



**THE EFFECT OF A SUCCESSFUL SUPPLIER SELECTION AND PURCHASING
STRATEGY**

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ABSTRACT

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The importance of purchases made from suppliers to the company's profitability and competitiveness is significant. Since the company's operation, continuity of operations, and development need information and resources from outside the company, the buying company should strive to utilize the supply of the supplier market so that the company's profitability and overall benefit are the best possible. The purpose of this thesis is to clarify what effect the right choice of supplier and the selected purchasing strategy has on an SME operating in the construction industry.

The thesis was carried out as a qualitative study, where the research material was collected with the help of semi-structured thematic interviews. The research method enabled a broad perspective on the researched topic, and the thesis reveals both differences and similarities between the previous research literature and the case company. This study extends the general models and methods presented in the literature for procurement management and supplier evaluation and comparison, explaining them more practically.

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Toimittajilta tehtävien hankintojen merkitys yrityksen tuloksenteko- ja kilpailukyvyllä merkittävä. Koska yrityksen toiminta, toiminnan jatkuvuus ja kehittäminen tarvitsevat yrityksen ulkopuolista tietoa ja resursseja, tulee hankinnoissa asiakkaan pyrkiä hyödyntämään toimittajamarkkinoiden tarjonta niin, että yrityksen kannattavuus ja kokonaisuus ovat parhaat mahdolliset. Tämän tutkielman tarkoituksena onkin selvittää mikä vaikutus oikealla toimittajan valinnalla ja valitulla hankintastrategialla on rakennusala toimivalle pk-yritykselle.

Tutkielma toteutettiin laadullisena tutkimuksena, jossa tutkimusaineisto kerättiin puolistrukturoitujen teemahaastatteluiden avulla. Tutkimusmenetelmä mahdollisti laajan näkökulman tutkittuun aiheeseen ja tutkielmasta ilmeneekin niin eroavaisuuksia, kuin myös yhtäläisyyksiä aiemman tutkimuskirjallisuuden ja case yrityksen välille. Tämä tutkimus täydentää kirjallisuudessa esitettyjä yleisiä malleja ja tapoja hankintojen johtamiseen ja toimittajien arvosteluun sekä vertailuun selittäen niitä käytännönläheisemmin.

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1. INTRODUCTION

This master's thesis will deal with the case company's supplier selection process and purchasing strategy, examining their impact on the company's competitiveness. The master's thesis will be done for a company whose current main field of business can be considered household energy solutions. The company is quite young, founded in 2018, operating in the construction industry and employing less than 20 employees. Research questions will be examined from both the company's and a purely theoretical point of view. The research will be qualitative, and the theoretical part will be examined using literature related to supply management, published scientific articles and internet sources. The situation of the target company will be examined by utilizing material based on interviews.

Iloranta and Pajunen-Muhonen (2008) define purchasing as the management of external resources needed by the organization, such as products, services and expertise. Climate change, rapidly developing technology, various financial crises, global pandemics, wars and many other business-related changes and challenges are essentially connected to the supply management of companies. Purchasing must go smoothly so that the organization can operate and produce goods and services for its customers. For this purpose, efficient purchasing strategies have been developed, which enable companies to minimize interruptions to operations and develop different relationships with their suppliers. These relationships secure the continuation of operations and possibly also produce cost benefits. (Huuhka 2016, p. 26.) The importance of strategic purchasing and supply management, in general, has grown over the past few years and more attention has started to be paid to it. The reason for this can be attributed to the large impact of supply management on business costs and thus on the company's competitiveness and results. (Weigel & Ruecker 2017, p. 1–5)

According to Steele and Court (1996), one way for a company to increase its competitiveness is to improve its profitability by reducing its costs. In this way, the role of supply management when looking at the company's competitiveness rises to a key position, as it

makes up about 80 % of all the company's costs and thus affects the company's result (Logistiikan Maailma 2016). Iloranta and Pajunen-Muhonen (2008) emphasize the importance of procurement, as they generally account for 80–90% of companies' costs. Several studies have shown that in the construction industry, about 90% of the general contractor's turnover is spent on the purchase of services or materials (Bemelmans et al. 2012). Hallikas et al. (2011) also state in their article that supply management has become one of the most important factors of a company's performance and competitiveness in recent years. Hallikas et al (2011) see the purchasing activity as having a significant impact on the company's finances, although they estimate that the purchasing cost constitutes only 60–70% of the company's turnover. Nieminen (2016) also does not see the volume of purchasing to be typically more significant than slightly more than 50% of turnover. In addition to procurement costs, the right choice of supplier is important for the company, as the supplier can be responsible for up to half of the company's product quality problems (Monczka et al. 2005, p. 241).

