalised in full

scale, or are not able to provide wide spectrum of products or services. Related to the scope of the supplier networks, it can be concluded that there is no black or white answer to the usability of the tier-model, which was largely discussed in the literature review. As presented, the current strategic trends seem to be to cut the numbers of the suppliers and to move on to more larger concept suppliers. However, few interviewees noted, how the MNCs want to keep control in their hands by e.g. making separate contracts with the secondary suppliers. In a way, this does not reflect the core meaning of the tier-model, as the company still in this case puts resources to the management of the second tier.

5.2.2. Relational Management

From the transactional management of supplier portfolios we move on to the more relational issues, which also affect the risk management of the companies. As Bensaou (1999) presented in the literature review of this study that supplier portfolio management is a model where every supplier has a certain role and a different purpose in the portfolio; therefore the core of the portfolio management lies in different relationships with different suppliers, thus as mentioned already – in *diversity*. However, only few companies showed me strategic models on the different levels of supplier relationships – from partnerships to arms-length – so the role of the supplier is determined firstly on practical basis, meaning on the criticalness of its product matching the needs of the company. As an example of the practicality of the decision over different relationships, the matrix model presented in the literature review by Ollsen and Ellram (1997), which measured the strategic importance of the supplier to the difficulty of management, would not be used in any of the MNCs. However, this does not mean the decisions on allocation of resources are not informed, but maybe less *strategically coordinated*.

The different positions and relationships of the suppliers can also be described using the weight – voice framework. As discussed in the literature review, the model by Bouquet & Birkinshaw (2008) describes the weight as the natural position of the supplier, depending on the size of it; and the voice refers to more on the suppliers other abilities

to gain attention. The findings support this model, with for example a statement of one of the SME interviewees, who said that they can compensate their small size by having a such a niche product, which gives them bargaining power in the negotiations as well as increases the buyers interest to e.g. do R&D together. In addition, the role of social capital was perceived extremely important according to the interviewees, and it can be stated to have influence in all the steps of the process in becoming and being a supplier. Firstly, as the MNC interviewees agreed personal connections in the field do matter when trying to find a new supplier. Also, long-term relationships between a supplier and a buyer are often regarded trustworthy for both parties.

The third aspect presented in the literature review on the relational management of the suppliers was the concept of power and especially power asymmetries. It can be stated that this issue is very relevant in the relationships of buyers and suppliers. As was discussed in the findings, the imbalance of power is especially visible in the contract negotiation processes. Although a very normal way of managing own risks, especially the use of coercive power, for example pressuring the supplier with cancelling the business, undermines the trust in the relationship, and therefore is not a long-term solution. This illustrates extremely well the current situation regarding e.g. the negotiation of financing clauses to the agreements between suppliers and buyers. Even though many companies can simply deny signing these contracts, the confidence in the relationships diminishes and shakes the sustainability of situation. However, it is difficult to forecast how the current state will develop further, perhaps as the SME supplier are able to grow bigger and gain more global customers, their position and weight-factor would rise enough to balance the asymmetries of power that currently exist.

5.2.3. Conclusions

As stated, the supplier portfolio management of the MNCs is part of their *risk management*. In the literature review it was also stated to *be management tool for long term planning*, and *a way to align strategic objectives with suppliers*. These imply to a very strategic objective in the formation of the portfolio. In the findings however, the

pyramid model illustrated presents a more concrete way on how the supplier portfolio's of the MNCs look like after decades of different strategic emphasis, and on historical peculiarities why a certain supplier has managed to reach such a dominant position. Even though companies have several strategic tools to help in the management of the supplier portfolios, the findings suggested that the supplier portfolio management in practise is usually a result of separate business decisions, where some of the decisions follow the lines of the current strategic objectives, but some of them are conducted solely for convenience reasons or on historical basis.

