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DEVELOPING GLOBAL SOURCING

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ABSTRACT

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Global Sourcing has gained popularity among Multinational Corporations as a method to achieve competitive advantage in increasingly competitive international environment. However, the companies pursuing coordinated global sourcing strategies in many cases tend to overlook many potential synergies from global sourcing. The objective of this research is to identify development areas in which the case company can further improve its conduct regarding global sourcing.

This thesis was done as a case study for a MNC with business units across the world. The data used to analyse the case company is based on personal observations of the researcher, company's material regarding its global sourcing, and on themed interviews and discussions with the company's purchasing personnel. The analyses of this research are qualitative in nature, relying on subjective observations of the researcher.

The research revealed that the case company has room for improvement in many of the identified success factors of global sourcing. One main recommendation of the thesis is to introduce portfolio-tool to identify synergy areas from global sourcing in a more systematic manner. In addition, the thesis proposes that information-processing framework can help the case company design more effective integration mechanisms that are required to process complex information emerging when sourcing globally.

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Globaali hankinta on yleisynyt monikansallisten yritysten keskuudessa keinona saavuttaa kilpailuetu kovenevilla kansainvälisillä markkinoilla. Kuitenkin, yritykset jotka pyrkivät globaalisti koordinoituun hankintastrategiaan usein jättävät huomioimatta mahdollisia synergiaetuja. Tämän tutkimuksen tavoite on löytää kehitysalueita, missä kohdeyritys voi edelleen parantaa toimintaansa globaalien hankinnan osalla.

Tämä pro gradu –tutkielma tehtiin tapaustutkimuksena monikansalliselle yritykselle, jolla on liiketoimintayksiköjä ympäri maailmaa. Tutkielman asiantieto perustuu tutkijan henkilökohtaiseen havainnointiin, kohdeyrityksen materiaaliin sen globaalista hankinnasta, ja kohdeyrityksen hankintaosaston henkilöstön kanssa tehtyihin teema-haastatteluihin ja keskusteluihin. Tämän tutkielman analyysit ovat laadullisia, nojaten tutkijan henkilökohtaisiin havaintoihin.

Tutkimus paljasti, että kohdeyrityksellä on kehitettävää monissa globaalien hankinnan menestystekijöissä. Yksi tutkielman tärkeimmistä kehoituksista yritykselle on käyttää portfolio-työkälyä, joka auttaa tunnistamaan mahdollisia synergia alueita järjestelmällisemmin. Lisäksi tämä tutkielma esittää, että tietojenprosessointi-viitekehys voi auttaa kohdeyritystä suunnittelemaan tehokkaampia integraatio mekanismeja, joita tarvitaan globaalista hankinnasta aiheutuviin monimutkaisten tietojen prosessointiin.

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Enonkoski, 15th of April 2016

Joosua Jääskeläinen

1 INTRODUCTION

Moving forward from traditional domestic procurement to international procurement and finally towards global sourcing is becoming an increasingly important task for companies that compete in the global marketplace (Monczka and Trent, 2003). However, moving forward from simple international transactions, which require little or no coordination at all among different business units of a company, has proven to be a challenging task (Monczka and Trent, 2005). The internal cooperation, coordination and integration challenges of global sourcing require a wide variety of measures, steps to be taken, and difficulties to be overcome, as to be successful. Moreover, due to the vague nature of global sourcing and many uncertainties involved, companies often struggle to grasp the full idea of it and can consequently miss potential benefits that global sourcing can bring.

This thesis is made for a multinational corporation, which has business units with their own purchasing organization in multiple locations worldwide. The need to integrate and coordinate the activities of these multiple locations through initiation of global sourcing is the starting point for this thesis. To find answers to the numerous challenges, uncertainties and difficulties concerning global sourcing is the main reason for conducting this research. A practical example of the challenges faced by the case company is, for instance, the difficulty of setting up common information sharing system to support the global operations. Another example is the vast distance among each business unit, creating coordination and integration problem. This thesis aims to find out why global sourcing is done, what key challenges and factors to be considered when doing it, and finally how to do it from the viewpoint of coordination and integration.

1.1 Research Problem and Questions

The origins of this research are in the case company's need to transform into a truly global company. The case company commenced global sourcing recently, and with it brought forward a great deal of changes. However as Global

Sourcing is still a new topic for the case company, there are many uncertainties regarding how to do it. For example, even to the question of “*what is global sourcing?*” there are many different opinions within the case company. Thus, the research problem of this thesis rises from the uncertainty concerning the topic of what global sourcing is and how it should be done. As the case company is already doing global sourcing, the aim of this research is not to present a model of how global sourcing is done from the beginning, but to identify improvement areas and provide general recommendations.

The main research question is therefore as followed: What can the case company do to improve Global Sourcing?

In order to answer the main research question there must first be a theoretical review and literature review done on the topics related to global sourcing. The literature review revealed that the answers to the three sub-questions of this thesis provide the framework required for analysing the case company’s global sourcing in search of development areas. The sub-questions are as followed:

- (1) What are the drivers/motives for global sourcing? What are the expected and sought benefits from global sourcing?
- (2) What are the most important things to do well in global sourcing for it to be successful? What are the success factors of global sourcing?
- (3) What are the factors to take into account as to successfully coordinate and integrate global sourcing across worldwide business units?

Therefore, the theoretical framework of the research revolves around the three main areas of global sourcing, which are the success factors, drivers, and coordination. With the in-depth literature review on these three subjects, the empirical information gathering of the research will be targeted to the areas with the most influence on global sourcing. The literature on these three areas will also provide theoretical background that is used later to analyze the case company’s situation.

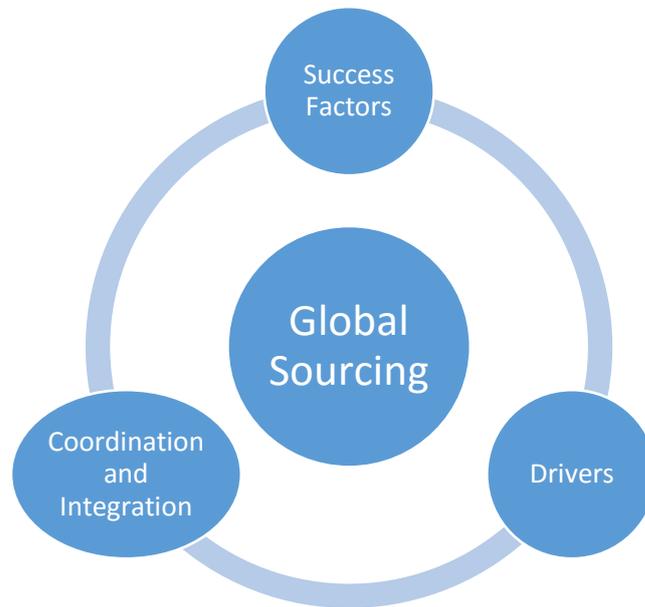


Figure 1. Theoretical Framework of the research

The aim of the empirical part of the research is to see how the case company's global sourcing project is done in light of the three theoretical areas depicted in Figure 1.

1.2 Definitions and Key Concepts

Global Sourcing is an attempt to utilize purchasing potential on worldwide level (Arnold, 1989). In this thesis it refers to "proactive integration and coordination of common items and materials, processes, designs, technologies and suppliers across worldwide purchasing, engineering, and operating locations" (Monczka and Trent, 2003, p. 26).

Global Sourcing Success Factors refer to the factors, which have the highest correlation with successful global sourcing, and are thus highly important to do right as to be successful in global sourcing.

Global Sourcing Drivers refer to the benefits and advantages that can be gained from global sourcing. These drivers are the factors that motivate the companies to pursue global sourcing strategy.

Global Sourcing Integration is about connecting the business units and functions together as to be able to process the information effectively on global scale. The main task of global sourcing integration analysis is to (1) identify the information processing requirements and then (2) counter them with appropriate information processing capacity-building mechanisms.

Global Sourcing Coordination is about coordinating common items and materials, processes, designs, etc. on global scale so that economies of scale, information and learning, and processes can be achieved. The main tasks of global sourcing coordination are to (1) identify which items, processes, etc., to coordinate, and then (2) decide how to coordinate them.

1.3 Research Methodology

This research is done as a qualitative case study. The reason for choosing qualitative approach was the fact that in the beginning of the research the topics of research were not clear. It was not known what the results would be, nor what the problem areas were. Qualitative research is most suitable for this kind of situations as it is used to study (1) complex phenomena and processes (2) not well known processes (3) phenomena which variables have not yet been identified, and (4) phenomena, which cannot be studied experimentally (Marshall, 1985; Marshall, 2010). Thus, the general characteristics of qualitative research were a match with the requirements of this study. These characteristics are such as trusting observations and interview data, researchers' aim to disclose previously unknown topics, and usage of qualitative methods (Hirsjärvi et al., 2007, p. 160). Qualitative research is in nature without pre-existing expectations towards what the results might be (Eskola & Suoranta, 2005). In qualitative research the theory that is first investigated in form of literature review, is used as a mirror to which the empirical findings of the research are reflected (Eskola & Suoranta, 2005).

1.4 Literature Review

How to develop and improve global sourcing is an area that requires more research. The literature review showed that while global sourcing is an increasingly popular topic in the literature, there is no comprehensive research done on how to improve global sourcing using the existing knowledge. Knowing all the areas which a company should focus when improving the global sourcing activities is a big question to which the literature does not have a thorough answer. This is the research gap this thesis tries to bridge.

Global sourcing suffered from the lack of research until the beginning of the 21st century, when Kotabe and Murray (2004) and Trent and Monczka (2002) brought the topic into more active discussion. As Quintens et al. (2006) state, this lack of focus on global sourcing is surprising, as purchasing has been found to have a major impact on global supply chain performance of any company.

Trent and Monczka (1991; 2003; 2005; 2008) may have contributed the most to research on global sourcing. Their contributions to the global sourcing literature have especially to do with the success factors of global sourcing. One of the most influential papers from them is "Achieving Excellence in Global sourcing (Trent and Monczka, 2005)". While their list is extensive, other researchers have pointed out other main areas of interests in global sourcing that require also closer attention.

Trent and Monczka (2003) in their renowned definition of global sourcing, already mention the importance of coordination in global sourcing. One major contributor to this topic is Leinonen (1999), who provided extensive literature review on the topic of coordination in global sourcing. Literature on coordination and integration leads to research concerning purchasing maturity, which is consequently a relevant topic also for global sourcing. Foerstl et al. (2013) pointed out well what important role coordination plays in increasing purchasing performance of a company, which is why his research is also used in this thesis.

Trautmann et al. (2009a) presented that Information Processing Framework could be used effectively to describe how and why different coordination and integration mechanisms can be used to increase information-processing capacity of an organization. These in turn improve the company's performance and effectiveness. This framework provides a clear and theoretical reasoning for studying coordination within global sourcing context.

Companies usually have few main reasons for conducting global sourcing. The literature provided many reasons, varying from simple cost reduction pressures to access to new technologies. From the viewpoint of improving global sourcing of a company, the important question to ask here is whether the company is pursuing after all the right benefits from global sourcing. Relevant researchers on global sourcing synergies as found out in the literature review were Frank Rozemeijer (2000) and Wouter Faes (2000), as they wrote on global sourcing synergies extensively. Their research was continued by Trautmann et al. (2009b) who also presented a portfolio tool that can be used to help companies pursue the right synergies from each category. This type of category-specific analysis is a major topic in the literature.

The literature review revealed that the literature on global sourcing has a lot to do with the three main topics. These are (1) drivers/motives of global sourcing, (2) success factors of global sourcing, and (3) integration and coordination within global sourcing. However, the literature did not provide a systematic method to evaluate how global sourcing could be improved, but focuses on these individual topics. This thesis presents a holistic approach to improve global sourcing in a way that includes findings from each of the main areas within global sourcing discussion.

1.5 Limitations

Even though this research includes analyses on different ways of organizing the purchasing organization, the idea is not to present a new organization structure for the case company. The idea is to present the general idea of how and why different mechanisms, such as organization structure, can be used as tools to influence the way global sourcing is coordinated. The final objective is to

present recommendations on how to coordinate global sourcing more successfully.

The information gathering is mainly done from the company's global headquarters, as it is where the global sourcing is led and coordinated. However, observations concerning other business unit's activities are taken into account, as are the discussions with the personnel from other business units.

Numerous issues and problems arise when globalizing a function of a company, such as cultural issues, communicating problems and IT system challenges. In this thesis, the problems faced by the case company are identified, but answers and solutions are limited to brief recommendations based on best practices as presented in the theoretical part of this research.

Even though the findings of the research can be generalized to a higher degree, the thesis does not in the first place try to propose how the globalization process should be ideally done, but concentrates on how the Global Sourcing at the case company's specific situation could be improved.

Finally, there are numerous success factors and issues to be considered in global sourcing, but for this thesis only the topics most frequently discussed in the literature were chosen. One big omission is to leave extensive discussions on global sourcing risks out of this thesis scope as to keep the topic manageable. In addition, when analysing the case company's conduct only the most obvious friction-causing topics are discussed in detail, since going through all the areas discussed in the theoretical part of this thesis would expand the research to unmanageable proportions.

2 GLOBAL SOURCING

Globalization of Purchasing as meant by the case company is best defined in the literature under the term Global Sourcing. Global sourcing has gained increasing popularity among firms as a way to find competitive advantage in times of increasing global interconnectedness (Christopher et al., 2011, p. 68).

In the literature the terms “global sourcing”, “international sourcing” and “global procurement” are often used synonymously, but according to Holweg et al. (2011) the definition by Monczka and Trent (1991) of “global sourcing” as the final stage in the strategy evolution has been the most favoured version of the definition recently. The strategy evolution and its stages are explained more in chapter 2.1 in more detail. Monczka and Trent (2003) define global sourcing as “proactive integration and coordination of common items and materials, processes, designs, technologies and suppliers across worldwide purchasing, engineering, and operating locations” (Monczka and Trent, 2003, p. 26).

Trautmann et al. (2009a, p. 57) use Monczka’s and Trent’s (2003, p. 26) definition, as well as that of Faes et al. (2000) and Rozemeijer (2000), as they define global sourcing as “integration of purchasing units across firm’s worldwide locations looking for common items, processes, design, technologies, knowledge and suppliers“. This is the definition of global sourcing used in this thesis.

Kotabe and Murray (2004) talk about Global Sourcing strategy, and about global sourcing as a business practice. According to Kotabe and Murray (2004, p. 8) global sourcing strategy is “the logistical management of the interfaces of R&D, manufacturing, and marketing activities on a global basis“. Kotabe and Murray (2004) emphasize the importance of R&D, marketing and purchasing cooperation across national boundaries as to achieve a sound global sourcing strategy. The point they make is that that while the product should be designed for manufacturability through standardization but in a way the marketing department’s needs to have innovative product designs that please the customers is taken into consideration. Kotabe and Murray (2004) present Toyota as a company which has successfully managed global sourcing by giving each business unit freedom to localize products to meet their individual needs, but this is done while taking into account the criticality and importance of making the utmost use of the integration benefits from global operations.

Overall, global sourcing is an attempt to utilize purchasing potential on worldwide level (Arnold, 1989). As the main benefits to be gained from global

sourcing come from buying together, it is reasoned by the author of this paper, that scientific contributions from area of purchasing consortia can also be used in this research.

In the following chapter about purchasing maturity, the purchasing maturity theory as well as global sourcing continuum are explained. The reasoning for explaining these comes from the fact that global sourcing can be seen as a continuum from domestic purchasing into gradually becoming global sourcing organization that has grown from reactive purchasing into strategic proactive purchasing. While the global sourcing continuum shows the progress from the domestic purchasing into global purchasing, the purchasing maturity explains the growth from reactive purchasing into strategic proactive purchasing that is able to achieve higher cost-savings. Purchasing maturity and global sourcing continuum explain well the theoretical background of how firms evolve from domestic sourcing into global sourcing, which is why it is explained now and not in the success factor part of the thesis, even though it includes numerous success factors in itself for global sourcing.

2.1 Purchasing Maturity and Global Sourcing Continuum

Purchasing maturity models describe the level of professionalism in the purchasing function (Rozemeijer et al., 2003). Úbeda et al. (2015, p. 179) provide a more detailed description as they define purchasing maturity as a “measure of the degree to which a purchasing department is advanced, sophisticated, and professional”. Úbeda et al. (2015) see that companies with high purchasing maturity have evolved from doing only operational functions into doing strategic work that supports business. According to the maturity model, the low maturity companies cannot introduce new practices and methods due to their lack in capabilities (Schiele, 2007). Developing these capabilities is however not so simple task, and often takes a lot of effort and resources, which is why the capability increases should always be well-justified (Lintukangas, 2009, p. 32). The reasoning in the maturity model goes as explained in Figure 2. below by Ubeda et al. (2015, p. 180). It shows that the higher maturity of a company, the more savings that can be expected.