As stated, purchases made from suppliers form a significant part of the company's costs and, as a result, also of the company's possible profits. Because of this, supply management has garnered increasing attention both in organizations and in academic research (Dubois & Pedersen 2002). Purchasing strategy can be considered born in the 1980s thanks to people like Peter Kraljic and Michael Porter. They understood that purchasing is more than a secondary function for the company, it is a strategic function. The persons in question introduced concepts such as Kraljic's matrix and Porter's five forces model to companies. (Keith et al. 2015, 1–2) In the categorization model presented in Peter Kraljic's 1983 article *Purchasing must become supply management*, also known as Kraljic's matrix, it is possible to divide products into four categories according to their financial impact and supply risk. (Koskinen et al. 1995) In Porter's model, two of the five forces were related to buyers and suppliers, and thus the model emphasized the strategic importance of purchasing, which was reflected in its growth in the literature since the 1980s (Ellram & Carr 1994).

Supplier selection has been studied fairly extensively since the 90s, as it forms a significant part of the company's cost analysis (Pullman & Verma, 1998). One of the first significant

works on the subject was Dickson's (1966) study *An analysis of vendor selection systems and decisions*, in which he formed a rating scale based on general vendor evaluation criteria. Since then, publications and treatises related to the topic have been published in a wide variety of ways, including van Weele's (2002) *Purchasing and supply chain management* and Iloranta and Pajunen-Muhosen's (2008) *Procurement management: from buying to supplier market management*, which are used extensively in this thesis as well.

1.1 Research questions

Since companies' procurements, operating environments and goals are different, the theory cannot be directly applied to every situation, but must always be applied case by case. For this reason, we still do not know which issues are the most important and significant factors for the case company when choosing its supplier and forming a purchasing strategy. In this study, the focus is on examining the issue concerning the target company, whose perspective can be assumed to have been studied significantly less since the company is relatively young (founded in 2018). By answering the research's main and sub-research questions, it is possible to create a clearer picture of the case company's supply management and purchasing strategy, and to detect possible differences between theory and empirics. Thus, it is possible to detect factors that are suitable for the situation of a small construction company and important for its operation, which can be utilized by the target company, by other SMEs or in possible follow-up studies.

The main research question of the study is:

How can the company's success be improved with selecting the right supplier?

This research examines why, how and by what means the company evaluates potential partners and assesses their suitability as a supplier.

Sub-research questions include:

What is the significance of the chosen purchasing strategy?

How are procurements managed?

What criteria is used to select and to evaluate a supplier?

This research examines in what different ways and methods it is possible for the company to evaluate the performance of different suppliers in different areas and which criteria affect the choice of supplier. It is also examined how the company distributes its purchases and what effect they, together with the market, have on the purchasing strategy.

1.2 Research method and material

This Master's thesis is a single-case study, done as qualitative research, in which the interviews with the representatives of the target company have been carried out as semi-structured thematic interviews, in which the discussion has been tried to be guided in the desired way using the interview frame as a help. I chose the thematic interview as the type of interview for the dissertation because it is the most popular qualitative data collection method in business economics and, when used well, first-class effective (Koskinen et al. 2005 p. 105). The purpose of the thematic interview is not only to get answers to the questions asked but rather to create a discussion on a specific topic. By keeping the interview within certain boundaries, I can get more out of the topic, if things come up that I wouldn't have understood to inquire about based on the prepared list of questions.

A semi-structured interview is characterized by the fact that, even though the topics of the interview are predefined, the questions and the manner and order of their presentation are freer than in a structured interview, because the goal of the semi-structured method is to get the interviewee to present their answers in their own words (Koskinen et al. 2005, p. 104–105). I will interview three representatives of the target company: a construction site manager, the sales director and the CEO.