In addition, the pyramid model can be stated to be in line with the result of Blombäck & Axelsson's study (2007), whose research on the importance of corporate brands in supply chains was presented in the literature review. This thesis agrees that the brand of the supplier can have especially large impact in the top of the pyramid, if a supplier is needed for convenience reasons. Also Blombäck & Axelsson noted, how the non-formalized supplier selection process means that decisions on suppliers may be consequences of individual managers' opinions and conceptions – a result, which was very evident in this study as well.

The literature review also offered a short discussion on the ability to cope with supplier portfolios, since there were two schools of thoughts representing somewhat different ideas in this. As the pyramid model of supplier portfolio management is drawn more as a historical development of the portfolio than as a strategic tool, it can be concluded that this study supports the view of the IMP –group, which stated that portfolio management is merely a "rationalization in hindsight" (Gadde & Snehota, 2000). I agree on the importance of the strategic decisions the company makes in constructing the portfolio, as can be seen from the middle section of the pyramid; however, the strategies change over time as CEO or presidents of sourcing change, and a supplier that originally was taken because of strategic reasons, can later become only a "historic relic" in the portfolio, keeping its contract on the basis on long term relationship.

5.3. Supplier's Response

To conclude the discussion & analysis section, the last part provides a look on the supplier portfolio management on the eyes of the supplier, and how it can or should respond to the MNCs' strategies. As the supplier portfolio management is merely risk management of the MNC, to adequately respond to this the SMEs need to have their own risk management strategy in place. The need for their own strategy is illustrated in the Picture 11 below. The strategic response and own risk management starts with (1) understanding the global environment, secondly to (2) understand the customer's needs, thirdly (3) getting to know one's own position in the portfolio, and lastly to (4) align one's own strategy and also to (5) create own customer portfolio. This section proceeds in line with this picture, by first exploring the SMEs abilities to understand the bigger picture (the global business environment, the customer needs, and one's own position in the network,) and then suggesting tools provided by the literature for creation of own strategy (aligning strategies and creation of own customer portfolio.)

Picture 11 Supplier's Response to Buyer's Strategy



5.3.1. Understanding the Environment and Needs

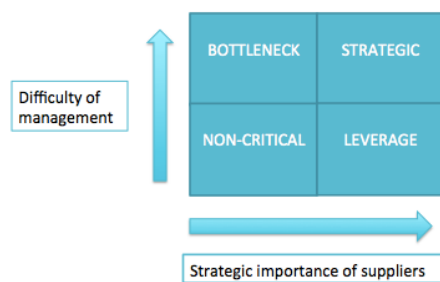
As discussed both in the literature review as well as in the findings of this study, the starting point for SMEs in responding to the supply portfolio management is to understand the strategy of the MNCs and the current global business environment. As discussed in the completed context, the I/R framework provides an excellent tool for this. The buyer's needs in regards of globalisation or localness can also be interpreted by using this model. As discussed earlier that most of the interviewed suppliers were

still in the exporting phase of their own internationalisation. However, if wanting to become closer to their customers and *adapt to their needs*, further internationalisation might be required. This study cannot go too deep in the process of SME internationalisation, but at least it can be noted that they should follow the similar guidelines as discussed in the internationalisation of the MNCs in the adapted literature review, thus not just changing their sales objectives, but reaching these changes to the entire company. As listed in the literature, the four issues that need attention in regards of internationalisation were: 1) The form of organisation (e.g. how to make sure organizationally that sales offices are integrated to the company), 2) Leadership (e.g. how to train your managers to lead multicultural groups), 3) Subsidiaries' competitiveness (e.g. how to assure that the subsidiaries stay in the similar level than the HQ), and 4) Networks of alliances (e.g. to attain information on the foreign markets by making local alliances).