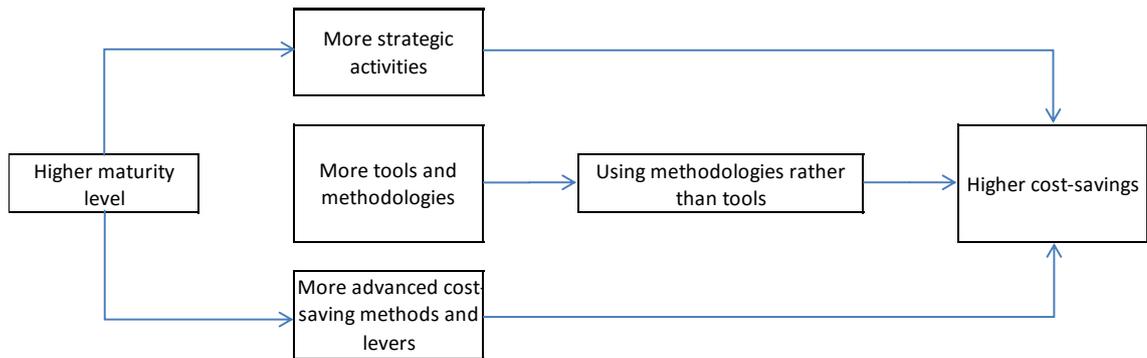


Figure 2. Conceptual model of purchasing maturity
(Modified according to Ubeda et al., 2015, p. 180)

Purchasing Maturity – Four underlying practices

Foerstl et al. (2013) break down the purchasing maturity concept into four underlying practices. The first two of these practices are considered as capability building practices. The first one is talent management, by which Foerstl et al. (2013, p. 698) refer to the practice of “selective staffing, comprehensive training, and appropriate job structures”. Talent management was found out to be the strongest driver of purchasing and firm performance, making it a first priority for companies wishing to become more mature. In supply management context the word “talent” means a person who has (1) soft-skills to collaborate efficiently and innovatively; (2) cross-cultural readiness with ability to communicate with foreign language(s) and experience to manage international settings; (3) cross-functional knowledge and experience; and (4) forward looking view on supply markets and supply processes (Monczka et al., 2008, p. 758). Companies must be able to attract, develop and retain persons with such attributes if they wish to succeed in the increasingly competitive global markets. Moreover, to do this the companies must have global hiring practices to reach talents across the world, as well as to work hard to be perceived as interesting and exciting places to work (Monczka et al., 2008, p. 760).

The second practice Foerstl et al. (2013) present is performance management, which refers to quantification of actions and the analysis of their effectiveness (Neely et al., 1997). Performance management in form of goal setting and performance appraisal is to guide and motivate the personnel towards two

remaining practices, which are cross-functional integration and functional coordination (Foerstl et al., 2013, p. 699; as cited in Englyst et al., 2008; Moses and Ahlstrom, 2008). According to Foerstl et al. (2013), the functional coordination within the PSM function refers to the coordination of services, processes, products and suppliers across worldwide locations. Cross-Functional Integration refers to the “integration and collaboration of the PSM function with other functions” (Foerstl et al., 2013, p. 697). Below is the figure 3. that show the results from the research done by Foerstl et al. (2013). The figure shows how the four practices have a direct and indirect correlation with purchasing performance, and also acts as a strong evidence supporting the claim that purchasing maturity has an effect on purchasing performance.

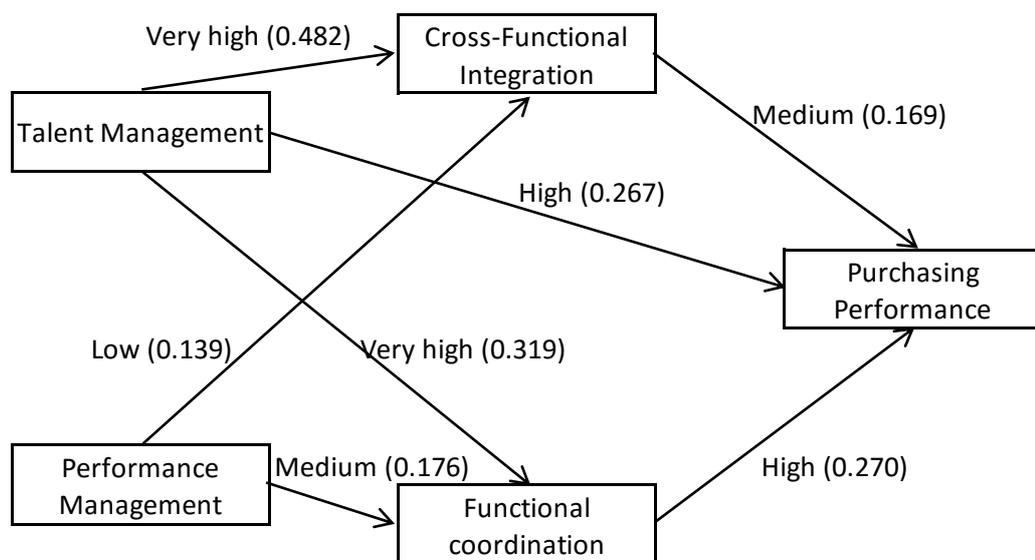


Figure 3. Four underlying practices of purchasing maturity
(Modified according to Foerstl et al., 2013, p. 708)

The most notable finding of Foerstl et al. (2013) is the high importance of Talent Management; its significant direct and indirect positive correlation with purchasing performance. Secondly, the higher correlation of functional integration than cross-functional coordination with purchasing performance stresses the importance of first making sure that internal coordination within the function is done well before focusing on cross-functional coordination.

Global Sourcing Continuum

Monczka and Trent (2005) developed a continuum that shows the development phases of a company's purchasing from domestic focus into global integration.

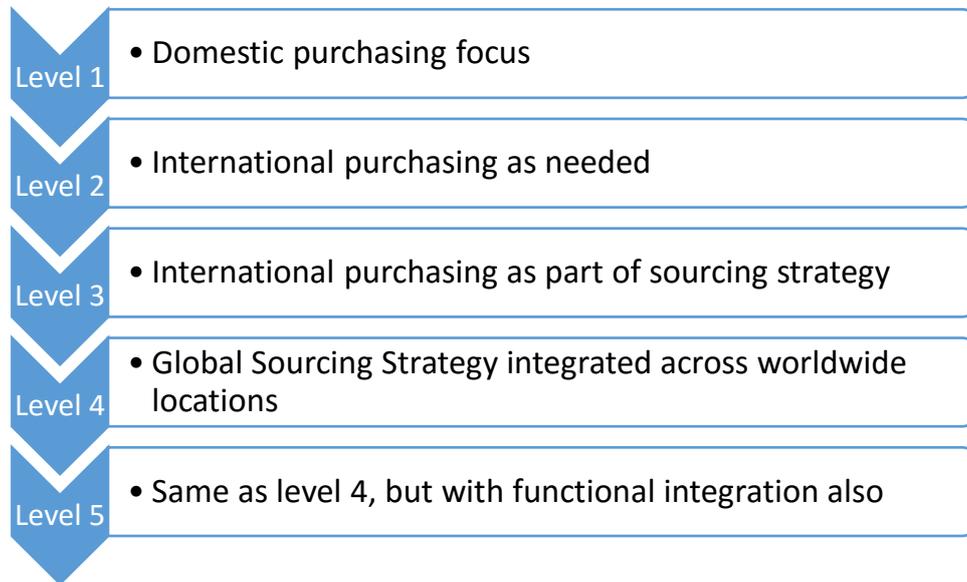


Figure 4. Global sourcing continuum

(Modified according to Monczka and Trent, 2005, p. 28)

The continuum shows how firms develop from being fully domestic companies into gradually buying internationally and finally into integrating purchasing activities across worldwide locations and functional groups (Monczka and Trent, 2005). Moving from domestic focus to international purchasing means that the company must learn to adapt to long distances, different rules, regulations, languages, cultures, time zones, currency fluctuations and customs requirements (Monczka and Trent, 2005, p. 26). Due to the aforementioned reasons, as well as due to lack of knowledge about international markets, uncertainty involved, and risk avoidance; global sourcing is achieved incrementally (Leinonen, 1999, p.42). Then the next step of pursuing global sourcing brings in the challenges of integrating various worldwide locations and managing to create effective cooperation between them (Monczka and Trent, 2005, p. 26).

The fifth and final level in the global sourcing continuum requires the company to integrate their activities not only with purchasing functions but also with such functions as marketing, engineering and operations. This integration occurs

during new product development as well as for current demand fulfilment. In the fifth level, supply management processes and practices are also standardized across worldwide locations. (Monczka and Trent, 2005)

2.2 Drivers

The reason why firms pursue after global sourcing is usually that the domestic supply markets cannot meet all the needs of the multinational corporations (Leinonen, 1999, p. 40). The most obvious driver for global sourcing is the cost reductions that can be gained from it (Jia et al., 2014). Cost reductions are also the earliest recorded reason for global sourcing in the literature (Leinonen, 1999, p. 40). These cost reductions can be divided into many sub-motives, for example, a company might start global sourcing as to be able to bundle purchasing volumes across sites (Trautmann et al., 2009b). However, cost reductions are not the only motive for global sourcing. Access to new technologies, knowledge and competences are also big motives for global sourcing as companies strive for innovation (von Haartman, 2015).

In the literature, the benefits from global sourcing are largely the same as with the benefits from centralized purchasing. The definition of centralized purchasing in this thesis is that which Karjalainen (2011) presented. He states that centralization on purchasing “refers to the use of centralized framework agreement” (Karjalainen, 2011, p. 88). Centralized purchasing is something that not only occurs in intra-company global sourcing, but also in purchasing consortia, which is why the drivers of purchasing consortia are also applicable to global sourcing to a certain extent. The advantages of consortium purchasing according to Schotanus (2005) are lower purchasing prices achieved through increased negotiation power, higher quality, reduced transaction costs from having less transactions through consolidation, lower workloads for each member of the group, supply risk reduction and inter-organizational learning.

The drivers especially associated with purchasing synergies that can be achieved from more centralized and coordinated approach have been first summarized by Corey (1978) and then further developed by Rozemeijer (2000).

Corey (1978) presented four main drivers for more coordinated approach, which were

- 1) Assurance of supply in terms of supply shortages and long-term availability
- 2) Responsiveness to business environment
- 3) Profit performance through cost reductions in supply
- 4) More efficient use of limited resources, for example personnel

Rozemeijer added organizational context into this list as a driving factor, as he sees it as a factor that “determines the scope of opportunities for realizing purchasing synergy” (Rozemeijer, 2000, p. 7).

Faes and Matthijssen (1998) identified the benefits that companies perceive to gain from more coordinated purchasing. The five points are as follows;

- 1) Better intra-company information usage,
- 2) Improved market negotiation strategy,
- 3) Cost reductions and savings,
- 4) More powerful standing towards monopolistic markets, and
- 5) Deeper knowledge and information about markets and cost structures.

Supply base optimization is one usual goal achieved from global sourcing (Leinonen, 1999, p.41; as cited in Laseter, 1998, p. 28), however according to Monczka et al. (1993, p. 46) the supply base reduction might often lead to a situation where the existing suppliers are automatically selected without investigating new suppliers from foreign markets. Overall, global sourcing is nowadays used as a proactive strategy through which competitive edge over competitors is to be achieved (Giunipero & Monczka, 1990, p.4).

Trautmann et al. (2009b) see that the benefits from global sourcing come in form of economies of scale, economies of process, and economies of information and learning. In the following paragraphs these are explained in more detail. Later on in chapter 3.3, the portfolio tool by Trautmann et al. (2009b) to identify synergy areas from these economies is also presented.

Economies of Scale, which refers to bundling of volumes to gain lower unit price, is the main motive behind Global Sourcing (Trautmann et al., 2009b).

Economies of Scale refer to the phenomenon where the production costs become lower due to the decrease in fixed costs per production unit as the amount of manufacturing increases (Silvestre & Joaquim, 1987). In global sourcing context the economies of scale is achieved by centralizing the purchasing to a few key suppliers. In practice, this means that the supply base is reduced and the buying from different business units is combined (Arnold, 1999). The advantages and benefits from this are such as reduced costs due to economies of scale, fewer transaction costs due to reduced amount of suppliers and transactions to be handled, and stronger negotiation position of the buyer (Faes et al., 2000; Knoppen and Saenz, 2015).

Economies of Process refer to the standardization of work processes so that each business unit has common work practices and processes which are based on best practices (Faes et al., 2000; Rozemeijer, 2000). The common work practices and processes refer to the way suppliers are treated, benchmarking is done, and joint training and development is conducted (Faes et al., 2000). Economies of process can be gained in global sourcing by having a central contract instead of multiple local contracts. The savings come from the reduced work-hours, as only one tendering process has to be done instead of many, therefore saving valuable work hours and freeing up personnel for other tasks (Karjalainen, 2011).

Economies of Information and Learning refer to the synergy, which comes from leveraging each business units' purchasing knowledge and information (Trautmann et al., 2009). According to Faes et al. (2000) the information shared is such as knowledge on suppliers, technologies, markets, internal users and applications. Additional benefits from economies of information and learning are preventing mutually incompatible negotiation strategy usage and using the available resources wisely on global scale so that no business unit deprives one another (Faes et al., 2000). More about information sharing and its benefits can be found in chapter 2.3.4.

2.3 Success Factors

Maybe most comprehensive analysis and research on the success factors has been made by Monczka and Trent (2005) who have extensive background on the research related to global sourcing. According to Monczka and Trent (2005) there are seven characteristics that organizations with successful and strong global sourcing have in common. In the following paragraphs, these characteristics and success factors are discussed in more detail.

2.3.1 Executive Commitment

The first one is *executive commitment to global sourcing*. According to Monczka and Trent (2005) this translates to strong support from CEO of the company to the global sourcing project. This is to result in the support from also the functional leaders of the company, and willingness to participate in the project. Therefore, the top-level commitment has an important role in global sourcing; because without it, it would be difficult to ensure organization-wide buy-in into the global sourcing activities (Monczka and Trent, 2005, p. 5, 8). This follows Rozemeijer's (2000) conclusion that CEO's role is to support, initiate and monitor. Monczka and Trent see that these functional leaders should not only be informed, but also included in the global sourcing project in form of steering committee or council. They also state that the task of executive leaders is to recruit qualified personnel to be part of the global sourcing teams. Another point emphasized by Monczka and Trent (2005) is that there should be a highly skilled and experienced manager in charge of the global sourcing process, with the authority and responsibility to turn the vision into reality. Rozemeijer (2000) says the same thing as he recommends that companies should appoint senior manager problem owner to be responsible for the global sourcing process.

According to Schotanus et al. (2010) the most important success factor for purchasing consortiums is "no enforced participation", underlining the importance of being able to convince the members of collaborative purchasing of the benefits of working together. This has been confirmed in other studies as well, for example Walker et al. (2013) and Virolainen and Tella (2005) found out

that the member commitment is seen as the highly important factor enabling collaborative procurement.

2.3.2 Rigorous and well-defined Processes

The second characteristic of successful companies is that they have *rigorous and well-defined processes*. By this, Monczka and Trent (2005) mean that the project teams must have clear set of guidelines, which show them the goals to be achieved, milestones to be met, and reporting to be done. Each process is to have an owner, who is responsible for reviewing and developing the process on continuous basis. The executive steering committee is to help in this task by reviewing the processes and proposing new improvement ideas. The reasoning behind having systematic global sourcing process is to accelerate the learning process through familiarizing each participant with the process at hand (Monczka and Trent, 2005). This leads to implementation of best practices, which in turn increase the probability of achieving success. In Monczka and Trent's (2005) research, it was also found out that a practice of having "lessons learned" meetings after each project, and then forwarding the points to global team leaders, is utilized by successful global sourcing companies. In conclusion, the rigorous and well-defined process allows the organization to continuously monitor the process and improve it (Monczka and Trent, 2005, p. 6, 8). Without well-defined processes the increased complexities, coordination costs and governance of activities can become a barrier for collaboration (Johnson, 1999).

2.3.3 Availability of Resources

The third critical success factor is *the availability of resources*. Monczka and Trent (2005) found out in their research that the best practice companies make sure that before the global sourcing begins, the resources required in the process are identified and made available. These resources are personnel, budget, information, time, and help from others.