The thesis is limited to dealing with the creation of a purchasing strategy and the management of procurement from the point of view of the purchasing company. The thesis focuses on supply classification and the supplier selection process, leaving other aspects of

the purchasing process to a lesser extent. Supply management and supplier selection, categorization and evaluation are examined in general in the theoretical part of the work and the empirical part from the point of view of the case company. The results obtained and the conclusions formed cannot necessarily be used directly when studying other companies operating in the same industry due to the case-by-case nature of the evaluation. The research will mainly focus only on the purchasing of goods, leaving services and their suppliers to less attention. Due to the limited nature of the thesis, it is more goal-oriented to focus on a more precisely defined topic to achieve reliable research results.

1.3 Structure and theoretical framework of the work

The theoretical part of the research is based on models and theories, which I use to explain the starting situations and settings behind the research. I will start by going through the construction industry, its importance and the typical features of the industry. After this, I examine the supply management and the purchasing process, which is well described by Iloranta and Pajunen-Muhonen's model (2008, p. 62). From the point of view of the research, the most essential parts of the purchasing process are necessary, i.e. procurement, definition and supplier selection, because only by defining the supplies, examining the market and evaluating the supplier can a suitable purchasing strategy be chosen for the procurement, with which to lead the purchase. For these reasons, I pay special attention to these steps. Looking at the purchasing process and especially the supplier selection, I can conclude that the company must succeed in identifying the procurements that are essential to itself, because a careful evaluation of all, including less important purchases, is time-consuming and inefficient. To help identify essential purchases, I use Kraljic's purchase portfolio matrix (Kraljic P, 1983 p.109). After this, I can evaluate the suppliers of these purchases using evaluation methods suitable for each case and situation. Based on the comparison of the estimates, a suitable supplier and purchase strategy can be selected for the situation.

The theoretical part also includes the opening and presentation of the criteria, methods and factors related to the categorization of purchases and the evaluation of suppliers, to

understand the most relevant issues from the point of view of the research, both in general and in the case of the target company. The section also examines the selection of a suitable purchase strategy and supply management and development. In the presentation of the empirical part, the focus is specifically on the material obtained from the target company, i.e., the information obtained based on the interview about what kind of operating methods and strategies the company uses to manage purchasing.

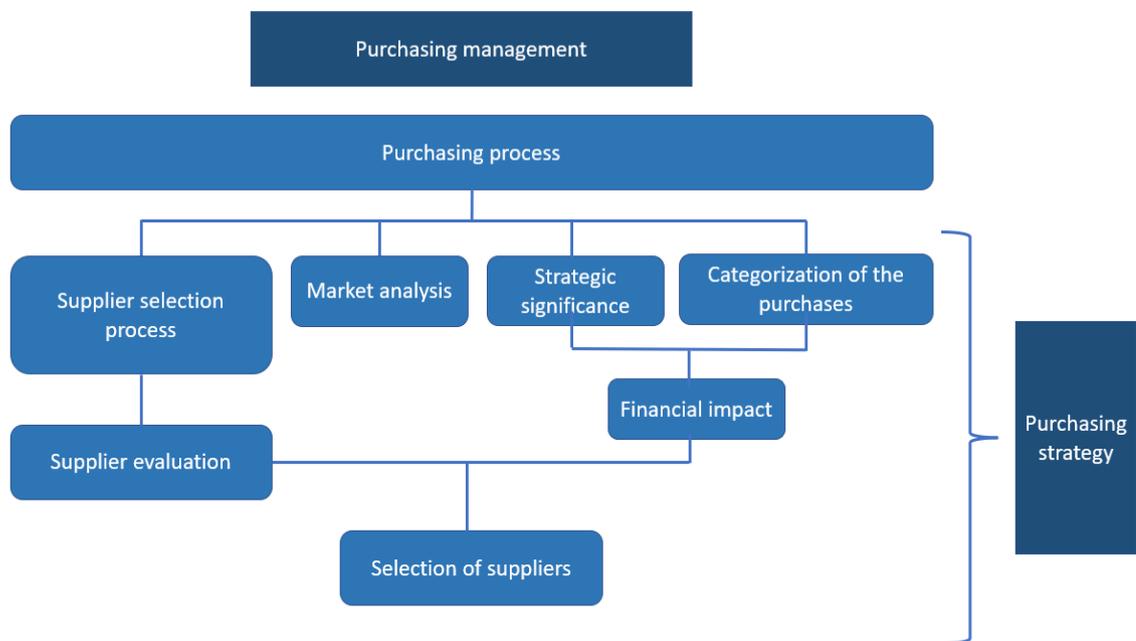


Figure 1 Theoretical framework

The basis of the thesis' theoretical framework (figure 1) is the management of purchasing and the purchasing process. In order to know how to manage purchasing correctly, it is necessary to be able to define a suitable purchasing strategy for each purchase, which serves as the company's long-term plan for the procurement activity. Purchasing strategies vary by company and case by case due to the inherent diversity of the procurement environment. Factors that influence the strategy include, for example, the purchasing target, its