In addition, the supplier must understand its own strategic importance in the supplier portfolio of the MNC, and to find out its position in the network. The matrix by Ollsen & Elram, presented several times in this thesis, provides an excellent tool for the supplier to find out their own strategic position in the portfolio. The supplier may start from finding out its position in the y-axis by answering to questions e.g. *How much resources does it take to manage the relationship with us?*

The position in the x-axis refers to the stage of criticalness of the supplier's products. A question to examine this would be for instance: *What would the customer do if I didn't supply for it?* After finding out one's own position, the supplier can continue the analysis with question such as *"Am I a worthy of this relationship? Can my knowledge in the supply network be replaced? And therefore can I conclude that my position in the network is on a sustainable base?"*

Adapted from Ollsen & Elram, 1997, page 105



5.3.2. Creation of Own Strategy

Helander & Möller (2006) stated in the literature review that the best results for a supplier are gained by aligning the strategic objectives with the buyer; therefore after having a clear picture of the setting where they operate, the next step is to align the strategic objectives with their customers. This process should start first from understanding the consequences of one's own competitive advantages, and later in understanding how to match these with the customer's needs. In the findings it was presented that the competitive advantage of the SMEs could be divided into three categories. 1) Niche-manufacturers, 2) Full-service providers, 3) Quality and Flexibility –providers. The niche-manufacturers and full-service providers have a solid position if competitive enough, and thus are most likely to be able to compete in the global market. However, the problems arises if SMEs competitive advantage lies only in the quality and flexibility issues, since almost every local and long-term supplier in the world are today able to provide a standard quality with flexibility. As noted in the findings, in some parts of the world it is especially difficult to brake into local networks in countries such as Germany and Norway.

The flexibility and quality, however, are issues that many MNC interviewees attached to the advantages of local Finnish suppliers, therefore it can be concluded that this type of strategy should be especially used when supplying locally rather than globally. As was pointed out by Porter (2000) in the literature review, the time of local clusters is not yet over. When combined with the I/R framework, it can be noted that especially the transnational strategy of the MNC leaves space for local networks. However, currently it is often so that the local suppliers with their flexible schedules are on the top of the pyramid of supplier portfolios, thus selected merely for convenience reasons. For example, one interviewed MNC manager told how after problematic distribution from Asia, they were forced to order the items from a local manufacturer, who in turn was able to produce the needed quality with a flexible and fast schedule. Thus, the local supplier was used only in the case of emergency and therefore trusting solely on this type of order channel is a fragile strategy for the SMEs.

In order to match the own offering to the needs of the customer, the pyramid model presented in the findings offers a great tool for the SMEs. By understanding the reasons why they are part of the supplier portfolio, the sustainability of the relationships is better guaranteed. Below Picture 12 combines the pyramid model with an analysis of the SME's position in it. For each section of the pyramid, there is a question (or questions) to be asked to find out the position of the supplier in the portfolio. For example for a supplier solely on historical basis it would be important to rethink their strategies and consider whether they fit to the MNCs current strategic objectives. Long-term relationship can be an important factor in maintaining the supplier contract, but what if the people change? Is there anything else than historical reasons in being a supplier to a MNC? The second section concerns the strategic decision of the company. A supplier that meets the requirements of the current strategic objectives naturally has the strongest position; however, without a proper relationship the position might not stay the same over the coming years. Lastly, the position on the top of the pyramid, selected for convenience reasons seems the windiest place. If the supplier is selected for one-time-project, how can it continue the relationship? These kind of questions can help the SMEs to not only aligning their strategies better, but also to assure the sustainability of their business.

Picture 12 The Pyramid Model as a Tool for SMEs



Using these tools and models, the last step for a SME would be to manage its own risks by creating a customer portfolio on the same basis that supplier portfolios are created for the MNCs. Even though this study cannot go into details of creating a customer portfolio, as was stated in the literature review by Cunningham (1982) that in an optimal portfolio there are different suppliers for different needs, so does the customer portfolio need to be constructed in a way, which supports the strategy of the SME and hedges against risks, of e.g. multiple strategy changes of customers in the same time. Therefore it can be concluded that as defined by Turnbull (1990) in the literature review of this study, the customer portfolios are especially tools for long term planning and hence support the survival of the SMEs.