The first resource to have is qualified personnel, which they say is the most important resource to make the global sourcing succeed. The participants in

global sourcing must have the right skills, abilities and knowledge. Giunipero (2000) in his research and interviews found out that the skills and attributes especially required are cost-analytic skills, global view on supply and ability to negotiate and create global contracts. Communication skills and strategic thinking capability, which goes beyond local requirements, are also noted as important traits for global sourcing personnel (Monczka and Trent, 2003). In addition, the purchasing personnel's knowledge about foreign cultures, language and business methods are noted by many authors as success factors in global purchasing (Faes et al., 2000; Monczka & Trent, 2003; Quintens et al., 2006). Giunipero et al. (2006) write that in order for a company to retain and hire talented personnel to the purchasing, it needs to provide attractive and clear career paths also for the purchasing personnel. Thus having a purchasing function that fosters and motivates talented personnel is also a success factor. The findings of Foerstl et al. (2013) that are explained in detail in chapter 2.1 support the claim that qualified personnel is a key success factor for global sourcing.

Skills and abilities are required especially in the field of cross-functional cooperation, as in order to achieve truly global view on the supply markets the participants must be able to cooperate globally as to find the potential suppliers and be able to evaluate them (Monczka and Trent, 2005). This requires cooperation across the globe, but also internally with other functional departments, such as engineering- and legal departments (Monczka and Trent, 2005), thus to have the correct networks of people is a vital precondition for successful global sourcing (Rozemeijer, 2000). Without the cooperation, it will be impossible to get the information about current contracts, current- and potential suppliers and their capabilities, internal customer requirement, and future forecasts for each commodity and location (Monczka and Trent, 2005). Thus, information and help from others are two of the five resources.

Budget is also one of the resource needed for successful and fluent global sourcing, as with separate budget, there is no need to fight over the issue of who pays what. (Monczka and Trent, 2005, p. 28)

Time is the most important resource to have when considering the effectiveness of global sourcing teams. Making sure that the global sourcing participants have the necessary time to commit to the global sourcing projects is a major success factor. (Monczka and Trent, 2005, p. 28)

2.3.4 ICT and Information Sharing

Information Technology is used to share information effectively, which is why this chapter also deals with information sharing. Information sharing is coordination method in itself (Simatupang et al., 2002), and can therefore be counted as success factor for successful coordination of global sourcing. Information sharing is one of the largest potential synergy areas in global sourcing (Faes et al., 2000; Rozemeijer, 2000; Simatupang et al., 2002; Monczka and Trent, 2005). The information sharing occurs through ICT systems, which consequently is highly important element in successful implementation of global sourcing (Hartmann et al., 2008). Information sharing is about making the relevant, correct, and on-time information available for all the participants in the supply chain (Simatupang et al, 2002; as cited in Lee, 2000). Being successful in this grants reductions in the cost of sharing information (Simatupang et al., 2002). According to Monczka and Trent (2005), many companies struggle with the efficient usage of information. This is because of the different coding schemes, contracts and systems that are simultaneously used within the same company. A history of separate business units and mergers has caused this. However to overcome these problems, the best-practice companies have set up global data warehouses with standardized coding schemes, and contract repositories which contain global agreements (Monczka and Trent, 2005). The importance of the above mentioned, as well as using internet, intranet and global software applications also as channels through which the information is shared, is also emphasized by Hartmann et al. (2008). Having these supports global sourcing as the global sourcing teams can effectively use the data to find the global sourcing opportunities (Monczka and Trent, 2005). Monczka and Trent (2005, p.28) write that the best practice companies utilize companywide intranet as a platform to share critical information about global sourcing. This data is such as supporting documents, guidelines for global sourcing, global sourcing strategy templates and progress

updates. As for global purchasing database, the common items to share are such as “prevailing contract structure, preferred suppliers, current prices and volumes” (Hartmann et al., 2008, p. 9). In addition to the above mentioned, Simatupang et al. (2002) write that the IT applications could make information about customer demand, resource planning and contract status available for all parties to see and review, as to be able to design and optimize the system to work as one synchronized system. Simatupang et al. (2002) point out an important success factor by showing that it is not enough to have the information systems, but there must be willingness of the parties involved to use the information in their operations. The IT systems are identified by companies conducting global sourcing as highly important element in successful implementation of global sourcing (Hartmann et al., 2008).

Closely related with information sharing is the topic of *collective learning*. Collective Learning has to do with the issue of sharing knowledge between all parties involved, and to do that in a way where all parties involved have a common collective sense making about the issue at hand (Simatupang et al., 2002, as cited in Senge, 1990). The goal of the collective learning is to reach a state of being able to use each participant’s knowledge and knowhow in solving the common problem at hand. Thus the collective learning is a coordination mode in itself (Simatupang et al., 2002). Moreover, this is to be done in a way where the disagreements about nature of the problem, direction of the solution, expected result of the solution, necessity of the solution, side effects of the solution, and viability of the solution with environment, can all be overcome. (Simatupang et al., 2002, p.12; as cited in Smith, 2000). To do these Simatupang et al. (2002) present that various means of communication, both informal and formal, are the means to support the buy in of all parties involved towards the change. Means of communication presented are such as meetings and discussions over the phone, e-mails, reports and joint training (Simatupang et al., 2002). Accordingly, the main point of collective learning is that in order to implement new ideas and programs, such as global sourcing, there must be a strong collective learning capability, as without this capability the organization cannot overcome the multiple layers of resistance which emerge when changes are introduced.

2.3.5 Organizational Design

Fifth success factor that is seen to have direct correlation with successful global sourcing is to have an *organizational design, which supports global sourcing activities* (Monczka and Trent, 2005). Supportive organizational design means that various functions within the company find synergies in global sourcing projects working together. Rozemeijer (2000) wrote about this as he stated that structural design is an area where companies most usually search for synergies. Rozemeijer (2000) also mentions networks as important for intra-company synergies. These networks are built by having various events, training, conferences, programs, and job rotation. Trent and Moncka (2005, p.7; as cited in Hellriegel et al., 2001) define organizational design as a “process of assessing and selecting the structure and formal system of communication, division of labor, coordination, control, authority and responsibility required to achieve an organization’s goals”. Monczka and Trent (2005) see that there are three main organizational design features that the most successful companies doing global sourcing have. These features are to have (1) a formal executive steering committee with a responsibility to oversee the whole process, (2) a dedicated executive leader to manage global sourcing, and (3) cross-functional teams to conduct the detailed analysis of possible global purchasing opportunities. However, they note that there are few things to remember when using teams; one is to make sure that the team members’ other job responsibilities do not intervene with the tasks related to global sourcing. Another is to make sure that the teams have a possibility to meet regularly face-to-face. Other recommendations and remarks made by Monczka and Trent (2005) are to separate strategic activities from operational activities, and to consider using International Purchasing Offices to support global sourcing. Monczka and Trent (2003, p.11) write that having a centralized structure is more efficient for global sourcing projects especially when more coordination and integration is required. Similarly, for companies whom Business Units have low purchasing maturity, Rozemeijer (2000) recommends centralized purchasing. Faes et al. (2000) also support centralization, as they see that it is a step towards more professional purchasing function.

2.3.6 Communication

The sixth success factor is to have a *structured approach to communication*. Among other things this means that, the global sourcing teams are to have regular meetings via latest telecommunication methods, such as videoconferencing. In addition, the teams are to use tools, which equip them to work collaboratively via internet. The results are to be regularly presented to the global sourcing committee and/or to the executive leaders responsible for the success of global sourcing. Updates on the process should be posted on a platform, which everybody can access, for example on company's intranet. (Monczka and Trent, 2005, p. 8-9)

Leinonen (1999, p. 103) goes as far as saying that proper communication system, along with information sharing system, is the cornerstone of global sourcing coordination. These systems should make clear that what are the communication and reporting lines, as without doing so they cannot facilitate smooth operation (Monczka and Trent, 2005; Rozemeijer, 2000). For communication, there should be an environment of trust, and to achieve such state various measures, such as having regular meetings, should be taken to build the confidence (Rozemeijer, 2000). Without good communication, the knowledge will not pass within cross-functional teams and will result in sub-optimal results as the decisions are made with only partial information. The lack of confidence building measures leads to lack of trust, -support and -culture of joint working, which are all important for successful cooperation (Schotanus et al., 2005).

2.3.7 Measuring Savings

The last of the success factors presented by Monczka and Trent (2005) is to have *methodologies to measure savings*. Rozemeijer (2000) put this as the need to have clear and measurable targets. The reasoning is that without well-established method to measure savings, the dissatisfaction towards global sourcing activities can gain ground within the company, which leads to lack of support (Karjalainen, 2011; Monczka and Trent, 2005). Karjalainen et al. (2009) found out from their research that it is not enough just to be able to show the

achieved savings, but it is also important to have all the buyers know the savings that can be gained from coordinated purchasing. This is because the lack of knowledge of the potential savings is the main reason for maverick buying (Karjalainen et al., 2009). Therefore, there should be agreed methods to measure the savings from global sourcing in place as to ensure that the savings realized can be used to increase to intra company buy-in to the project (Monczka and Trent, 2005). The realized and anticipated savings should also be reviewed with executives on regular basis. The things to measure as presented by Monczka and Trent (2005, p. 8) are as follows;

- (1) Realized and anticipated savings from global sourcing for the whole company
- (2) Global sourcing activities' effect on corporate key financial figures (e.g., ROI)
- (3) ROI for individual projects
- (4) Other business unit performance changes due to global sourcing

A practice often used is to show the cost savings as per unit. However, this does not show the costs that were caused by the global sourcing complexities. Best practice companies include the total costs, not only unit cost savings, to their calculations and measurements. (Monczka and Trent, 2005, p. 8-10)

2.3.8 Other

Strategic urgency feeling is a success factor noted by Rozemeijer (2000) to motivate and push the global sourcing integration. To achieve this company wide communication on the reasons for and potential benefits from global sourcing ought to be marketed actively. This is especially the case as lack of knowledge about the potential benefits can hinder the participation (Schotanus et al., 2005).

Incentive alignment is a success factor for global sourcing (Rozemeijer, 2000). It is also important coordination mode to be used to make different parties work together (Simatupang et al., 2002). Without incentive alignment, the multiple parties working together can have strong individual interests that make them to act against the well-being of the whole system, and therefore can cause the

optimization of the system as a whole to suffer greatly (Simatupang et al., 2002; as cited in Clemons and Row, 1993). In global sourcing context, these kind of cases can occur easily for example case when the interests of business units differ in terms of global vs. local supplier usage, and consequently cause the scale merits to be missed on company-wide scale. This is a problem of having individual productivity incentives in conflict with company-wide optimization, leading to functional optimization (Knoppen and Saenz, 2015). Thus, the incentive alignment should be connected to global performance in customer focus and total profit, rather than individual location performance (Simatupang et al., 2002, as cited in Simatupang and Sridharan, 2002). One way to solve the problem is to foster dual allegiance through incentive mechanisms (Knoppen and Saenz, 2015). The causes for dissatisfaction towards centralized approach have been identified in the literature of joint-purchasing groups as (1) satisfaction with current suppliers and (2) the thinking that changing suppliers is too expensive (Schotanus et al., 2005). Other factors hindering the motivation to implement global sourcing are such as unwillingness to terminate existing sourcing contracts, differences in product specification preferences, and lack of knowledge about the contracts (Karjalainen et al., 2009). Therefore, when drafting the incentives it must be considered how these factors can be overcome.

Supplier's interest in global contracts is a success factor for global sourcing raised by Monczka and Trent (2003). As the demands from global suppliers can be vast, many manufacturers with global presence do not want to enter into global agreements (Monczka and Trent, 2003). The reason for suppliers for not wanting to do business using global contracts is that they can get better prices doing business with each business unit individually (Hendrick, 1997). Therefore, the supplier selection in global sourcing should not only rely on global presence but also on suppliers' willingness to enter into global contracts. Not only is supplier's interest in global contracts important, but also in giving out preferred customer status to new customers. Steinle & Schiele (2008) discovered in their research that companies should be aware of the difficulty of gaining a preferred customer status from new global supplier due to supplier's pre-existing domestic buyer-relationships. Steinle & Schiele (2008, p. 10) note that it is especially difficult to become a preferred customer if a competitor company is in

the same cluster as the supplier and enjoys the preferred customer status already. Thus being able to become a preferred customer of the supplier is a success factor for global sourcing.

Identification and prioritization of projects, common items and requirements that have most potential for integrated approach, is an essential capability to be had, and thus a critical success factor for global sourcing (Faes et al., 2000; Rozemeijer, 2000; Monczka and Trent, 2003; Trautmann et al., 2009b). According to Faes et al. (2000) it is not only important to pick the areas, which hold the most potential, but also to pick the improvement areas that are also within the organizations capabilities to improve. Faes et al. (2000) see that it is better to do the global sourcing well, step-by-step, rather than try to implement everything at once. The reasoning behind this is that in order to acquire the cooperation of all parties involved, there must be successful cooperation projects, which are to motivate and ensure the buy-in of the not-so-enthusiastic parties to the global sourcing. Therefore Faes et al. (2000) stress that it is of high importance to select the first coordination project carefully, as if it fails it might take a long time before the global sourcing endeavour starts moving again after unsuccessful project. A tool to identify most promising areas for coordination is presented in chapter 3.3.

2.4 Global Sourcing Risks and Challenges

Global sourcing has been seen as an attractive way to find new source of competitive advantage, however the decision to pursue global sourcing also brings with it new problems as companies are exposed to not only local risks, but to more complex and harder to control global risks (Christopher et al., 2011, p. 1). Compared to local sourcing, global sourcing has been especially found out to cause significant rise in the supply chain vulnerability (Wagner and Bode, 2006). Causes of risks and problems can be over focus on price when selecting suppliers, costs of cooperation, and difficulty of determining common objectives (Nollet and Beaulieu, 2005).

One big risk is to underestimate the costs of doing global sourcing, which can be categorized into static costs, dynamic costs, and hidden costs (Holweg, 2011, p. 336). Static costs are such as EXW price, logistic costs, customs and duties. Dynamic costs constitute from such as increased safety stock sizes, expedited shipments, and costs of problems dealing with supply chain that cannot respond to demand. Easy to overlook are especially the hidden costs, which are such as labour cost inflation, intellectual property losses, currency fluctuations, and overhead in managing global supply base. (Holweg 2011 p. 336).

Global Sourcing Challenges

Challenges arising from the coordination on global sourcing must be taken into account. The challenges arise from the costs that occur from coordination as well as from organizational challenges that come with the increased complexity and bureaucracy that global coordination brings with it (Leinonen, 1999, p. 101). Porter (1986) states that there are five basic problems related to business unit coordination. The first one is the problem of asymmetric benefits, where some business unit benefit and some suffer from the coordination. The second problem is that of loss of local autonomy in decision-making. Third problem is the difficulty of setting up fair measurement and incentive system that motivates all business units to participate. The fourth basic problem is the difficulty of communication between business units with radically different backgrounds. Finally, the fifth problem is that the global coordination might cause the local business units to lose their entrepreneurial attitudes. (Porter, 1986, p. 386-392)

On general level the usage of foreign suppliers, and differences in technical issues as well as perspectives of local and HQ managers, are the main problems in global sourcing coordination (Leinonen, 1999, p. 102; Gadde and Håkansson, 1993, p. 130; Flaherty, 1986, p. 94-95). Usage of foreign suppliers brings with it major issues in responsiveness, flexibility, control and costs issues for local manufacturing plants, as well as big problems in communication also, especially if the supplier and local plant have different time zones and languages (Leinonen, 1999, p. 102). For example when the supplier assistance is needed on technical issues the plants would be in trouble cooperating with the global supplier, thus the local supplier usage tendency and negative attitude

towards using foreign suppliers is understandable (Flaherty, 1986, p. 95). Flaherty (1986, p. 95) also found out that this negative attitude also affects cooperative learning and sharing benefits between business units.

3 INTEGRATION AND COORDINATION OF GLOBAL SOURCING

Global sourcing refers to “integration of decision making across worldwide business units”, and to tackle this challenge of integration firms use various tools and methods to achieve the integration. The definitions of coordination and integration are put forth by Leinonen (1999). He defines that coordination in sourcing is about linking equivalent activities within a Multinational Corporation. Moreover, as for the term integration, he defines it as “cross-functional linkage along the value chain” (Leinonen, 1999, p. 88). Trautmann et al. (2009a; as cited in March and Simon 1958; Lawrence and Lorsch 1967) define integration and coordination in global sourcing as finding a way to connect worldwide purchasing units so that they work as one and achieve synergy benefits supporting each other. According to Leinonen (1999, p. 88) there are two primary considerations regarding global coordination. First, the activities that hold the most potential for benefits from global coordination are to be identified. Secondly, the most suitable coordination mechanisms to use to achieve the benefits are to be considered. In this research, the information processing framework, as presented by Trautmann et al. (2009a), is used as the backbone to present that there must be a fit between the information processing requirements arising from the need to coordinate various global sourcing activities, and information processing capacity which is determined by the coordination mechanisms used.