characteristics and importance for the company, the nature of the market and the supplier from whom the purchase is made. (Corey, 1978) Since the company's aim is to manage its purchasing successfully and thus achieve a competitive advantage, the research must examine how to form the right purchasing strategy and choose the right supplier in different situations. These issues are directly affected by the characteristics and effects of procurement, so procurement and suppliers must be able to be classified and evaluated.

2. PROCUREMENT AND PURCHASING PROCESS

The classic definition of procurement is the following: the goal is to buy the right materials in the right quality and quantity at the right price and time from the right target to the right place (Zenz 1994, p. 9). In reality, the procurement rarely happens this way, because in many cases you have to give up something right to achieve something else. For example, for a company, in light of other characteristics, the best supplier is often expensive, or if, for example, the company wants to save on price, quality may have to be compromised. For this reason, the purchase is influenced by which criteria the company considers most important. (Lysons & Farrington 2006, p. 6) Sakki (2009) sees procurement as ensuring the delivery of goods and services in a cost-effective manner, so that customers' needs can be met. Therefore, procurement can also be seen as a mandatory step in the production of the products sold by the company, as the final product generally consists of raw materials, design and manufacturing or assembly. However, this traditional perspective is outdated.

Changes in companies' business environments have caused a shift from the classic definition of procurement to a new, broader definition, in which procurement is seen as the management of all the organization's external resources. Procurement must be seen as the management of the company's external resources in such a way as to secure access to the necessary resources as well as possible. (Nieminen 2016, p.10) Since the operation, continuity and development of the organization need knowledge and skills from outside the organization, in procurement, the customer should strive to utilize the supply of the supplier market so that the company's profitability and overall benefit are the best possible. (Iloranta & Pajunen-Muhonen 2008, p. 67)

The role of procurement has grown in the business operations of companies in recent decades. Porter's (1998) value chain model is often used to describe the internal value chain of a company, i.e. the formation of value. In the model, the company's core functions are divided into basic functions, i.e., primary activities, and support activities. Primary activities include inbound logistics, processing operations, outbound logistics, marketing and sales

operations, and service. These activities are supported by the company's infrastructure, technology, human resource management and procurement. (Huuhka, 2016, p. 16) According to Porter's (1998) model, procurement, therefore, supports the company's main operations as well as support operations, in which case it is defined as part of value-adding operations.