The aim of this study has been to understand the supplier portfolio management of the MNCs and its influences to the SME suppliers. Therefore, it can be concluded that the entire thesis boils down to the importance of SME's customer portfolios. Even though the knowledge of the environment and of one's customer's supplier management strategies can never be perfect, creating an own customer portfolio on the basis of this information allows the SMEs to build a strong strategic response against the supplier management of the MNCs. In addition, customer portfolios also support the core advantage of Finnish SMEs of being flexible, since it allows different strategies to be used for different customers.

6. IMPLICATIONS

6.1. The Future of the Industry

Since this study was conducted in cooperation with Finpro consultants, in addition to analysing the findings in the light of the literature, a discussion on the future of the Finnish SME suppliers in the machinery industry is continued in order to bring concrete examples of future development in the field. Firstly, author's own reflections on the state of industry are presented. The foundation for this discussion is the TRIO studies, conducted by the Federation of Finnish Technology Industries, perhaps currently the most prominent studies in the field of managing the structural change in the machinery industry in Finland. After this, the discussion is taken further by suggesting concrete ideas for implementation in order to enhance the status of the SME suppliers.

It is obvious that the future of the Finnish machinery industry seems to be at stake. Previously the pulp and paper industry has lost a number of jobs in Finland, and as noted in the context of this study, in the machinery industry more than 60 000 jobs were lost between 1990-2010. When asked on the future of Finnish SMEs in the machinery industry, one of the interviewees from a MNC asked if he should answer the question in a scenario where the industry stayed in Finland, or where it had left the country. This statement highlights the current uncertainty in the industry very well, the structural change is unavoidable, and therefore the emphasis is no longer on preventing it instead of managing it properly. In addition, the recent turmoil around STX shipyard in Turku, when a ship order was cancelled due to lack of financing, has gained the attention of the local Finnish media, increasing people's knowledge around the issue, and personalising the problems. It has been understood that the cancellation of the order does not only affect the workers at the shipyard but also the Finnish suppliers are facing a difficult future magnifying the problems even further.

There have been some studies on the structural change of the machinery industry in Finland, especially concerning the future of the SME suppliers. The most recent study

called TRIO (2009), and its follower TRIOplus (2011), conducted by the Federation of the Finnish Technology Industries, concentrated on the change of MNCs' preferences from local suppliers to larger entity suppliers. The emphasis of TRIO was especially on enhancing the suppliers' abilities to networking, as was mentioned by one of the interviewed Finpro consultants. The main idea behind the enhancing of the networking with other Finnish SMEs was to help the companies to find local contact easier when internationalising. However, as the consultant noted, in reality this has turned out to be much more difficult than what was planned, and therefore the amount of networks born from the projects has not reached its target. In addition, in 2013, the structural change is still shaking the foundations of the industry in Finland, perhaps more than ever before especially due to the diminishing role of shipbuilding. The efforts for enhancing the positions of the Finnish SMEs will therefore continue relentlessly, although it should be noted how the environment is changing along the way.

This study brings new information to the setting of the TRIO studies, and the perceived importance of the large entity suppliers. Perhaps surprisingly, the interviewees of this study mentioned the importance of holding on to small part and even raw material suppliers in order to keep the costs down, undermining the trend towards large entity suppliers mentioned by TRIO. The TRIO-study (2009, p. 5) also notes how the "previous benefits of local suppliers, such as closeness and easiness of communications, are losing their importance". However, even though this thesis has noted the diminishing role of the local suppliers, as globalisation and internationalisation of MNCs is moving forward, the benefits of being close and flexible are not disappearing. Quite the opposite, the findings of the study noted how the MNC managers appreciated especially these qualities in Finnish suppliers. The Table 7 summarises the results of the MNCs interviews, when asked about their opinions on the future of the industry.