Which activities then require coordination in global sourcing? A comprehensive list of coordination issues was presented by Leinonen (1999, p. 90) as he conducted a literature review on the topic. The table below presents his findings.

Table 1. Coordination issues for sourcing function (Leinonen, 1999, p. 90)

<ul style="list-style-type: none"> ➤ Consolidation or pooling of material requirements ➤ Conduct of sourcing-related investments ➤ Development of consistent sourcing objectives, strategies, and policies ➤ Establishment of common material specifications and standards ➤ Rationalization of the global supply base: utilization of same supplier ➤ Establishment of common supplier strategies and policies ➤ Supplier audits, and evaluation, selection, and development of current suppliers ➤ Locating and managing suppliers in different location ➤ Establishment of same standards, delivery conditions, and prices for common suppliers ➤ Purchasing research and information gathering and sharing ➤ Transfer of sourcing-related know how and innovations ➤ Development of information, control, and budgeting systems ➤ Development of common contract models ➤ Skill, competence, and process development
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While doing integration in global sourcing, firms need to have a balance between centralization and local responsiveness when they design new global sourcing organizations. This is an important consideration, which must be clear when firms consider integrating their activities (Porter, 1986). According to Trautmann et al. (2009a), the firms use varying integration approaches depending on three main contingencies, which are category characteristics, supply environment characteristics, and interdependence of purchasing units. More of these are explained in the following chapter about Information Processing Network.

3.1 Information Processing Framework

Trautmann et al. (2009a) propose in their paper “Integration in the global sourcing organization – an information processing perspective” that Information Processing Framework, hereafter referred to as IPF, can bring theoretical understanding into the questions of *when* integration is needed and “how and why various contingencies affect integration in the global sourcing organization” (Trautmann et al., 2009a, p. 59). The main idea of IPF is that organizations have different needs for information processing, and thus have different information processing mechanisms (Trautmann et al., 2009b, p.58). They state that IPF can increase the understanding of global sourcing especially on integration topic, which they say has only regarded the benefit-side without

taking into account the costs involved. They borrow theoretical arguments from organization scholars and present an IPF that theoretically explains that organizations use different integration mechanisms because their information processing needs are various (Trautmann et al., 2009a).

Figure 5 shows that there should be a fit between information processing requirements, hereafter referred to as IPR, and information processing capacity, hereafter referred to as IPC. The logic goes that when IPR are high, various lateral mechanisms are required. The low IPR can be effectively met with vertical mechanisms such as centralization. However, an important point is to understand that there are costs involved in increasing the IPC, thus there must be a balance between IPR and IPC. (Trautmann et al., 2009a)

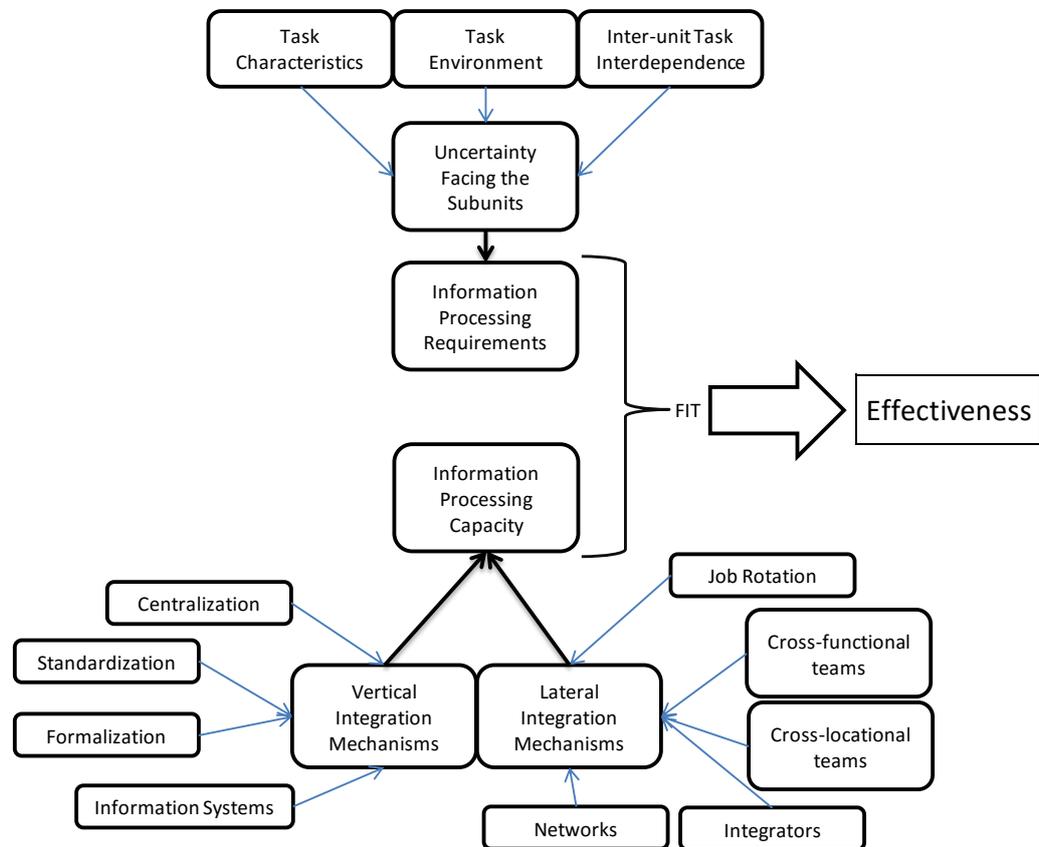


Figure 5. Information Processing Framework
(Modified according to Trautmann et al., 2009a, p. 59)

Trautmann et al. (2009a; as cited in Galbraith 1973, 1977, 2000) write that IPC can be increased by two mechanisms, which are vertical integration mechanisms and lateral integration mechanisms. According to Trautmann et al.

(2009a) the vertical integration mechanisms are such as organization structure (centralized-decentralized), standardization and formalization of processes, and vertical information systems. The lateral integration mechanisms refer to the methods such as job-rotation, cross-functional- and cross-locational teams and integrators. These are more costly and time-consuming to implement than vertical integration mechanisms; however, these mechanisms have more IPC potential than vertical mechanisms (Trautmann et al., 2009a). These two mechanisms, which can be called in other words as (1) structural and formal mechanisms, and (2) subtle and informal mechanisms, are to be used together, cumulatively, as to gain ability to answer the demanding information processing requirements of global sourcing (Leinonen, 1999, p. 99-100).

Trautmann et al. (2009) refer to the literature of Organizational Buying Behaviour to find the causes of uncertainty. They state five causes of uncertainty, which are as followed: purchase novelty, product complexity, purchase importance, demand volatility, and supply market characteristics (Trautmann et al., 2009a, p. 60). The first four relate to the Task Characteristics from Figure 5, and the fifth, supply market characteristics refers to the Task Environment. The third factor causing uncertainty facing the subunits is the inter-unit task interdependence as seen in Figure 5. Example of what this interdependence is, for example, when purchasing of common item is pooled to one location to take advantage of scale effects. This means that they have a high interdependence with one another, which is named in the literature as “reciprocal interdependence” (Trautmann et al., 2009a, p. 67-68).

First task characteristic is purchase novelty. It refers to the experience the firm has on purchasing a specific item, and the reason it affects uncertainty is because the newer the task is, the more uncertain the purchasing process of it is. The second task characteristic of product complexity refers to the product's customization degree. Here the reasoning is that more customization leads to increased uncertainty. The third task characteristic is purchase importance, referring to the degree and type of risk perceived in the purchasing situation. The general rule is that higher volume and risk of purchase also cause the uncertainty regarding the purchase rise. Demand volatility is the final task characteristic, and refers to the degree of demand changes across periods. The

higher the fluctuations in demand, the more uncertainties there are regarding the purchase. (Trautmann et al., 2009a, p. 60)

The main point of Trautmann et al. (2009b) about information processing framework is that it should be used to analyse each purchase category, so that the information processing capacity can be adjusted to match the IPR using the various mechanisms. In the following sub-chapters, the integration mechanisms are studied in detail as to form a comprehensive picture of the methods firms use to transform themselves into global sourcing organizations. In the following chapter, the vertical information mechanisms are presented in detail. However, the integration mechanisms of information systems is not presented here, because its benefits and necessity for successfully coordinating global sourcing are already widely and deeply discussed in chapter 2.3.4.

3.1.1 Vertical Integration Mechanisms

The mechanisms included in vertical integration according to Trautmann et al. (2009a, p. 59) are centralization, formalization, standardization and vertical information systems. In the following chapters, these topics are described in more detail. Martinez and Jarillo (1989, p. 491-492) named the before-mentioned mechanisms as structural and formal mechanisms, and included output- and behavioural controls in addition to this list.

Organizational Structure

Organizational structure is an important topic in global sourcing since the global sourcing must be executed by an organization that is most suitable to do it (Arnold 1999). It is even argued that the configuration of organization is the most significant decision to be made concerning global sourcing (Cavusgil et al., 1993, p. 150), which means who, where and what of global sourcing system design (Leinonen, 1999, p. 78; as cited in Wood et al., 1995). Issues concerned are such as: which activities are grouped to which organizational unit, in what degree the formal authority is concentrated, and what kind of hierarchical mechanisms are used (Leinonen, 1999, p. 94). Highest form of coordination means practically total centralization of operations (Leinonen, 1994, p. 94). The discussion on the organization has been mostly centred on centralization vs.

decentralization in the literature (Arnold, 1999; Bals and Turkulainen, 2015). However in recent years the so-called “Hybrid organization” has been gaining ground on the discussion (Bals and Turkulainen, 2015; Trautmann et al., 2009). Global sourcing also poses organizational challenges (Gelderman and Semeijn, 2006). This is because the ideal or most efficient organization structure is dependent on the category characteristics of each bought goods and services (Trautmann et al., 2009). The main problem or challenge which each firm must face is to balance the organizational structure so that it is able to deal with firm-level strategic requirements as well as local strategic requirements; finding this balance is the key to achieving successful global sourcing (Arnold, 1999; Hartmann et al. 2008). However, it should be noted that this is not specifically only global sourcing problem, but a problem that each firm operating in dispersed environment faces (Lintukangas, 2009). While configuring the organization for global sourcing, one should have an idea about which operations and sourcing activities benefit the most from centralizing, and which are better to keep decentralized (Leinonen, 1999, p. 83). Some general guidelines are to centralize the organizations sourcing strategy (Dobler and Burt, 1996, p. 11), as well as those activities that concern the whole company (Cavinato, 1992, p. 32) and those that require global view and high expertise (Carter, 1990, p. 9).

Centralization, or coordination, is often considered as the logical path for purchasing organization when global sourcing is to be implemented (Faes et al., 2000). In centralized purchasing organization the purchasing is, as the name tells, centralized into one organization (van Weele 2011, 286). The benefits of centralization have been identified as synergies from economies- of scale, scope, process, information and learning (Faes et al., 2000). According to Dobler and Burt (1996, p. 120), the most significant benefit of centralized system is to gain deeper specialization that results in higher knowledge and more competent workforce. Other advantages include consistency of sourcing strategies, better control of sourcing performance, and better chance to deal with price anomalies and competition (Leinonen, 1999, p. 82). Disadvantages are such as bureaucracy, fewer supplier contacts, slower response time, and decline in morale of local business units (Leinonen, 1999, p. 82).

Decentralized purchasing means that each business unit has their own purchasing functions with full authority and control over their own purchases (van Weele 2011, 284). The reasoning for having decentralized purchasing can be based upon three main points according to Faes et al. (2000). First is that by having local personnel, companies can handle any local problems effectively. Secondly, the costs are thought to be best handled by allocating them to each “profit centre”. Thirdly, the local presence is important as to achieve good relationship with suppliers. Arnold (1999) also writes that decentralization provides an opportunity by granting flexible border crossing making it easy to operate in foreign markets. Risk connected to decentralization is that purchasing units might not achieve economies of scale and scope and thus cannot work efficiently due to their small sizes (Arnold, 1999). Moreover, increased need for communication between business units is another disadvantage of decentralized purchasing (Leinonen, 1999, p. 82).

Hybrid organizations are the latest addition into the organizational design discussion. In hybrid organizations, the tasks are allocated between the headquarters and the sub-units that are dispersed. This way the firm can draw benefits from the synergies in global sourcing without losing the local responsiveness (Trautmann et al., 2009a). In other words, it is about pursuing after the benefits of both approaches while avoiding their disadvantages. In hybrid organizations, the HQ usually conducts the strategic activities, such as deciding on sourcing strategies, policies, company-wide specifications and standards, while the local business concentrate on operative activities (Leinonen, 1999, p. 83; van Weele 2011, 286). The most usual things to centralize are strategic negotiations, supplier management and long term contracting (Karjalainen 2011, 88). According to Leinonen (1999, p. 83; as cited in Corey, 1978; Narasimhan & Carter, 1990; Leenders & Fearon, 1993; Gruschwitz, 1993; Dobler & Burt, 1996; Matthyssen and Faes, 1997), other HQ level responsibilities are to take care of information sharing systems, training programs, HR recommendations, and legal issues concerning supply management. The relevant question in hybrid organizations has been to identify what to centralize and standardize, and to this question, Trautmann et al. (2009b) tried to answer by presenting a portfolio model in which the purchasing categories are separately analysed by analysing each purchasing category

potentiality. The reasoning for analysing at category level was that each category has its own unique characteristics and thus requires individual analysis (Trautmann et al., 2009b).

Standardization

Literature sees many topics that have synergy benefits when standardized. Rodriguez et al. (2006) found out that the standardization on purchasing has significant positive effect both on purchasing as well as on business performance. Rodriguez et al. (2006) connect the purchasing standardization's positive effects into product-, delivery- and inventory performance. Quintens et al. (2006) point out the importance of standardization in global sourcing as they present that Global Purchasing Strategy is conceptualized into four dimensions, out of which three are standardization of purchasing process, product-related characteristics and staff organization. Quintens et al. (2006) argue that global standardization and coordination of purchasing are vital for successful global sourcing. Without standardization the volume bundling can be very difficult to achieve and thus globally integrated global strategy cannot be achieved. Sanches-Rodriguez et al. (2006) found out that the standardization affects purchasing and business performance significantly and is therefore highly important. Apart from increased business performance, the advantages from standardization listed by Sanchez-Rodriquez et al. (2006) are as followed: meeting expenditure targets, increased quality, and better delivery and inventory performance. Knoppen et al. (2015) write that company can increase the learning capabilities of a company through standardization. One way to do this is by centrally developing guidelines and procedures, for example by using standardized contract content and criteria (Knoppen et al., 2015).

Process Standardization in global purchasing was defined by Quintens et al. (2006, p. 883) as "the degree to which global purchasing takes place in a standardized way". Quintens et al. (2006, p. 883) see market investigation and screening, supplier selection, negotiations and contracting, and supplier evaluation and follow-up as the phases to be targeted in standardization. Trautmann et al. (2009b, p. 66) see that standardized purchasing process, which according to them include things such as need definition, market analysis and strategy development, is a way for category manager and local supply

manager to have a common understanding without unnecessary misunderstandings.

Product Standardization is the degree to which the product characteristics have been standardized across the company, and is heavily dependent on the marketing strategy of the company since adaptation to local markets is major topic in marketing (Quintens et al., 2006). However Standardization is not always the most suitable option, as adaptation can be a better option for some products, markets and supplier relationships (Quintens et al. 2006). Standardization has been found to result in reduced need for geographically close suppliers, thus benefitting company as it gains more opportunities and alternatives (von Haartman, 2015). Monczka et al. (2008) state that the advantages from product standardization and simplifications are for instance fewer part numbers, which leads to fewer suppliers and transactions, which again turn into lower inventory management costs. Maybe the most important reason is to be able to increase total order volumes with suppliers and to be able to leverage worldwide purchasing volumes (Monczka et al., 2008). Monczka et al. (2008) note that the change to standardized products can be a huge cultural challenge for the organization as well, and thus requires strong top management support and directing in order to succeed. The tools listed for achieving product standardization by Monczka et al. (2008) are as followed:

- (1) Establishing premium pricing for customization in which custom requirements mean more costs for the customer.
- (2) Establishing geographic-specific options and standards.
- (3) Maintaining a database of option requests, which means to map out the option requests, and regularly remove non-used options from catalogues and further develop those options for easier manufacturing that are increasing in usage.