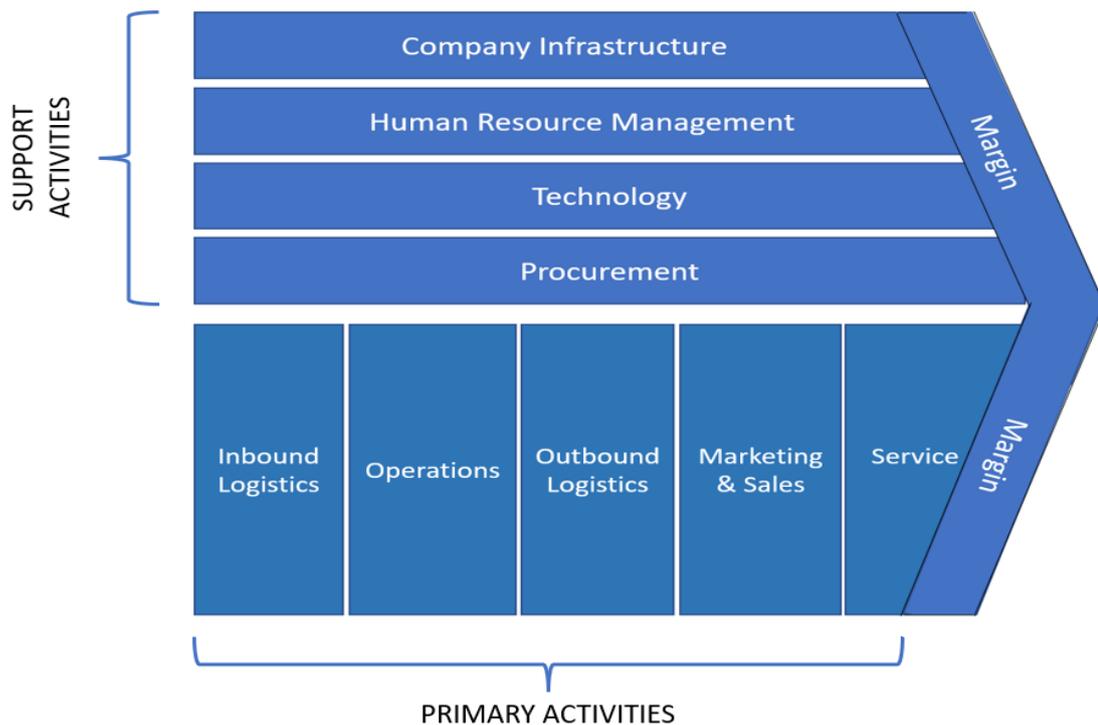


Figure 2 Porter's value chain (adapted from Porter 1998)

According to the value chain model, the company should therefore maximize the company's procurement activities by, for example, reducing costs. The value chain model is a model that is very suitable for different situations, where the product goes through all the stages of the process. Inbound logistics includes relationships with suppliers and activities needed to receive purchased goods. In operations, the company turns inputs into profits. Outbound logistics includes those activities where the company collects and resells products. Buyers are attracted and informed about the products with the help of marketing and sales activities.

With the help of service functions, the product or service works in the right way. Among the support activities, the function of the company's infrastructure is to support the company's operations, it consists of functions such as accounting, relationship maintenance, quality assurance and general management of operations. The development of technology supports the company's hardware, software and general knowledge of technology. The task of human resource management is to recruit, train and develop personnel. The task of procurement is to manage production inputs and purchasing. (Tardi 2020)

Although procurement is only one of the company's support activities, whose task is to purchase external resources to support the company's production, Hallikas et al. (2011) state in their article that procurement has become one of the most important factors of the company's performance and competitiveness in recent years. McKinsey and the Supply Management Institute have studied companies and their procurement in an extensive study, and the results show that procurement and procurement expertise have a strong impact on a company's profitability. The companies that performed best in the study managed to reduce their relative procurement costs more than the less successful ones, which was also reflected in the better operating results of the companies that performed best in the study. (Iloranta & Muhonen-Pajunen 2008).

2.1 Procurement costs

Procurement is very important as it affects the company's success in several ways. First of all, the savings from purchases directly increase the sales margin. Second, by developing quality management and logistics with suppliers, other manufacturing costs can be influenced. Thirdly, working cooperation with the supplier can positively affect the innovativeness of the company. The strategic value of procurement is related to how the company succeeds in building a supplier network that is more efficient than its competitors. One of the key factors of the company's success is finding competitive suppliers and building cooperative relationships with them. (Van Weele, 2002). In the modern world, companies are highly specialized. Because of this, the processing value achieved by the company for

its products is not very high relative to the turnover. This emphasizes the importance of the company's purchased products and services as the company's largest expense item concerning the business. (Sakki 2009).

Procurement costs are not only made up of the purchase price of the procurement but also consist of both direct and indirect effects on different types of costs. Therefore, purchases have a significant impact on the company's operations and results, as the costs of procurements make up the largest part of all the company's costs. The purchase price of the procurement can be considered as the tip of the iceberg, with the rest of the costs hidden under the water. (Haverila et al 2009) So contrary to this general misconception, where the total cost of the procurement consists only of the invoice of the purchased product itself, the total cost consists of many factors, such as the costs of the purchasing process, the purchase price, the costs generated during use and the costs of decommissioning. (Logistiikan maailma 2018) Sakki (2009) divides these procurement costs for the company, in addition to the purchase price, into direct and indirect costs: Direct costs include, for example, the costs caused by ordering, warehousing and transportation, while indirect costs can be incurred from monitoring the market, evaluating alternatives and developing supplier relationships costs. Therefore, the costs of purchases, especially material purchases, must be analyzed more widely and over a longer period of time, possibly for the entire life cycle of the procurement, because when choosing materials and suppliers, a significant part of the costs are incurred outside the company. (Haverila et al. 2009)

2.2 Procurement process

Sharp and McDermott define in their book (2009, p. 38) that a process is a set of activities with the purpose of achieving a final result. According to Luukkonen (Luukkonen et al. 2012, p. 8), a process can be described as a chain of events in which the company uses resources to create added value for the customer. The processes are often customer-to-customer chains, which is illustrated in Figure 3.