Table 8 Future of the Machinery Industry in Finland (according to the MNC interviews)

Answers	COMPANY A	COMPANY B	COMPANY C	COMPANY D	
Future development of this line of business	<p>1. Trends come and go (2/4)</p> <p>2. Companies want to buy larger entities (1/4)</p> <p>3. Portfolio management is more strategic today than what it used to be (1/4)</p>	There has been drastic changes recently, the tools to manage the portfolio are totally different, this is visible in e.g. Contract negotiations. These days the contracts are signed on fact -basis.	Towards buying larger entities, this means less SME suppliers. Interested in following how Finnish SME manage whne opening their own productions in Asia. Could this be a solution?	The trends come and go, sometimes bigger entities are favoured, sometimes the MNCs want to buy everything by themselves in order to cut the extra expenses.	The world is faster, so changes (i.e. changes in supplier base) take place more often than what they used to. There are different trends all the time, I would see that both having large entity suppliers and doing business with small parts suppliers is important.

The pyramid model presented in this thesis highlights how one should not focus only on the current trends, but more on the development of the field in general. This thesis has focussed on the strategic responses, and sustainable portfolio models in order to manage risks in the long-term. The TRIO studies have been initiated from the needs of the MNCs, however I suggest that the focus should be maintaining the long-term competitiveness of the SMEs, and thus start from the abilities of the SMEs and planning of long-term goals in the changing environment. Although as mentioned by two of the interviewees that trends in supply management come and go, the bottom line for the MNCs supplier management however will not change, and that is the cost management.

After creating the basis for the change in perspective needed, the next step is to implement a change to the industry in order to fight the structural change. The concrete ideas listed below come from the author’s own observations from getting to know the industry during this project. They emphasise especially the position of the SMEs, since that was one of the objectives of this study.

Ideas for implementation

After this research I agree with the TRIO studies that *networking* is one of the keys to successful internationalisation of the Finnish metal workshops, since it allows bigger pool of resources for the SMEs to be used. However, in addition on networking with other Finnish SMEs, I would suggest also networking with foreign companies. If following the model of the internationalisation of many larger firms, making alliances

with especially local companies has often brought good results when concurring new markets. Local networks, whether in forms of alliances, brown field investments or joint ventures help in adaption to a new environment, and can provide valuable resources in e.g. setting up a local distribution channels. Thus I would recommend a wider perspective on the networking aspect, than what the TRIO-studies have suggested.

Networking in general will also increase the *voice and weight –factor* of the SMEs, since it lets them “grow by uniting”. Another hot topic in this research has been the problems the SMEs face with contract negotiations and the imbalance of power between the negotiating parties. Thus, networking would provide a solution here as well. The knowledge of the technicalities in the agreement negotiations should be shared more openly among the SMEs, and law services should be made more easily available also for the smaller companies further away from business centres. For example, the SMEs could gather an own pool of lawyers that would provide legal help specifically to the SMEs. In the era of information technology, the distance should not be an obstacle for these kinds of services any longer. Additionally, increasing the openness and awareness of the fair processes, could also have a positive effect on the current asymmetry of power between the negotiation parties.

Another issue in the development of SMEs was their lack of expertise in e.g. marketing or international sales, noted especially by the consultants working tin the field. The findings emphasised how the coming generational changes are going to help in this process; however, the real problem lies in lack of resources of the SMEs, which concerns two issues. Firstly, the companies do not have enough financial resources to hire new workers or to educate current workforce enough, but secondly, there is also a shortage of experts willing to work among SMEs, possibly very far from the capital area. Here I suggest that cooperation with local educational institutions could be a possible solution. Some of the interviewed companies had already realised this and were actively working with local universities and universities of applied sciences with good results. For example, cooperation with business schools on new international sales models would take much less resources than hiring new experts. In addition, this would

increase the students' awareness on career opportunities at SMEs. As a business student myself, I feel that job opportunities at SMEs are more difficult to find, even though the larger responsibilities and also international opportunities would be something many young professionals appreciate in their future careers.