However, when standardizing the local peculiarities and uniqueness should be taken into account in the product design. Finding the balance between adaptation to local circumstances and global standardization gains must be carefully thought (Knoppen and Saenz, 2015; Quintens et al. 2006; Zou & Cavusgil, 2002). Elements that are critical to company's product branding and positioning should never be removed through standardization (Monczka et al.,

2008). Usage of Total Cost of Ownership and Business Modeling tools and decision criteria templates can help in the product-design decision process as with them the optimal design also in terms of supply possibilities and costs can be measured and taken into consideration (Monczka et al., 2008).

Personnel characteristics were identified by Quintens et al. (2006) as one of the areas in global sourcing in which standardization can bring benefits. According to Quintens et al. (2006; as cited in Faes, Kinght & Matthyssen, 2001), the main objects to influence in personnel characteristic standardization are the staff organization and staff management.

Formalization

Formalization refers to the conduct of routinizing and standardizing the decision-making through the usage of rules, procedures, norms, routines, systems, and standards (Nobel and Birkinshaw, 1998; Leinonen, 1999, p. 95). It also refers to the administrative planning and control processes, which result in integration within the organization (Leinonen, 1999, p. 93). The goal of formalization is to guide decision-making as well as the performance of activities (Leinonen, 1999, p.95; as cited in Bartlett & Ghoshal, 1989; Martinez & Jarilla, 1989; Ghoshal & Noria, 1993). Reason for formalization according to Nobel and Birkinshaw (1998) is to achieve control without communication. Formalization, when successfully implemented, grants increased efficiencies and reduce operating costs that follow centralization (Leinonen, 1999, p. 95). In global sourcing context, formalization is considered as indispensable requirement, but it is to be used with care as it can cause loss of motivation for managers in other business units and over rigidity of the organization (Leinonen, 1999).

The areas where formalization is seen as a must in global sourcing were identified by Hartmann et al. (2008, p. 35) as governance and policies, processes, and controlling. Governance and policies is said to include creation of manuals, such as general rules and codes of conduct. In addition, the definition of each role and their competencies is part of governance and policy creation area. Global sourcing process formalization refers to creation of clearly defined roles and responsibilities. Controlling is about having common methods

of performance monitoring and reporting templates, with the aim and idea of being able to compare each business unit's performance effectively. (Hartmann et al., 2008)

3.1.2 Lateral Integration Mechanisms

Lateral integration mechanisms are used because it is not enough to just share and exchange basic information about suppliers and prices, but there is a need to have a shared understanding about the joint project (Trautmann et al., 2009b, p. 67). Lateral integration mechanisms are more informal and subtle in nature, and have their focus on personal relationships (Leinonen, 1999, p. 96). According to Hartmann et al. (2008), a typical example of lateral integration mechanism used in companies is the usage of cross-locational teams. This is a form of formalised lateral relationship. Other typical lateral mechanisms are such as job rotation, cross-departmental teams, task forces, committees, integrators and integrative departments (Leinonen, 1999; Trautmann et al., 2009). These kind of lateral relationships bring in benefits from active involvement of other business units in strategy development, leading to increased communication and creation of informal networks that allow higher knowledge and information transfer to be achieved (Hartmann et al., 2008, 37). According to Harmann et al. (2008, p. 39) the personnel involved in these cross-locational teams are for instance subsidiary managers and global category managers. This kind of lateral integration grants companies the ability to process more information and knowledge than what could be achieved by only relying on vertical integration mechanisms (Hartmann et al., 2008, p. 39). For global sourcing, the information processing requirements have been identified to be so high, that without the usage of variety of lateral integration mechanisms a company cannot integrate its activities with its many business units (Hartmann et al., 2008, p. 39).

Temporal task forces are highly flexible and are most suitable for tasks that have specific scope. Coordination committees provide a platform for information exchange and are good for presenting new ideas and test new projects. Integrators in turn can be used to bring strategic convergence among the managers who operate the global sourcing. (Doz, 1986, p. 230-231)

Coordination Team

Sourcing Coordinator or coordination teams are used in many MNCs in activities such as supply market research, finding benefits from coordination to the company as a whole, coordinating global strategy creation and execution in consistent manner, and finally in ensuring that available resources are used well. Therefore, the coordination team acts as supporting function that connects the HQ with the other business units. When using sourcing coordinators it must be taken into account that the information channels become lengthy and more time-consuming. (Leinonen, 1999, p. 96; as cited in Gruschwitz, 1993).

Commodity Sourcing Teams

Commodity teams are responsible for creating global sourcing strategies, selecting the most suitable suppliers and materials to use, creating policies and procedures that bring synergy benefits, consolidating purchases, and being aware of the latest cutting-edge technologies through sharing information between each other (Dobler & Burt, 1996, p. 122; Trent & Monczka, 1994, p. 5). The simplified three-step process that the commodity teams are to do, is to first collect all the information regarding the commodity, and then to negotiate with the supplier a framework agreement, and finally each business unit is to use that agreement when directly buying from the agreed supplier (Gadde & Håkansson, 1993, p. 130). The commodity teams consist of members from each business unit; therefore, the burden is not solely on the HQ but shared with each business unit (Monczka & Trent, 1992, p. 16). This kind of functional coordination within the PSM is found to have significantly positive effect on purchasing performance of the firm, even higher than cross-functional coordination (Foerstl et al. 2013, p. 711). The commodity teams are usually led by those business units who are closest to the suppliers or by those who have the best resources to lead it. The leading business unit in most cases has the highest sourcing volumes (Leinonen, 1999, p. 97). Additionally, the team leader is in most cases the lead buyer, who is required to have enthusiasm and talent to manage the commodity team successfully (Leinonen, 1999, p. 98; as cited in Pooler, 1991). Making the participation voluntary is a way to make the process more agreeable to business units across the world (Leinonen, 1999, p. 98; as cited in Pooler, 1991).

Informal and Subtle Coordination Mechanisms

In chapter 2.3.5 about Organizational Design, few informal coordination mechanisms were already stated. These are such as personal networks, trips to meet other business unit managers, all kinds of meetings and occasions where managers can meet, and even transfer of managers (Leinonen, 1999, p. 98). These are used to supplement the formal, or vertical, coordination mechanisms. This kind of coordination can however be highly challenging, expensive and demanding (Leinonen, 1999, p.99; as cited in Bartlett & Ghoshal, 1989). Nevertheless, it is very important, as without socialization of individuals who are located across the globe, the formal coordination mechanisms alone are not enough to achieve common understanding on management issues (Leinonen, 1999, p. 99; as cited in Bartlett, 1986).

3.2 Control Mechanisms of MNCs

Hartmann et al. (2008) build on a typology from Harzing (1999) when they present four categories of control mechanisms for achieving integration among business units. The classification is built on four types of control variables, which are personal and impersonal, and direct and indirect. Which control mechanism is used depends on the unique aspects of each Business Unit relationship with the HQ, thus there can be different mechanisms used in same company for different business units (Nobel and Birkinshaw, 1998). The control mechanisms are already presented as parts of IPF, however as Hartmann et al. (2008) presented them in a bit different package, they are explained here shortly.

The first three categories have to do with the vertical mechanisms as found in the IPF. The first category is personal centralized control. According to Kim et al. (2003), in personal centralized control the decision-making stays at the headquarters due to better oversight over the other business units. Second category is bureaucratic formalized control in which usage of policies, rules and standardized work procedures drafted by HQ are distributed to other Business Units (Nobel and Birkinshaw, 1998). Third category is output control, in which the final output in terms of performance and quality are used as performance metrics. In output control, the key is to have good output measuring systems in

place (Hartmann et al, 2008, as cited in Baliga and Jaeger, 1984; Ouchi, 1977). Fourth category is coordination by socialisation and networks, and is categorized as lateral integration mechanisms in the IPF. Socialization and networks work to ensure that the cross-functional and cross-locational teams have the same norms, rules and behavioural expectations in the organization (Hartmann et al., 2008). These common norms and rules are expected to promote like-minded decision-making (Nobel and Birkinshaw, 1998, p. 5). A study conducted by Lawson et al. (2009) confirmed that the informal socialization mechanisms, such as communication guidelines and social events, support and advance inter-organizational knowledge sharing. They also concluded that the formal communication mechanisms, for example cross-functional teams, indirectly support the knowledge sharing as they also advance informal communication (Lawson et al., 2009).

3.3 Analysing Synergy Benefits

Synergy Benefits from global sourcing refer to the increased global efficiency that in turn is to become one of firm's competitive advantage (Faes et al., 2000). Rozemeijer (2000, p. 7) define purchasing synergies as the value that is added when two or more business units combine their resources and share their knowledge in the area of purchasing. He simplifies this by simply stating that purchasing synergy is "doing more with less" (Rozemeijer, 2000, p. 1). According to Rozemeijer (2000) the approach the company should take on the purchasing depends on business unit homogeneity and the level of maturity of the purchasing in the business unit. Below is the matrix Rozemeijer (2000) presented which acts as a guideline for choosing the right purchasing approach.

Purchasing maturity in the business units	High	Sharing Best-Practices Corporate competence centre	Centre-led purchasing Lead buying Cross-functional teams Global database CPO
	Low	Decentralised purchasing Information sharing (price, suppliers, etc.)	Central Purchasing
		Low	High

Business Unit homogeneity

Figure 6. Purchasing Maturity versus Business Unit Homogeneity Matrix
(Modified according to Rozemeijer, 2000, p. 7)

It was found out that the identification of the areas with most potential for synergy is a critical success factor in chapter 2.3.8. In the following chapters, the portfolio tool presented by Trautmann et al. (2009b) to identify the synergy areas is presented. The portfolio is based on the three economies that can be gained from global sourcing. These economies from global sourcing were presented by Faes et al. (2000; as cited in Arnold, 1997; Keough, 1993; Matthyssens and Faes, 1997). These economies are as follows: economies of scale, economies of process, and economies of information and learning. In the following chapters, this portfolio tool is presented. This portfolio tool is based on the theory presented in Information Processing Framework. The portfolio tools include in themselves some basic directions of *How to pursue integration* in these economies in terms of integration mechanisms. The main idea of Trautmann et al. (2009b) is that the economies of a product show and dictate how the integration is to be managed in it.

However, when to pursue more coordinated approach to purchasing has been studied and thus the topic already has some answers. Corey (1978) stated that the common requirement in different business units is an important prerequisite for purchasing integration and coordination. He also suggests that for oligopolistic markets an integrated and coordinated purchasing could be advisable (Corey, 1978). Faes et al. (2000) write that especially good targets for more centralized or coordinated global sourcing purchasing are those with low site specificity and low specificity linked to assets or human resources. An

example they give are raw materials and components that are standardized, non-production goods and maintenance, repair, and operations-items, hereinafter referred to as MRO items (Faes et al. 2000, p. 3). Smart and Dudas (2007) come to the same conclusion as they suggest that MRO-items and indirect materials are most suitable for pooling initiatives. Karjalainen (2011, p. 3) conclude that for the abovementioned reasons it could be reasoned that especially the routine and leverage items from Kraljic's (1983) portfolio are suitable for centralized framework agreements. This seems to be the case also according to Joyce (2006) as he states that high-volume and high-value items are most suitable for coordinated purchasing. Trautmann et al. (2009a) write in their paper about information processing framework that when there is low uncertainty in the purchasing environment, a centralized approach is suitable. Thus, the reasoning goes that for high uncertainty purchasing more decentralized method could be more fitting.

3.3.1 Economies of Scale

Trautmann et al. (2009b) present that synergy potential in terms of economies of scale can be best analysed by using degree of volume aggregation and geographical scope of the relevant supply market as dimensions of portfolio analysis. By this degree of volume aggregation Trautmann et al. (2009b) mean the extent to which each Business Unit shares similar specifications and requirements with each other. Trautmann et al. (2009b; as cited in Arnold, 1997; Kraljic, 1983; Porter, 1999; Smith, 1999) write that high similarity and standardization level of a product category translates to lower related risks and higher potentiality for purchasing pooling as the products are not so prone to design changes. As for the dimension "relevant supply market", the main thing as identified by Trautmann et al. (2009b) is the supplier's capability to deliver the product globally. The topics that affect this dimension are such as transportation costs, supply risks and complexity of supplier base. Below is the portfolio to determine the economies of scale.

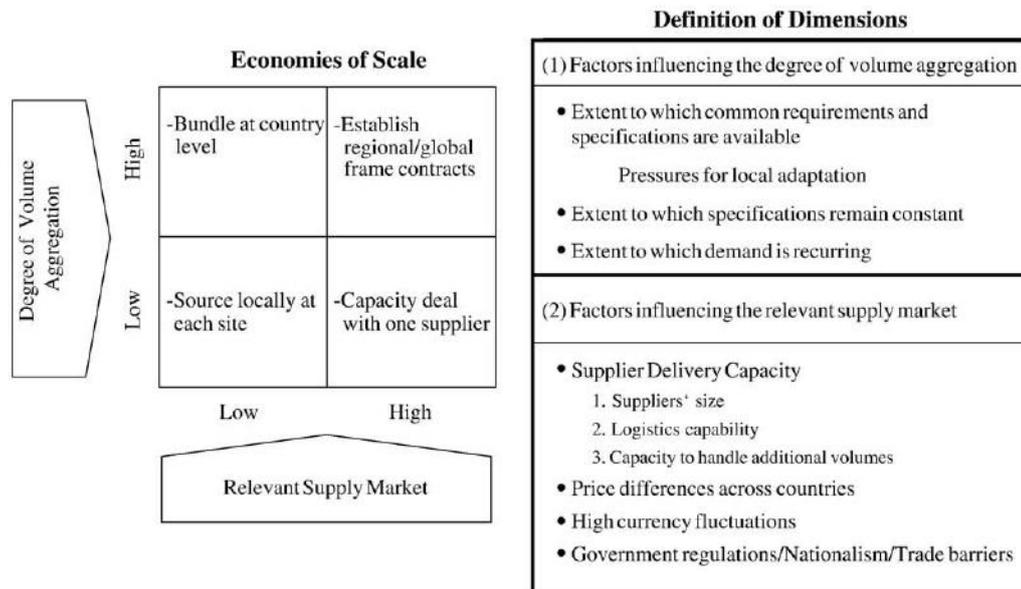


Figure 7. Purchasing sub portfolio to determine economies of scale
(Trautmann et al., 2009b, p. 199)

3.3.2 Economies of Process

Trautmann et al. (2009b) identify economies of process as a synergy form that is exploitable in global sourcing. Trautmann et al. (2009b) present a portfolio approach to identifying the situations in which common way of working and best-practice implementation is advisable in global sourcing. The portfolio has two dimensions, which are transaction volume and process complexity. Transaction volume is one dimension with reasoning that high number of transactions for low value items can cause significant transaction costs (Williamson, 1979). These high transaction costs should be targeted by streamlining of purchasing processes with means of adopting standardized best practices, and electronic procurement systems (Trautmann et al., 2009b; as cited in Bartezzaghi and Ronchi, 2004; Croom, 2000). The factors increasing process complexity are such as high number of substitution possibilities, balance issues in supplier relations, and supplier availability (Trautmann et al., 2009b, p.200). Below is the purchasing sub portfolio which Trautmann et al. (2009b p. 200) presented as a tool to determine economies of process.

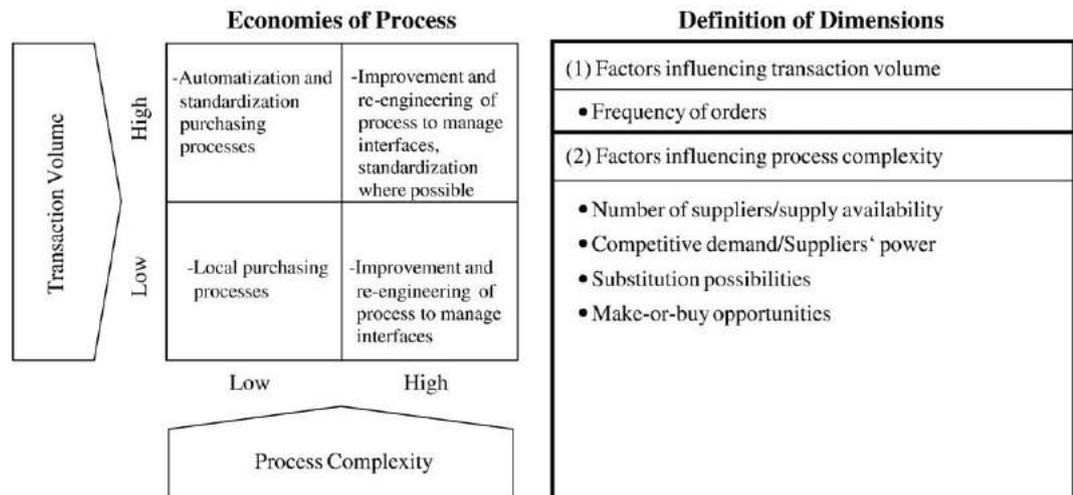


Figure 8. Purchasing sub portfolio to determine economies of process
(Trautmann et al., 2009b, p. 200)

3.3.3 Economies of Information and Learning

In the portfolio meant to determine economies of information and learning made by Trautmann et al. (2009b), the economies of information and learning are divided into two dimensions, which are factors influencing purchase difficulty, and factors influencing supply risks. The purchase difficulty refers to the five causes for difficulty as described earlier in page 33. Supply risk dimension is the same as presented in Kraljic's Portfolio (Kraljic, 1983), thus the availability and substitutability of suppliers are the main determinants in this dimension. Depending on the results of the analysis, the recommendations are, as can be seen from the figure below, to leverage either market knowledge or category knowledge, or both. In practice when the knowledge leveraging requirements are high, the companies should consider using various measures to ensure that the knowledge transfer is efficient and that the teams are well equipped to share the information. Moreover, when the requirements are low, company can save money by not over-investing in information processing capacity mechanisms.