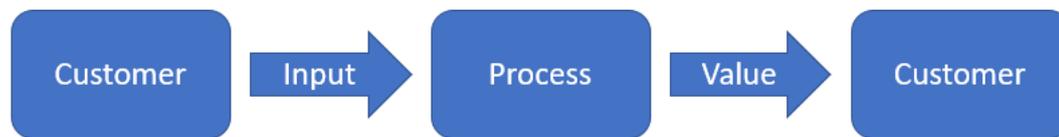


Figure 3 Process example (adapted from Martinsuo and Blomqvist, 2010)

As shown in Figure 3, processes use resources such as material, money, time, and labor to add value to an input that is refined into a desired output in the process. Outputs can be, for example, products, solutions to problems or services for different purposes. The added value that is produced in the process depends on the customer's needs, expectations and requirements. (Martinsuo & Blomqvist, 2010) A business process can be simply defined as follows: a process defines how a company does its work and consists of steps in which it pursues a certain goal for either an internal or an external customer (Davenport, 2005).

The focus of the research is the procurement process, which in itself is difficult to define as a concept. This is because the procurement processes of companies are very different and include different stages depending on the company and its operating environment. However, a precise definition of the concept is of primary importance in order to understand and manage the procurement process (Novack & Simco 1991, p. 145). Thus, its definition is also important from the point of view of researching the process and this study. For the sake of clarity, the concepts of procurement process and procurement must also be distinguished from each other.

The procurement process includes a set of measures and methods, with which the persons belonging to the customer's procurement organization search for, limit and evaluate suppliers and define the principles for supplier selection. The purpose is to find and select a supplier that best meets the conditions set for the purchase. Companies' procurements should be

clearly defined into process stages so that each activity performed at different stages of the procurement process can be traced and checked. (van Weele, 2002) Figure 2 below (van Weele, 2002) shows the procurement process which consists of six steps; 1. Definition of specification 2. Selection of a supplier 3. Contracting 4. Placing an order 5. Expediting and evaluation of the order 6. Follow-up measures and evaluation. These activities can be divided into tactical and ordering activities, of which the tactical (strategic) part of procurement is the focus of this thesis. The sub-area consists of three phases: determination of specification, supplier selection and contracting.

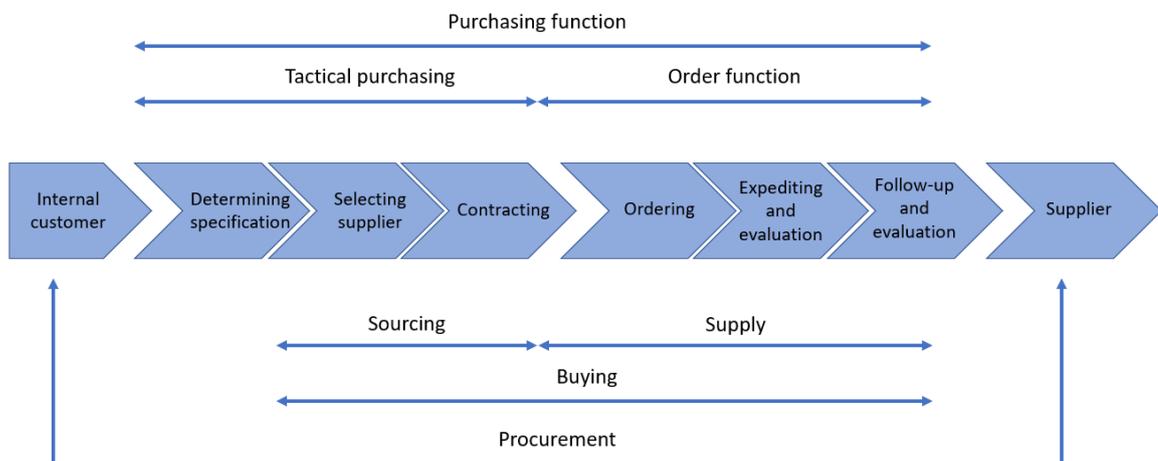


Figure 4 Procurement process model (adapted from van Weele 2002, p. 15)