Lastly, I will come back to the discussion on the sacred concept of Finnish quality, and its general implications to the SMEs. As the competition has risen, it is obvious that more resources are needed to keep up with the high standards of quality. Currently, the problem seems to be that the cost structures of the SME suppliers are trampled down and less and less money is left for investments. In addition, the unstable market environment, lack of forecasts from the customers and changing strategies are making the investments riskier every day. The risen competition in quality has forced to change the strategies of many companies, as global cost competition already did decades ago. Without investments, it is obvious that this field of industry will not survive. This should be one of the first problems to be tackled, both by the MNCs as well as the SMEs. As noted by one of the consultant interviewed, "as long as we have the technology and know-how, also the ability to innovate should not disappear anywhere. The question is how to utilise them in the future."

6.2. Limitations of the Study

After conducting the research, it can be said that the limitations of the study are related to the scope of the empirical research as well as to the generalizability of the results. Firstly, even though the amount of interviews for this thesis was in total 21, since there were three different groups of interviewees, the samples from these groups could have been larger. For example, the MNCs interviewed for the study were only 4, thus with a bigger sample the results could be more stable. Also, as already predicted in the introduction of the thesis that since the interviews were all conducted during a short period of time, the results do not present long-term development but rather the current situation. The second point regarding the limitations concerns the generalizability of the results. Since the context of the study was limited to Finland and to the SME suppliers,

the results of the study are primarily generalizable only to this framework. Although, as stated already the MNC results naturally present also the global view on this issue. It can also be argued that currently in western countries the context within machinery industry and local SMEs is similar due to the global development of the emerging economies. Therefore, with some caution, the results are transferable to similar environments, such as Sweden or Germany.

This study was conducted totally as a qualitative research, which in its nature also limits the research to some degree. Although as mentioned, quantitative research on this matter would have been impossible to conduct, the qualitative methods cannot give exact answers to the research questions, but rather a wide explanation, taking account the context of the study. Hence, larger samples and longer-time span would have provided the results in a more exact form. If wanted to include a much wider scope of companies, a survey could have been used, and the results of the survey could then have been quantified. However, some face-to-face interviews would still had to be conducted in order to able to respond to the research objectives.

Lastly, I would like to point out some biases that might have influenced this research. As mentioned in the previous section, the globalisation of MNCs and the position of the local suppliers have been extremely up-to date topics in Finland. Pieces of news in the television as well as in printed media have appeared weekly. The STX case has been connected to social and economic questions such as employment and the future of the industry making the issue not only current, but also very personal to many of the interviewees. Thus, personal opinions and sentiments were obviously present in the interviews, diminishing the objectivity of the results. In addition to the biasness of the interviewees, also the researcher's objectivity can have been influenced by the public discussion on the matter.

6.3. Implications for Future Research

As this study has touched a very vast subject of supplier management, there have been multiple issues along the way, which have sparked a need for deeper research, especially in the context of machinery industry in Finland. In addition, the results of this study indicate several new lines of research for future, as well as comparative or expansive studies to be conducted in the same research area. To start with issues that would have needed deeper analysis during this research, the supplier selection criteria is obviously the most prominent one. Although a studied subject already, the issue would certainly provide interesting outcomes, especially in the context of Finnish machinery industry. In addition, a slightly larger perspective would be provided by studying the total cost measurement process of the sourcing. For instance the mentioned conflict between the MNCs incentives for their workers in order to minimise costs and the general quality requirements would definitively provide an interesting setting for a study. The results of these researches would be a significant help both to the suppliers, but also to the MNCs in analysing their own processes.

Regarding the results of this research, the next logical step in studying the Finnish SMEs and their development would be to concentrate on their internationalisation strategies. It would be interesting to find out how some companies have already managed to internationalise, and have there been problems where from other companies could learn something? In addition, a subject of internationalisation in help of a multinational customer would provide an interesting starting point for a new research, since all of the interviewed SMEs mentioned how they had been asked to go abroad by their customer, but only one had seized the opportunity. Second research area stemming from the results of the study would be the innovation process within a supplier network. As this study has focussed on the management of the suppliers, the management of innovation and new technologies has been left untouched. An interesting point was raised by one of the Finpro consultants asking, if the MNCs are only focusing on creating effective and efficient supplier portfolios, who takes care of the innovation? The subject is up-to-date in a sense too that Finland as a country is looking for its place in the global value chain and many have suggested innovation as the role to step into;

however, as mentioned earlier, currently the investments for innovation have been diminishing as the role of the large industrial players in the country diminishes too.