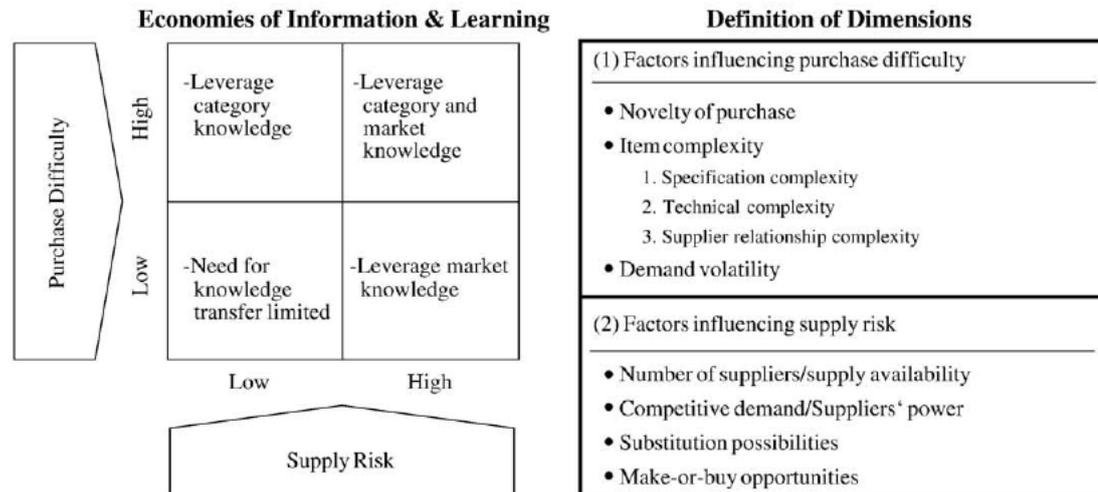


Figure 9. Purchasing sub portfolio to determine economies of Information and Learning

(Trautmann et al., 2009b, p. 199)

3.4 Analysing empirical findings

The theoretical information of the thesis is used to analyse the case company. The paragraphs below describe the analyses process and provide a systematic and holistic approach into evaluating and improving the global sourcing of any company.

First of all the motives for global sourcing are investigated as to find out whether the company is pursuing all the possible benefits from global sourcing. One main area of investigation is the method of identifying the synergies to be pursued; is the process systematic and such, that every potential synergy-area is likely to be found? Focus areas are especially the tools and methods used to identify areas in which actions should be taken to find synergies. The case company's practices are then compared to the tools and methods as found out in the literature as to see if there is any room for improvement.

The second part of the process is to examine how the case company fares in each of the identified success factors of global sourcing. The best practices and ideal situations as identified in the literature are used as the default state to which the case company's actions are compared. Due to the complex nature and wide-encompassing reach of global sourcing activities there are many

potential areas that are looked into. To put it simply, the success factor analysis is the action of analysing various areas within the company using a checklist, that is comprised of the most influential and critical success factors for global sourcing.

Third part of the analysis is concerned on finding out whether there are problems in coordination and integration. The basis for analysing the case company comes from seeing how well the coordination- and integration mechanisms used at the case company work to ensure smooth and effective information exchange and processing. As researching and evaluating each coordination- and integration mechanism used at the case company would be too large of a task, the approach is to concentrate on clearly visible problems that are most likely to be caused by insufficient coordination- and integration mechanisms. The analysis on this part especially focuses on finding out whether the coordination- and integration mechanisms are designed to suit the information processing requirements of each category specifically.

4 EMPIRICAL PART

The empirical part of the thesis starts by explaining the research process in the chapter 4.1. In chapter 4.2 the case company is briefly introduced, and especially the global sourcing aspects are looked into as to give the reader basic understanding of the case company at hand. Chapter 4.3 shows how the empirical data for this research was gathered. Chapter 4.4 is the analysis part of this research in which the topics researched in the theoretical part are used to examine the case company's conduct in global sourcing. According to the theoretical findings and analyses done in chapter 4.4, the chapter 4.5 provides the recommendations to the case company on how it could further develop and enhance its global sourcing.

4.1 Research Process

Figure 10 below shows the research process. The research began by doing a literature review on the global sourcing motives and success factors. This part

of literature review provides an understanding on why companies pursue after global sourcing, and what are the common requirements, or success factors, for implementing global sourcing. The second part of literature review is to research the various coordination and integration mechanisms that are used to realize the synergy benefits from global sourcing. With the theoretical knowledge in hand, the case company's situation is then analysed. This brings forth the development areas in the case company's global sourcing practices, which are then targeted in form of recommendations on how to improve them. Finally, conclusions are drawn from the main points of the research.

THEORY	Research plan: Developing Global Sourcing at the Case Company	Theory: (1) Global Sourcing drivers, success factors. (2) Coordination and Integration within Global Sourcing.			3. Recommendations and Conclusions
EMPIRICISM		The theoretical findings define the topics of empirical research: which documents to read, what to ask in interviews and to which processes to observe closely.			
		1. Investigate Current Situation	1.1 Documents 1.2 Interviews 1.3 Observance	2. Analyse by reflecting with theory	

Figure 10. The research process.

4.2 Case Company

The case company for this thesis wishes to remain anonymous, which is why it is referred just as case company in this thesis. According to the case company's wishes, the detailed information about the company is also kept to minimum and only information that is relevant in this thesis is included. The case company is a tier 1 supplier for mainly automotive industry, but its core technology can also be utilized in other industries as well. The case company has a long history going back over 70 years, with steady progress from being

only domestic company into becoming an international company, and now striving to become a truly global company.

The case company has less than 10,000 employees (as of March 2015) with revenue of around 2 billion euros in 2014. The case company is independent, not being part of larger conglomerate. The company has multiple overseas business units, some of which are jointly owned with local companies. From market serving strategy point of view the case company has a decentralized international manufacturing, which means that it has manufacturing and assembly plants across the globe. The global operation areas are in North America, Asia and Europe, in all of which it has manufacturing locations. The home country of the company has been losing its importance as the overseas locations have increased their revenue steadily, forcing the company towards becoming a truly global company and not just company with international presence. This change in the revenue sources of the company is one reason the global sourcing was initiated. Other reasons were the drastic increase in the amount of suppliers, and realization about the lack of synergy between business units. These led to below-expectation performance in purchasing performance indicators, such as achieved annual cost reductions.

4.2.1 Purchasing Function before Global Sourcing

Before the global sourcing project began, the purchasing was done by each worldwide location independently, without much interaction or coordination with other business units. However there were some lateral mechanisms used to keep control of the activities on global basis, maybe the most important of them was to have a person from HQ's a home country in each business unit's purchasing department to manage, coordinate and develop the purchasing in each region and to act as a liaison person between overseas locations and HQ. The importance of having a HQ person in overseas purchasing was highly important especially because of communication issues, as without the liaison person it would have been very difficult because of language differences. The global coordination was thus on the shoulders of these few individuals and on a global database system which was so underdeveloped that only few persons

used it. This led to a situation, in which each business unit established their own supplier bases and had their own purchasing procedures. The company strategy supported this “localization” development as it emphasized the importance of having local supplier. Thus in the end, before the global sourcing began, the global supplier base had grown so big that gaining scale benefits on global scale became very difficult to achieve. This was due to not only having different suppliers in each business unit, but also having different the part names, part numbers and purchasing procedures in each business unit. With focus on local operations there had been very little global formalization or standardization in the area of purchasing. Causes for different systems and procedures were also the joint ownership of some of the overseas business units, and the history of acquisitions of other companies that have their own systems and ways of working already in place. In fact, the standardization had not been happening even on domestic scale, as different locations also operated locally without actively trying to find purchasing synergies with other locations.

Purchasing in the case company has not enjoyed a reputation of being strategic part of the company as other functions within the company. Reasons for this are for example its lack of global operations, leading to smaller amount of cooperation with other locations and functions, and thus not seen as contributing strategically to the corporate performance. This reputation, while maybe outdated, still causes the new applicants to apply to other functions within the company, to those that have reputation of speedier career advancement and better overall reputation. This, and the fact that the company concentrated on local sourcing, led to a situation in which there were only few persons within the HQ purchasing are capable of handling global issues, simply because most cannot speak English. As the country of HQ values English skills high, the applicants with strong English capabilities tend to end up into the functions with more favourable reputation and better career prospects.

4.2.2 Purchasing Function after Global Sourcing

The case company’s purchasing is now facing big changes due to the change to global sourcing. Previously the case company’s each region was responsible

for their purchases, but now this is changing as the purchasing is becoming more centrally led through the initiation of global commodity management. In the new system, the global commodity lead buyers are responsible for developing a global approach towards purchasing as to achieve synergies from purchasing, mainly through bundling of purchases.

The main drivers and motives in the case company towards Global Sourcing were the cost-reduction pressures, severe earnings situation, poor cost-reduction achievements in the past years, and lack of global coordination even though globalization continues to advance. The lack of global coordination led to loss in potential synergy benefits, such as incapability to try to bundle purchases on global scale. Therefore, the main points to achieve with the global sourcing initiative were to

- (1) Reduce the amount of suppliers radically by consolidating global purchases to global strategic suppliers, and by doing so achieve scale benefits that bring cost reductions
- (2) Streamline purchasing procedures globally by standardization and formalization, using the best practices, and thus improve the efficiency of purchasing worldwide.
- (3) Achieve radical cost reductions for new products by involving the purchasing into the new product development

There were many sub motives, such as improving risk management by eliminating risky suppliers by consolidating the purchases to the strategic suppliers. One goal in the process is to unify part numbers on global scale.

4.2.3 Global Sourcing Organization

The Global Sourcing Organization has its backbone built on the company's home country personnel and with the North American personnel. As these two constitute the major part of the businesses globally and have the largest purchasing organizations globally, the decision to form the global team by teaming up these two locations was natural.

The organization structure for global sourcing changed from previous so that the global sourcing strategy is on the shoulders of global commodity leaders,

who are responsible for the global purchases of their respective commodities. Global commodity leaders were initially selected on basis of their knowledge about the commodity in question. The buyers in each business unit are responsible to cooperate with the global commodity leader for example by providing the global commodity leaders the information they require to build a global strategy.

Global commodity leaders are responsible for the Global Leaders who oversee the implementation of the global sourcing initiative. Global Leaders are the executive personnel who have the final say in the global purchasing strategies. Global Leaders provide guidelines and general advice for global commodity leaders. They review the strategies prepared by the global commodity leaders and discuss the details with them.

Global sourcing project coordinators have been set up to plan, develop, coordinate and support the global sourcing project with the support of Global Leaders. Their responsibility is to coordinate the project, take care of the global standardization and formalization, provide the global commodity leaders with instructions and material they need to build a global purchasing strategy. With the help of global leaders, the project coordinators developed and provided the guidelines, documents and templates. They also coordinate the global purchasing meetings, set the roles and responsibilities for global sourcing, support commodity leaders in their task, and in general have the role of making sure the project continued and stayed on schedule. They also have the task to coordinate the Global Sourcing project with other functions of the company.

4.3 Data Collection

The empirical information is based three sources, which are as follows:

- (1) Company material (documents, executive presentations)
- (2) Theme interviews for personnel involved in Global Sourcing
- (3) Personal observation as a member of case company

For the empirical part, the information came from the company's headquarters, as it is there where the global sourcing is led. The interviews were conducted

with the case company's purchasing managers and with the "Global Project Coordination Team" which is responsible for creating and implementing the changes to the current purchasing model to fit the global needs better. The researcher's participative involvement in the process further increases the qualitative nature of the research, placing emphasis on the observations and subjective experiences.

The empirical information gathered is based upon the findings of the theoretical part of this research. The information gathering methods in qualitative research are multi-channelled, meaning that they involve means such as the personal observation of the researcher, discussions, interviews, and analyses of the company material available, such as documents and presentations (Anttila, 2005). These provide the empirical data of this research. The personal observation in this research is participative in nature, thus the researcher itself took part in the process. Interviews conducted are theme interviews, in which the topics and themes of the interview are discussed freely, and so that the information received from the person interviewed is used to lead the interview to reveal more of the topic. Theme-interviews are used as they are especially well adapted in revealing the complexities of the global sourcing process and the problems associated with it.

4.4 Analysis

In this thesis, no quantitative analysis was done as to find out the purchasing maturity of the case company. However, the general level can be inferred from many indicators. Firstly, the talent management in terms of global sourcing capable personnel is still in its infancy, as the personnel have mostly conducted only domestic buying until now. Secondly, as Ubeda et al. (2015) claimed in their research that higher the amount of cost saving levers, tools and methodologies used, higher the cost savings tend to be and the general level of purchasing maturity. It was evident that the tools used at the case company were rather few. In addition, the portfolio mechanisms were not used for supplier classifications, risk analyses, or for anything else. Gelderman and Van Weele (2005) claim that the usage of portfolio tools in itself is an evidence of higher purchasing maturity. Finally, the difficulty in implementation of new tools

during global strategy creation showed that the ability of the purchasing organization to use new tools still had plenty of space for improvements. These all indicate that the maturity of the case company's purchasing has still plenty of room for growth.

As for global sourcing continuum, the case company had in many ways still domestic purchasing focus and the global strategies were to be created from now on. However, the existence of numerous worldwide business units and some cooperation with them, as well as the usage of few international suppliers, have made the case company somewhat prepared for international transactions and trade, therefore it cannot be said that the global sourcing capabilities are fully underdeveloped.

In the following chapters, the case company's conduct is analyzed. Later on recommendations to improve the conduct are presented. Using the recommendations presented in this thesis, the author of this thesis believes the case company has better chances on increasing its purchasing maturity and move closer to become a true global company with sophisticated global sourcing.

4.4.1 Success Factor Analysis

Executive Commitment

The global sourcing project is evidently important for the executives of the case company, which can be inferred for example from the CEO's regular messages to the company staff. Making the company global is one main theme within the company nowadays, therefore it is not only the procurement which enjoys support for its global sourcing project, but also other functions of the company that are undergoing similar globalization initiative. Therefore, the support for global activities is also cross-functional, meaning that the procurement can expect support for its activities also from other functions. Within the case company the CEO's role is similar to that which Rozemeijer (2000) presented, that is to "support, initiate and monitor" the global sourcing project.

Even though the global sourcing project is done as teamwork with many personnel involved in making decisions, the head of procurement is ultimately responsible for the project and has the final authority and responsibility to turn the global sourcing into reality. Personnel involved are such as procurement executives and specialists from other business units, project coordinators and lead buyers of each category. Buy-in to the project was achieved in other business units by having global sourcing leaders to go in each business unit to explain the project, and thus achieve voluntary participation to the project. Overall the executive commitment and support for the global sourcing is not generally an issue with the case company, however it must be noted that in some individual cases the lack of knowledge of the subject at hand prevented executive level support to an individual project. In such cases, there should be rigorous and well-defined processes to overcome the situation, more of this in the following paragraph.

Rigorous and Well-Defined Processes

Setting up rigorous and well-defined processes is one goal of the case company in their pursuit to standardize and formalize many processes. The case company has set clear responsibility areas for each participant involved, and set deadlines and milestones that must be met. However, as the global sourcing project is still very young, thus there is still a lot to be done. One area is in the ownership of processes. The case company has many projects in which there is no clear process owner as the project responsibility is shared. This led to situations in which specific projects froze and did not advance as the team members had disagreements on how to proceed. Another regrettable outcome of not having clear process-owner is that after once doing the process, there is nobody to take responsibility for improving the process on continuous basis (Monczka and Trent, 2005). The trend was to design a process and implement it and then move on to the next process or project. Theoretically, this leads to a situation in which the problems that arise in the designed process become obstacles for coordination. This is because of the fact that without fixing the processes that still require development, the collaboration between parties involved can suffer greatly as the collaboration becomes complex and consequently cause higher coordination costs.