The procurement process begins when the customer identifies and defines the need for procurement, followed by the mapping of potential suppliers and the collection of requests for quotations. After this, a supplier is selected. Supplier selection can be considered the most important stage of the procurement process when the purchasing staff is required to know about different supplier markets and industries, as this is the only way the selection can be made successfully (Erridge 1995, p.151). The selection of suppliers will be examined in more detail in the next paragraph.

Although in Figure 4 the part of the procurement process that is been examined more closely in this study is presented as tactical purchasing according to van Weele, the relevant part of the procurement process is generally referred to as the strategic part in the literature. Contrary to van Weele, Iloranta and Pajunen-Muhonen (2008) separate the strategic part of the procurement process from the tactical part and consider the management of the process to be divided into three different levels. The strategic part of procurement is the management of the entire process and the control of operations, while the tactical part can be seen as the definition of operating methods. The third level of management is the operative part, which means taking care of the daily work tasks of procurement. A large part of procurement's human resources is spent on these operational activities, which thus make up a large part of procurement's personnel costs. It is therefore clear that procurement costs are not only made up of the purchase price of the procurement. (Iloranta & Pajunen-Muhonen 2008, p. 89-90)

Van Weele's procurement process has been criticized for its limitations. Among others, Lindberg and Nordin (2008) consider the model to offer a too limited perspective on the procurement of services, as the model is built to serve the procurement of products. Since procurement can be considered the management of the company's external resources, the procurement processes of different companies are very individual and case-specific, depending on the company's environment and industry.

3. SUPPLIER SELECTION PROCESS

The more significant and longer-lasting the procurement is, the greater the risk involved in the procurement or the more imprecise or complex the purchased item is, the greater the role of supplier selection and its monitoring (Iloranta & Pajunen-Muhonen, 2008 p. 261). Scheuing (1989, p. 212) points out that every purchasing organization is only as good as its suppliers, and the purchasing unit is also judged based on managed suppliers. Gadde and Håkansson (1993, p. 40) state that due to the growing specialization of companies, suppliers make up to half of the turnover of the buying companies on average. It is therefore clear that the choice of the supplier has a critical impact both in terms of the procurement itself and also in terms of the company's operations. The procurement staff's challenge is to bring together the needs of the company and what the market offers, and the most critical part of this challenge is to find out which suppliers will be finally selected (Johnson et al. 2011, p. 314).

Supplier selection is one of the classic areas that has been studied in procurement management (Arpan et al. 2014). The need for companies to reduce the size of their supplier base has increased the importance of supplier selection (Swift 1995). Supplier selection consists of searching for new suppliers and evaluating and developing existing supplier relationships (Iloranta & Pajunen-Muhonen 2008, p. 127). According to Vitasek (2013), the company has two different approaches to supplier selection. The company can choose either an old, proven supplier or first define a procurement project and then map out potential suppliers. Everyone involved should be informed about the valid contracts and thus avoid overbuying. Purchasing within the framework of the agreement makes operations more efficient and reduces process costs. If there is no valid contract, the company can start researching potential suppliers and how to distinguish the most suitable and approach them. The best solution is usually found when choosing cooperation and interaction with suppliers. If the company decides to buy from there as before, the possibility of exploiting the supplier market remains small. (Nieminen 2016; Van Weele 2002, p. 33–37)

The selection of the supplier can be seen as a critical part of the organizations' procurement process that was presented in the previous paragraph. Experts in the field agree that there is no single best way to evaluate and select suppliers, which explains the existence of many different approaches. The unifying goal, on the other hand, is the minimization of the risks involved in the purchasing and the maximization of the benefit that can be achieved from the procurement. (Monczka et al. 2005, p. 225) According to Monczka et al (2005), the supplier selection process is described as seven stages (Figure 3), which starts with the recognition of the need for supplier selection.