Lastly, also the results of this study provide a setting for either validation or expansion of the research. As mentioned in the previous section, the sample sizes of this study could be enlarged in order to prove the reliability of the results. In addition, another industry could be taken to be part of the study for comparing purposes. Especially practises of the electronic industry in Finland would be interesting to compare with the machinery industry, as it has just recently weakened substantially after Nokia's large layoffs in the country. Additionally, the innovation practises in the electronic industry would provide more interesting results, since the field is more sensitive to innovations than the machinery industry. All in all, the field of supply management, and the context of Finnish machinery industry provide multiple lines of research. In my opinion, the area is noteworthy and up-to-date and combines fascinatingly the academic research in supply chain management as well as economic perspectives in Finland. Therefore, in addition on impacting to the individual companies, the studies in this field may also have a larger economic impact.

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8. APPENDIXES

Interview protocol

A. Interview Questions for the Finpro consultants in Finland

Interview time and place:

Interviewee:

Position in Finpro:

The experience from the supply management:

1. What different kinds of supplier networks / portfolios have you seen during your career?
 - a. On which basis has the supply network been created?
 - b. Possible usage of tier-model
2. What kind of strategies you see the SMEs have on managing MNC customers / or generally for customer management?
 - a. What do you think are the aims of the relationship for the SME?
 - b. Do you think the SMEs have goals on the customership?
3. Do you feel that suppliers have different relationships with the MNC customers?
 - a. What are the different relationships based on?
 - b. Does the relationship also imply a certain position in the network?
4. Do you have experiences, do the Finnish SME understand their position as a part of the supplier network for a MNC?
 - a. Are there differences in views between the supplier and buyer?
 - b. What are these differences based on?
5. The next question concerns the criteria of becoming a supplier. What kind of a process is it for a Finnish SME to become a supplier to a large MNC?
 - a. How do you experience the actual criteria of becoming a supplier?
 - b. Do you think it is easy to get to know the criteria?
 - c. Are there other than the written criteria that the supplier must fulfil in order to become a supplier?
6. How are the supplier-relationships taken care of? Both from the side of the supplier as well as the buyer.
7. The next questions concern the position of the Finnish suppliers
 - a. Have you encountered situations where Finnish suppliers would be specifically favoured on the basis of being a Finn?

- b. Special notions on Finnish suppliers.
8. Finally, in what direction do you see the supplier management to be moving towards?
- a. In a global level?
 - b. In a national level, in the machinery industry.
 - c. Do you think the Finnish SMEs are able to adapt to these changes. Why?
 - d. What do you think are the future prospects for Finnish SMEs in the machinery industry

The next questions were added later in the process of interviewing.

+ What do you think on the concept "Finnish Quality"?

+ What do you think is the general competitive advantage of Finnish SMEs in the machinery industry?

B. Interview Questions for the Finpro consultants abroad

Interview time and place:

Interviewee:

Position in Finpro:

The experience from the supply management:

1. In your work, in what kind of situations do you encounter the Finnish SME suppliers?
 - a. Generally speaking, what is the goal of the Finnish SMEs, when contacting you?
2. How are the Finnish SME suppliers viewed in the global market in general? (Examples)
3. What are the main challenges of Finnish SMEs trying to sell to large multinationals?
4. Can you describe to me shortly the process of getting a contact to a big multinational company?
 - a. What are the most crucial steps in this?
 - b. What are the Finnish SMEs doing well/ what should they avoid?
5. Do you think the Finnish SME suppliers in general are prepared enough to meet the requirements of becoming a supplier for a multinational company?
6. In your point of view as a consultant, how do you see the global environment of supplier-buyer relationships? What are the current trends?
7. How do you see the Finnish companies responding to this development?
8. Anything to add?