Availability of resources when entering into global sourcing is a major success factor. The case company lacked mainly in the capabilities of personnel, and availability of time. However, this is natural as the transition from local- to transnational- and again into global sourcing does not happen in one day. The following three paragraphs analyse the case company's situation in terms of the main resources to be had.

Qualified Personnel

Long history of domestic focus in purchasing had led to lack of English skills and lack of cross-cultural experience for many employees. Global view of the supply chain was very limited for of the same reason. Language and cross-cultural communication capabilities for many were at levels that limit the cooperation capabilities within global teams significantly. Therefore, many, not all, of the global category teams did not have the readiness to create and negotiate global contracts. It must be noted that the capabilities to act global differed greatly between teams and individuals, as some had none, and some very extensive experience working abroad. A low utilization of business tools and analysis methods was apparent; a reason for this could very likely be the lack of people who have business education, as most of the personnel had technical backgrounds. This imbalance can be seen as one factor lowering the readiness of the department for global sourcing, as many lacked knowledge of basic tools and methods of strategic business thinking that is required when creating business strategies. As the case company has just begun true globalization of its activities, the hiring practices are not yet as global as they could be. Consequently, the personnel are mostly used to only domestic purchasing and cannot be said to have the cross-cultural abilities nor international experiences nor global view on supply chain.

Budget

In terms of setting up global meetings and taking care of the expenses related to it, the case company had no problems. However, *who pays and for what* about global sourcing related expenses were still not completely clear. In addition, the global sourcing budgets were not completely separated from the departments' own budgets.

Availability of Time

The case company had very tight time schedule for the creation of global strategies for each category. Afterwards it can be noted that the information processing capabilities were largely overestimated initially, leading to delays and unexpected difficulties in bringing forth satisfactory results. In addition, the fact that many teams had members in various time zones made the email-based information gathering and coordination very slow and cumbersome, as only one email could be sent per day. Thus, even small things became big, delaying and slowing down the process. Another big issue, which did not follow best practices as found in the literature, was the fact that the global sourcing teams were supposed to create the global strategies while still attending to their daily work normally.

Information Sharing and Information Technology

The current situation at the case company is that it relies mostly on emails, phone calls and videoconferences for information sharing. While the company has information database for sharing purchase related information, such as prices, suppliers and quantities, it is not widely used. The information database suffered from the same problems as many other multinational corporations suffer; from different coding schemes, contracts and systems that are simultaneously used within the same company (Monczka and Trent, 2005). With bad experiences in incorporating shared information database, there were even voices within the company who doubted the reasonability of developing a common information system. In addition, multiple ideas and opinions for such information sharing system exist, and consequently there was a general disagreement over how to proceed with it. While some meetings were held to discuss the problem, the collective sense making, as discussed by Simatupang et al. (2002), about the issue at hand was still in its infancy. These have caused unwillingness to utilize current information sharing system even after the system is improved and further developed; therefore making sure that the synergy benefits from having the system remain low. This finding emphasizes the point made by Simatupang et al. (2002), as they stated that it is not enough to have a system, it must be utilized by all to gain the benefits. Thus, the purchasing database development has come to standstill, and as a result, emails are still used as main information exchange method. Not only purchase related

information, but also all the information and data related to global sourcing project is shared via emails. The case company does not yet have intranet pages for global sourcing related data sharing.

The current system of individually requesting data by email is first of all very time consuming process that makes the information sharing, and consequently whole global sourcing project, to slow down. This is the result from writing emails every time there is need to see data, making a template and form in which format the data is requested, and in many cases, having to request the data more than once due to other party not replying. In addition, there is the possibility that the same data is asked by many people, causing overlapping work and a lot of duplicate work. As for global sourcing related material, manuals, guidebooks, templates etc., the disadvantages of using emails over intranet pages are huge. With one intranet page it would be clear to everybody where the information is, what information is out there, what is the latest version of document/template etc. and so on. Not to even mention the man-hours saved from liberating everybody from personally organizing all the global sourcing related information.

The information sharing is very important; maybe even the most important area to be done properly in order to be successful in global sourcing (Faes et al., 2000; Rozemeijer, 2000; Simatupang et al., 2002; Monczka and Trent, 2005). The lack of intranet systems, underdeveloped and low-importance of information systems, such as global purchasing database, tell that the case company has not fully grasped the importance of having proper information sharing systems to be successful in global sourcing. Without the systems, the case company's global sourcing teams cannot effectively find the global sourcing opportunities (Monczka and Trent, 2005). The existing global database is updated so infrequently that the global sourcing teams needing the latest on time information have to request all the latest information by email, supporting the findings of Simatupang et al. (2002) that the information must be on time and correct to be usable. With the current systems, the cost of sharing information at case company is very high as systems are not used nor intranet platforms utilized. There is a will to set up common standards and coding schemes, but due to manpower and time restrictions in business units, the

process is not moving forward as well as it should be. With standardization process still in its infancy, and not achieving global database utilization, and not having global software applications, not one of the most crucial features for successful information sharing in global sourcing as stated by Hartmann et al. (2008) have been achieved in the case company.

Organization Design

The organizational design for the new global sourcing organization within the case company is a hybrid. Practically this means that the global category managers from the HQ and business unit in North America have been granted the authority and responsibility to source the items and services that are suitable for global sourcing. This is done with the help of all business units across the world, so that the global category managers are connected to each business units purchase departments. The global sourcing management and coordination are led by joint teams with members from the Asian HQ and North American business unit. Intra-company synergies within the case company rely heavily on personal networks, as formal cross-functional teams do not have strong history at the case company. The strength of such networks became evident especially in cooperation with other business units, as those category managers with abroad experience advanced significantly faster in global strategy creation than those that were put to work with people they didn't have shared history. For the case company events to facilitate such cooperation between business units were scarce, as it was only during the few days when global strategies were presented the teams actually got a chance to have face-to-face meeting with their team members.

When the teams were formed little was known about the challenges of each category in terms of information complexity and specificity. This caused for example one category to become separated into two categories with two global category managers, as it became too difficult to coordinate the activities across distant business units with significant time zone differences. The case company relied on purchasing executive meetings for guiding its global sourcing initiative. The head of purchasing of the whole company led the global sourcing initiative, but he also had numerous other responsibilities and thus cannot be said to be

full time dedicated global sourcing leader as was recommended in the literature (Monczka and Trent, 2005).

Communication

In the case company, there were meetings and brainstorming sessions held to decide on communication and reporting lines. As a result of these meetings, a RASIC matrix (Roles, Accountability and Responsibility Matrix) was created to show who has the responsibility, authority over what and how the communication and reporting is to flow. There was an initiative to standardize the communication template/document, which would have been used companywide as a standard template to communicate ideas, suggestions, and decisions. Initially this did not however go through; later on similar ideas were presented to simplify communication as much as possible. Nevertheless, the current situation on communication style and method was still not clearly decided; therefore for this part the case company still can improve structured approach to communication as stated by Monczka and Trent (2005, p. 8).

The case company did use videoconferencing a lot to support the global teams to communicate with each other. However, due to low enforcement of the idea that teams should communicate frequently, the result was that most of the communication was done via email. One reason for this was the difficulty and cumbersomeness of setting up a videoconference, which required mutual confirmation and agreement on time, reserving a videoconference rooms well in advance due to their high usage also by other departments, and making sure that the teams had support when needed to help with language issues in some cases. As for creating an environment of trust, the case company utilizes various measures. One such method, which is used to get the teams and even departments to know each other better, is to in informal setting to dine together. However, such measures cannot be taken with global teams whose members are across the globe. In the end, the global category teams had very limited face-to-face contact with their team members, and consequently did not get to know each other very well. Latest communication methods, such as Skype, WhatsApp or Line were not widely utilized in global teams, however some effort was made to introduce these. As was noted in information chapter, no common web collaboration tools were used, such as intranet pages, but emails were

used for information sharing and communication. As for presenting results to executives, there were regular emails and check-ups on the progress of global teams concerning their progress on creating global strategies.

Apart from difficulties in videoconferencing and only using emails, and not using latest communication methods, there were also many other factors that hindered communication. As noted in personnel chapter, the language incapability and cultural issues were big issues slowing down the information exchange and mutual information processing capacity. Communicating ideas between business units had big issues also from the viewpoint of using different business tools, analysing methods, and concepts. A practical example of this was the decision to use SWOT analysis in the standardized global strategy template. As SWOT was not familiar to all, it took trial and error before all global teams learned to use this tool, and resulted in unnecessary loss of time.

Measuring Savings

The case company has clear targets it aims to achieve from global sourcing. It has two targets; a cost reduction target for existing products and significantly higher cost reduction target for new products. The savings are divided into three categories based on the mechanisms used to achieve cost reductions. These are negotiations, value analysis, and rebates. The annual savings are calculated for each category at the case company. The cost savings are then reported as percentage reductions in unit costs. These realized and anticipated cost savings are reviewed with executives on regular basis. The case company does not include the various costs involved in global sourcing, which might become a problem as if they cannot prove that the achieved savings are in fact lower than the costs of global sourcing, internal opposition to global sourcing might become an issue at some point as Monczka and Trent (2005) noted. The case company does not yet calculate static-, dynamic-, and hidden costs of global sourcing. Furthermore, the case company does not yet calculate or measure the global sourcing activities' effect on key financial figures, individual projects, and other business unit performance as Monczka and Trent (2005, p. 8) noted that best practice companies do.

Strategic Urgency Feeling

The case company faces increasingly competitive environment. This has caused the feeling to rise that “something must be done about the situation”. It is in fact one of the main reasons for the case company to commence global sourcing. Thus, the case company’s situation is such that personnel understand that something has to be done. This urgency feeling is also actively enforced through messages from executives to the staff.

Incentive System

At the case company the existence of multiple interest holders is a reality as the global business units all have their own suppliers. Trying to come up with one global supplier solution that suits everybody could very well mean that one or two business unit might have to take a hit for the team by leaving local supplier so that the company as a whole can reap benefits from global supplier usage. Such conflict of interests was acknowledged in the case company; however, there was no solution yet present at the time of this research. By using incentives, this conflict of interest could be solved. To make this reality a system needs to be set up where the decline in local performance through usage of global framework contracts could be measured in detail so that the annual global cost savings from the year can be fairly allocated to each business unit. Doing this requires a global purchase information system with ability to measure the performance changes that follow supplier change for each business unit. Being able to do this would solve one of the five basic problems related to business unit coordination, which in this case is to set up fair measurement and incentive system (Porter, 1986).

Supplier Willingness to Become a Global Supplier

As the Global Sourcing at the time of the research had not yet advanced into execution, the willingness of the selected suppliers to become global suppliers was not yet completely clear. However, the case company did not initially think of this issue, but only concentrated on finding out the suppliers with global presence. Another criteria when choosing global supplier as found in the literature is to see whether it is possible to become a preferred customer for the supplier; as if the supplier has a competitor of the case company already as a preferred customer it might be very difficult to challenge this position. This is

especially the case if the competitor and the supplier belong to the same industrial cluster geographically and have a long history with each other (Steinle & Schiele, 2008, p. 10). This criterion was not present at the case company's supplier analyses.

4.4.2 Integration and Coordination Analysis

The general answer to the third sub-question of "What are the factors to take into account to successfully coordinate and integrate global sourcing?" can be answered by providing the main tasks involved in global coordination and integration.

Global Coordination Main tasks

Even though the integration and coordination are synonymous in many cases, they still differ in this thesis so that the integration refers especially to the organizations information processing aspect, whereas global sourcing coordination is about identifying which items, processes, etc. to coordinate and how. The global coordination's two main tasks are (1) to identify which activities have the most benefits to be gained from global coordination, and (2) to find the most suitable mechanisms through which these benefits can be achieved (Leinonen, 1999, p. 88).

Global Integration Main Tasks

From global integration point of view the main questions is "how to ensure information processing capacity in complex global sourcing environment?" This viewpoint towards integration is adopted from the IPF. For global integration the same two main tasks are also applicable, as in global integration. The first task is to identify information-processing requirements by analyzing task characteristics, task environment and inter-unit interdependencies. The identified IPR are then to be matched with appropriate IPC increasing mechanisms. Thus identifying is the first task, and matching with appropriate mechanisms is the second task.

Global Coordination at the Case Company

The first task in global coordination is that of identifying activities, items, processes, etc. with most potential benefits. Global category leaders did this by using various analysis methods. The tools and methods used were such as PEST analysis (Political, Economic, Social, and Technological), SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats), Cost Driver analyses, supplier analyses, and spend analyses. PEST analysis provides the Supply Market Characteristics of IPF. SWOT analysis on the other hand can provide some answers to the Task Characteristics. Inter-unit task interdependence was analysed by commodity leaders individually; the main method was to gather the purchasing information from all the business units together and to make sense of the data as to get an overall idea of which products have global synergy potential. However, in terms of global category leaders, the areas of interests were mostly related to how to reduce the unit price of the product. Thus only analyses made had to do with economies of scale-type of investigations, with aim to be able to bundle the purchases of different business units together as to be able to consolidate purchases to fewer suppliers, and consequently achieve scale merits. The category managers did not think about economies of information and learning, nor did they think about economies of process, but it was the responsibility of global coordination team to improve these aspects.

Therefore, it can be argued that the potential synergy areas of each category were not analyzed thoroughly, as economies of information and learning, and economies of process were neglected. The literature also acknowledged this common problem of overly focusing on economies of scale, and thus failing to take advantage of all benefits achievable from global sourcing (Trautmann et al., 2009b, p. 196). Economies of process and economies of information and learning were not however completely neglected, but were given to the global coordination team to improve. While the improvement activities did not name the improvement areas as such, both areas were concerned in the projects. As for economies of process, many processes were re-evaluated as to standardize and streamline them on global scale. Such were for example the standardization of Design Change Request process, global RFQ standardization, and supplier contract unification. As for economies of

information and learning, the unification of data systems was the most challenging and largest single area to improve as discussed earlier.

The case company did not utilize portfolio tools to identify synergy areas, but relied on the expertise of individuals to identify areas using other tools. While it can by no means be said that the case company's approach did not work, the approach still leaned heavily on personal knowledge and abilities of category managers. While the analysis tools used did provide background for the strategies, the reasoning of category managers in terms of how the presented information connected to the presented strategy was still difficult to understand, as their reasoning were not as visible to outsiders as they would be if portfolio tools had been used. In addition, the approaches by different category managers varied greatly. The explanations and question sessions did open up many uncertainties the persons reading the global strategies had, but the overall picture of all different strategies for different categories was diverse to say the least.

As for finding the most suitable mechanisms to achieve the synergy benefits, it was the sole responsibility of the category manager to come up with ideas. For global coordination team, the solutions to problems in economies of information, learning, and processes, were discussed within the team and the mechanisms to fix the issues at hand were brainstormed. The tools used did not offer guidelines as to how the category should be managed, but concentrated on describing the current situation. The main point here is that there was no systematic and standardized way of identifying synergy areas.

Integration in Global Sourcing

Each category manager at the case company analyzed the Task Characteristics, Task Environment, and Inter-Unit Interdependencies of their own categories. Thus, the Information Processing Requirements were analyzed at the case company. However, the idea of matching the IPR with appropriate IPC increasing mechanisms did not exist, thus the category managers were simply tasked to create the global strategy and find synergy areas by themselves and with their respective teams. When the global strategies were to be ready the problems became clear, not all category managers and teams had

the IPC to be successful in the task. This could be observed from the many delays that occurred; information could not be transferred nor analyzed in time, communication issues were numerous, further delaying the strategy creation.

The category teams were constructed with simple rule; whoever is most experienced buyer of the category shall be the global category leader, and the buyers from each business location responsible for buying the commodity in question was automatically part of the team. The end-result was that the teams varied greatly in their backgrounds. For example, some category managers had comprehensive personal networks and deep knowledge on their commodities thanks to their history at also other functions within the company through job-rotation. However, some category managers had little experience and limited networks, and consequently had much smaller information processing capabilities. In many cases, the information sharing within the team suffered greatly from communication issues arising from lack of language skills and partly from cultural differences. Time differences between locations caused even more difficulties, as these parties with little communication could communicate only one e-mail per day due to time differences. The category managers analyzed the information processing requirements, however they were not analyzed with purpose to evaluate the required IPC increasing mechanisms. Not taking into account the IPR of the category at hand and the IPC of the category teams, the global sourcing integration suffered difficulties.

The reasoning of doing the easy-to-do projects first as to ensure intra-company support for the global sourcing endeavour was not present in the case company. However, this did not become an issue, as ensuring the intra-company support was not particularly important issue to be thought as the criticality of doing something to improve the company's situation was understood by everyone as was explained in earlier paragraph about strategic urgency feeling.