C. Interview Questions for the MNC interviews

Interview time and place:

Interviewee:

Position in the company:

Previous experience from the machinery industry in Finland or abroad:

1. What is your company's supply network based on?
 - a. I would like to know about the history of it, and for what purpose is it created for?
2. What is the structure of your company's supply network?
 - a. Possible usage of tier-model
 - b. Different roles within the network,
 - c. What are the roles based on?
3. Do you possibly use different kinds of matrixes or other possible tools for evaluation of the suppliers? What kind?
 - a. For instance a one which measures the supplier's economic impact to the risks of the relationship
 - b. How much these kinds of tools have practical importance?
4. Are there any overall criteria of the portfolio?
 - a. E.g. on the nationality of the suppliers, or the size of the supplier base
5. What kind of companies do you have as suppliers?
 - a. The amount of the suppliers
 - b. Nationality of the suppliers
 - c. The size of the suppliers
6. What are the criteria for a company wanting to become a supplier for you?
 - a. Do you have other expectations that aren't written down?
7. Do you have expectations on how the SME should improve its functions, while being a supplier to you?
 - a. For instance regarding price, but also about the other elements (quality, innovation)
8. How do you manage the relationships with the suppliers?
9. As a MNC, what are your responsibilities in a buyer-supplier relationship?

10. How do you manage risks in cooperation with the SMEs?
11. Next questions concern the position of the Finnish suppliers:
 - a. Do you consciously favour Finnish suppliers over other nationalities?
 - b. Special notions on especially Finnish suppliers?
 - c. What do you think about the concept of Finnish quality?
 - d. How do the Finnish suppliers differ from suppliers from other countries, or do they?
12. Finally, in which direction do you think the supplier management is moving toward? Can you say how has the industry developed during the past decade? (In Finland and globally)
 - a. Do you think the Finnish SMEs are prepared to adapt to these changes?
 - b. How do you see the future of the Finnish SMEs in the machinery industry?
13. Anything to add?

D. Interview questions for the SMEs

Interview time and place:

Interviewee:

Position in the company:

Previous experience from the machinery industry in Finland or abroad:

Ownership of the SME (does the interviewee own the business):

1. What does your company do?
2. What kind of customers do you have? Do you have a strategy to manage these?
 - a. What are the goals on the relationship?
 - b. What kind of a deal are you usually looking for
3. What is your competitive advantage?
4. What kind of process was it to become a supplier to a MNC?
 - a. How did you felt the criteria of selection?
 - b. Opinion on the criteria: the communication, their fulfilment, flexibility etc.
5. What kind of a sales strategy do you have? How do you contact a possible new customer?
 - a. Do you have a marketing strategy?
6. What is your view on your position in the MNCs supplier network based on?
 - a. How do you get information on this?
 - i. Different views
7. How do you adapt to new strategies of MNCs, do you have examples of this?
 - a. Has the tier –model affected your business
8. As a subcontractor, what do you agree on when supplying for a MNC?
 - a. How are the risks balanced between the relationship?
9. What is it to manage a MNC customer in practise?
 - a. Does it differ from other customer relationships?
 - b. Everyday problems relating to the management of MNC customers
 - c. How important role is on personal relationships when managing a MNC customer?
10. How do you maintain a customer relationship with a MNC?
 - a. How does the MNC maintain the relationship with you?

11. Are you planning on internationalising? Is there a need for it?
 - a. What motivates / or unmotivates you to internationalise?
 - b. How is it to do business abroad? Is it very different from business in Finland?
 - c. What kind of support do you need for internationalisation?

12. What changes do you feel this business field has met during the past decade? Especially regarding the cooperation between the SME suppliers and MNC customers?

13. How do you see the future of your business, as part of the supply network of MNCs?
 - a. How do you need to change?
 - b. Need of internationalisation?

14. Anything to add?