4.5 Recommendations

In this chapter the recommendations to the case company are presented. The recommendations start from how the company could improve its conduct concerning the identified success factors of global sourcing, and the last paragraphs deal with the topic of coordination and integration in global sourcing.

Executive Commitment

Recommendation regarding executive commitment is to ensure that the executives and employees at the case company understand the need for global sourcing. Constantly reminding personnel on the advantages that can be gained from global sourcing, and encouraging personnel to take part in this project is necessary. This is to be done especially if the initial global sourcing strategies fail to produce wanted results, as in such cases the support for global sourcing can suffer great step backs in the minds of personnel. As has been done already, keeping the strategic urgency feeling by stressing the importance of renewing the company should be continued as it grants further support and understanding for global sourcing project.

Setting up process-owners

The process ownership was one issue not yet clearly defined at the case company, and should thus be fixed. Setting up clear process-owners improves the development and improvement of processes, and above all, prohibits collaboration obstacles from arising as problems that increase complexities in processes are fixed in time. The recommendation is that there should be clear process owners for every process, who is then personally responsible for making sure that the process works as intended.

Talent Management

Ensuring that resources are available for global sourcing activities is one key success factor. In terms of personnel, the company should increase its international hiring and educate its current personnel to become more cross-culturally capable. Without doing this the worldwide cooperation is difficult to improve, and the information processing capacities of the teams remain lower than required for dealing with complex global challenges. An issue was also the

lack of business education among the personnel, leading to low usage and understanding of even basic business tools. Therefore hiring people with business background to the procurement is also recommended as to increase the maturity of purchasing. For supply management field the persons with cross cultural readiness, innovative and collaborative characters, wide experience and knowledge, global view on supply markets, latest information on supply processes, should be favoured (Monczka et al., 2008, p. 758). Practical positive consequence of doing the talent management improvements would be the increased capability of the function to use and adopt new and more sophisticated levers, which are required for successful global sourcing (Foerstl et al., 2013). The case company also needs to improve its purchasing function status within the company as to be able to provide more attractive and clear career paths.

Budget and Time

As for budget, the recommendation is to set up a separate budget for global sourcing activities, which is separate from normal budgets, as to remove all causes for hindrances (Monczka and Trent, 2005). Recommendations to make time available for global sourcing projects is to separate global sourcing personnel from their routine work at least for the duration of the global strategy creation, as having double responsibilities is a cause for major problems and loss of focus. (Monczka and Trent, 2005).

Improving Information Sharing and Information Technologies

Recommendation as to improve information sharing and integration through ICT is to set up global intranet pages through which the latest global sourcing information, documents, etc. can be effectively shared. As for global purchasing database, the recommendation is to develop the global purchasing database further as to remove need for email based information sharing. As the company suffers from disbelief, doubts and uncertainties concerning the global database benefits, encouraging and informing personnel about the undisputable benefits and advantages of having effective data sharing system is necessary. Removing doubt and opposition to the task is a prerequisite for continuing the development. Not only removing the disbelief and fear towards the database system, there must be collective understanding about the problem at hand. The

method to overcome this problem, as presented by Simatupang et al. (2002), is to have meetings, discussions and even joint training concerning the problem as to gain collective sense making. Additionally, increasing socialization and networks increases the personnel's commitment towards common norms and rules, which in turn increase the like-minded decision-making (Nobel and Birkinshaw, 1998). Without doing these measures, it is extremely difficult to overcome the multiple layers of resistance.

Simultaneously continuing the standardization of coding schemes as to make the data easier to read and search is a prerequisite. As without doing this, the need for contacting other business units for details and confirmations cannot be removed. Focusing the standardization of coding schemes initially on common commodities and items with most potential for coordination can help in overcoming the initial feeling of this being an insurmountable problem.

Organizational Design

In terms of organizational design characteristics, the recommendation is to centralize the sourcing categories that have high coordination potential as well as are complex in nature, requiring close cooperation between global category manager and buyers in business units across the world. However due to the cross-locational teams that cannot be brought together, the recommendation is to make the teams to work as well as possible together through combination of lateral- and vertical integration mechanisms. This can be done through socializing and networking; by sending the buyers and category managers to meet their team members and personally get to know each other and each other's situations as to build trust, increase understanding and knowledge about each other's situations, and build strong networks. The face-to-face meetings should be regular to ensure that the teams' IPC does not decline (Monczka and Trent, 2005). This increases the IPC of the teams, making them more adapt to handle the global sourcing complexities (Hartmann et al., 2008, p. 39). To support the cross-locational teams, having efficient information sharing systems is necessary.

Following best practice companies, the recommendation is to separate strategic operations from routine operations (Monczka and Trent, 2005). This is

recommended as it gives the global category purchasing teams more time and resources to do their work, but also increases the overall maturity of the company's purchasing and thus make the organization more capable to adopt more and more advanced and sophisticated cost-saving levers and methods (Ubeda et al., 2015). Having a dedicated leader for global sourcing is a success factor identified by Monczka and Trent (2005); the recommendation is thereby for the global sourcing leader of the case company to find more time to manage the global sourcing endeavor. What is the exact level of dedication needed is for the case company to decide, but the evidence from successful companies' points out that more dedicated the leader is, higher the chances of success.

Finally, the usage of cross-functional teams is recommended especially for teams whose members do not have job-rotation background and do not thereby have strong personal networks to which they can easily resort to when facing challenges. The cross-functional teams should be used especially for evaluating suppliers and conducting detailed analyses on global purchasing opportunities (Monczka and Trent, 2005).

Communication

Improving communication within the company, especially between the category team members who are located across the world, is an area in which a lot can still be done. First, the problem of irregular videoconferences between global category team members can be easily fixed by firmly deciding to have a meeting for example every week on certain date at certain time. This way the environment of trust and support, and culture of joint working can gradually grow.

The teams' communication should be further enhanced by introducing latest communication methods through which the members could easily keep in contact with each other. Moving forward from e-mail based data exchange, deciding on web-based platform to use to share information and latest updates is also highly recommended to improve the communication. In order to ensure that the progress is steady and that possible problems and issues are noted early, having regular meetings with sourcing committee/executives of purchasing is recommended.

Finally, using tools is a powerful way to induce strategic thinking within the groups, but as was the case at case company, this benefit will not be achieved if the persons involved are not thoroughly educated on the usage of these tools. As for language capability, the current employees should be strongly advised and encouraged to study and use English as to be able to take part in global purchasing effectively. Extremely effective method is to send the employee to country in which he/she must use English, however the benefits and costs of doing this should be carefully thought.

Measuring cost savings

The case company can improve its conduct in measuring cost savings by introducing more sophisticated measurement systems, such as global sourcing activities effect on key corporate financial figures (Monczka and Trent, 2005, p. 8). The case company should also take into account all the costs of global sourcing; static-, dynamic-, and hidden costs. With exact figures at hand, balancing the expensive coordination and integration activities with the expected savings from global sourcing would further help the case company to set a balanced and reasonable global sourcing budget that is easy to defend against possible accusations that can arise against high global sourcing expenses.

Incentives

Allocating the global cost-savings achieved to the business units should be based on quantitative data that is easily provable. This requires purchase information databases that can track the changes in purchasing performances caused by supplier changes, therefore investing into this capability is highly recommended. In the beginning, it is understandable that developing a system that can track the performance in so detail is difficult and takes time, thus alternative methods to measure changes in performance of individual business units have to be taken. Whatever the method is, it has to be convincing and provable as to make sure that the individual business units can rest assured that the possible losses they suffer for example from changing local supplier to global supplier for the sake of the company as a whole is justly reimbursed to them. Here it is also important to include also the costs caused to individual business units through specification changes that might be required from them.

Otherwise, the common causes for dissatisfaction, which are satisfaction with current suppliers and thinking that changing supplier becomes too expensive, can gain ground in business units. This in turn easily leads to a situation where framework contracts are ignored and maverick buying becomes rampant.

Supplier willingness for global contract and preferred customer status

The case company should make sure to find out whether the supplier is interested in setting up global contracts before creating global strategy based on presumption that they are interested. In addition, when selecting global suppliers it should be investigated whether the supplier considers case company's competitor as preferred customer, as in such case it would be highly difficult to get better prices than the competitor does. Such can be the case especially when the supplier and competitor belong into the same cluster (Steinle & Schiele, 2008, p. 10).

Global Coordination and Integration

The case company pursues after global sourcing with mainly cost reductions in mind, which can be seen from the strong focus on finding ways to pool purchases as to achieve scale merits. As global sourcing offers also a lot of potential in terms of economies of information and learning and processes, focusing more on also the synergies that can be achieved from these could open up new ways to improve the efficiency of sourcing on global level (Trautmann et al., 2009b). Doing so would grant more efficient usage of limited resources as shown by Corey (1978), and thereby release more resources for strategic activities that in turn have been found out to result in further cost savings (Ubeda et al., 2015).

The recommended method in this thesis to go after all three economies that can be achieved from global sourcing is to use portfolio tools presented in chapter 3.3 to analyze each category separately for areas in which synergy benefits could be achieved. With more unified, systematic, and standard approach to the global strategy creation by using common tools and methods to identify synergies and potential benefits, the knowledge sharing and collective learning potential of the company could improve greatly. This would also give the outsiders better understanding of the topic, making it easier to comment on the

strategy and present improvement ideas. This in turn would grant the category manager to utilize the knowledge and expertise of many more people when perfecting his/her global strategy. In addition, using a list of common areas of coordination (see Table 1.) to go through each category is recommended. This is done as to identify where coordination could benefit the company, would again help the category managers to come up with more thorough and systematic approach and would also ensure that no major aspect are neglected in the strategy creation. Rather than just describing current situation, portfolio tools work as frameworks for designing effective sourcing strategies as they provide general guidelines of how to act (Trautmann et al., 2009b; as cited in Hadelar and Evans, 1994). Incorporating portfolio tools would provide an effective and flexible method to analyze categories at various sophistication levels (Trautmann et al., 2009b; as cited in Turnbull, 1990). Nevertheless, it is important to understand that the portfolio tools should be used primarily as a method to facilitate discussion within the company, rather than to use them just as tools to get classifications. The process of discussing and analyzing the topic together constitutes the actual strategic thinking process holding highest value for strategy creation (Trautmann et al., 2009b, p. 206).

First thing to do in terms of integration in global sourcing should be to analyze the IPR of the commodity. After knowing what kind of information and information processing capabilities are required, the appropriate IPC increasing mechanisms are to be evaluated. Each Information Processing Capacity increasing vertical- and lateral integration mechanisms have to be individually thought for each commodity. For centralization the question to think would be: To what degree we should centralize this commodity management? From standardization point of view, the question could be: What are the things to standardize as to improve this commodity's management? As for formalization viewpoint, the question could be stated as: How could we streamline and formalize processes regarding this commodity, as to increase the efficiency of this commodity's management? As for information systems the thing to consider is: how can we ensure efficient information sharing for this commodity's requirements? The lateral integration mechanisms have then to be evaluated as to understand whether there is need for more lateral mechanisms. For example, how do the commodity team members know each other? Do they require get-

together and socialization as to make them know each other and learn to work well together? However, it must always be kept in mind when thinking about the mechanisms to be used, especially lateral mechanisms, that the expenses of using these mechanisms can easily exceed the potential benefits from them, thus the balance must be kept in mind (Trautmann et al., 2009a).

5 CONCLUSIONS

The purpose of the research was to identify development areas from the case company's global sourcing. The research question could be answered by answering three sub-questions. The first sub-question has its aim on ensuring that all potential benefits from global sourcing are pursued. The literature reviewed that there are three economies that the global sourcing can especially offer. These are economies of scale, processes, and information and learning. Whenever a firm wants to achieve benefits from global sourcing it should analyze each of its purchase categories separately with a purpose of finding synergies in each of these synergy areas. The literature revealed that a portfolio tool could be most useful for this purpose as a method to elevate strategic thinking by bringing all parties in the same table to discuss various dimensions of each purchase category. Moreover, the list of potential benefits from global sourcing is long, and thus companies should carefully consider each of them and not just concentrate on one or two main motives.

The second sub-question was set on the purpose of finding out the most critical success factors for global sourcing on which companies should focus primarily. The list of success factors consists of seven main success factors and a few additions, out of which identifying the correct areas to pursue synergies is maybe the most important. Executive Commitment was found out to be important for ensuring companywide support. Rigorous and well-defined Processes are needed to accelerate the learning process, and to successfully implement best practices. Availability of Resources should be ensured before commencing global sourcing. Most important resource to have was found out to be talented personnel who have the capabilities to operate globally. ICT and Information Sharing are highly important factors to take care of, for without

effective information sharing and cooperation among global teams, the output of these teams are doomed to be below-expectations. Organizational Design-success factor is about coordinating and integrating activities so that the organization supports global sourcing. The sixth success factor is to have a structured approach to communication, which means that the communication should be regular and smooth. Measuring Savings is required so as to share the global savings fairly among business units, and in turn prevent any dislike that can hinder collaboration among business units on global sourcing matters. Identification and prioritization of projects, common items and requirements that have most potential for integrated approach is one main success factor of global sourcing. On this the first sub-question of this thesis sheds light. Strategic urgency feeling was also found to be success factor, as with it changes can be introduced more easily. Finally, incentive alignment is a success factor having to do with making sure every business unit stays in line with global policy.

The third sub-question set out to find out factors that must be taken into account when coordinating and integrating global sourcing. The coordination and integration areas were well presented in the Information Processing Framework, which stated that companies must balance the Information Processing Requirements (IPR) arising from uncertainties from task characteristics, task environment, and inter-unit task interdependence, with proper Information Processing Capacity (IPC) enhancing mechanisms. These IPC mechanisms are divided into two categories: lateral- and vertical mechanisms. Vertical coordination and integration mechanisms are centralization, standardization, formalization, and information systems. Lateral mechanisms are such as job rotation, cross-functional and locational teams, integrators, and networks. The lateral mechanisms hold more IPC potential, but are more expensive to use. The main point is to analyze each category separately, and then to utilize suitable IPC enhancing mechanisms, so as to have a balance between IPR of a purchase category and IPC of the team responsible for that specific category. Therefore, as a conclusion and answer to the third sub-question, it is most important to have a systematic approach to finding out coordination areas from global sourcing, and secondly to design global sourcing teams, so that their information processing capabilities are on a par with the information processing requirements of that specific category.

5.1 Managerial recommendations

While there are many recommendations to the case company in chapter four, here are general managerial recommendations to the case company with the main points from chapter four.

From the viewpoint of drivers and motives for global sourcing the case company's focus on the benefits of global sourcing could be wider, as in current state the scale merits are emphasized to the detriment of economies of information and learning, and processes. The global purchasing strategy creation at the case company did not premeditatedly try to find synergy areas from other areas than economies of scale. The recommendation of this thesis for the case company on this point is that there should be a systematic approach towards finding synergy areas from global sourcing, for example by using the portfolio tool by Trautmann et al. (2009b). Moreover, cross-functional teams and list of coordination areas are also recommended to identify potential synergies and opportunities from global sourcing.

Identified success factors in which the case company has still room for improvement are especially talent management, communication, and information technology among other things. The importance of talent management and its high correlation with successful global sourcing are emphasized and consequently highly recommended areas to target for further development. Other recommendations to note here are to make sure that global category teams have enough time for global strategy creation, and to make sure that each process has owner who is responsible for developing the process continuously.

As for integration and coordination in global sourcing, the findings proved that not much had been thought about the information processing capabilities of the global sourcing teams when they were created. The recommendation of this thesis is to first analyze each commodity category separately, not only for the synergy potentials, but also for finding out the information processing requirements of each category. This is meant to design and implement effective mechanisms to improve the information processing capabilities to an

appropriate level. On this issue, not having a powerful information sharing system is one major weakness of the case company that hinders global cooperation and integration significantly, and should thus be fixed as soon as possible.

5.2 Further research topics

While the literature provided many coordination and integration mechanisms, little was written about when each of the mechanisms should be used. Currently it is up to managers to think and decide the best mechanisms to enhance IPC of a team. Doing a quantitative research about the success of each used mechanism could bring about new knowledge and information to support the manager's decision making.

Drafting a global strategy was a big part of the global sourcing process. However, little was written in the literature about creating a global purchasing strategy. Observing the case company it became clear that the quality of global strategies between category leaders varied substantially, which is why more research should be put into the topic of global purchasing strategy creation as a next step to improve global sourcing in a company.

The identified success factor list for global sourcing could be further prolonged with additional points. The existing research from knowledge management in the area of team management could especially have many points from which global sourcing coordination and integration-area could benefit a lot.

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