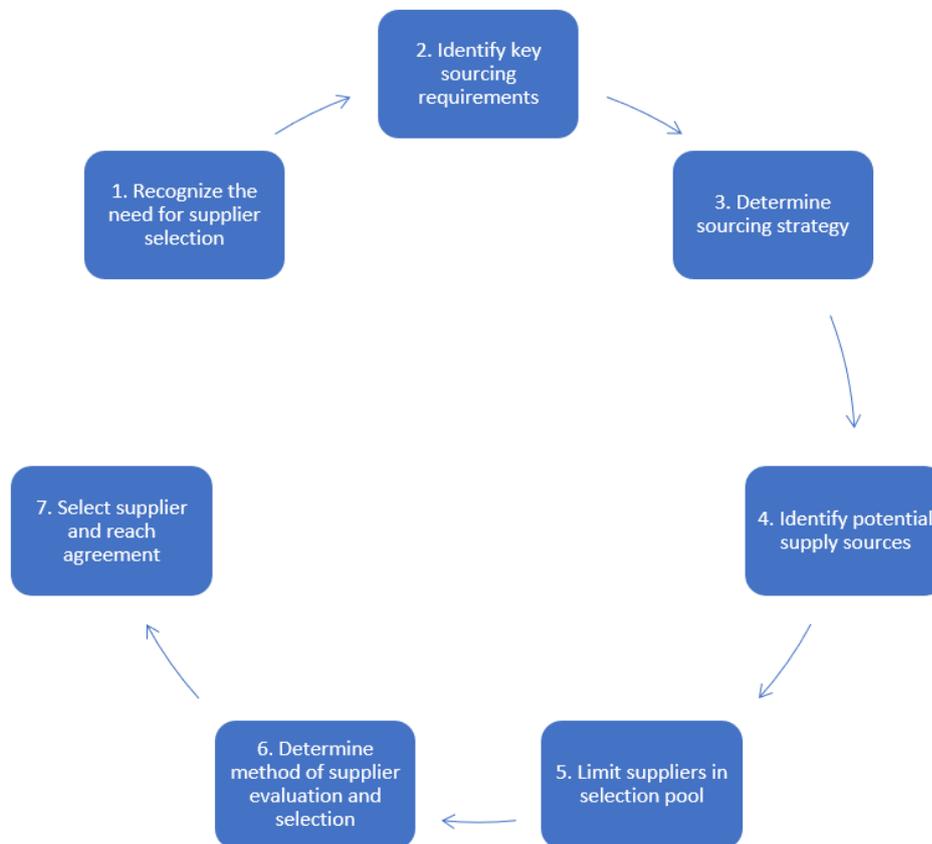


Figure 5 Supplier selection process according to Monczka et al 2005

Assuming that the company has already made a decision not to manufacture the product or produce the service itself, i.e., the so-called make-or-buy decision has been made. Another possible activator for starting the evaluation and selection process is the search for suppliers

with an eye on future procurement. According to Monczka et al. (2005), this is common, for example, in the development phase of a new product, when designers provide preliminary information about products and services, but exact details are not yet available, or they have not been consciously locked in yet. However, the information is sufficient for a preliminary survey and for mapping the interest of different suppliers. A preliminary survey can be useful, for example, for cost calculation, planning and pricing. The third possible starting point for starting supplier evaluation and selection is the desire to change the existing supplier or at least find a possible alternative to it (Monczka et al. 2005, p. 208). The reason may be dissatisfaction with the performance or pricing of the current supplier, in which case the alternative offered by the new supplier may also encourage better performance and price competition by the current supplier.

After this, the main requirements for the procurement must be defined, i.e. the characteristics on the basis of which the supplier will be selected. According to Monczka et al. (2005), the requirements vary greatly between different procurements, but there are also a few key requirements that can be considered to apply to all procurements. These include, for example, quality, price and delivery capability. These three requirements mentioned above are usually the so-called minimum evaluation criteria considered in every purchase. The third stage of the process is the definition of the procurement strategy, where the buyer thinks about his relationship with the future supplier and decides, among other things, how close the cooperation between them should be. One and the same procurement strategy very rarely applies to all procurements. For this reason, the chosen procurement strategy regarding a certain product or service also significantly affects the principles of evaluation and selection (Monczka et al. 2005, p. 209). When thinking about the strategic positioning of the procurement target, the Kraljic matrix (1983) shown in Figure 5, can be used as an aid.

Once the procurement strategy has been defined, it is possible to start mapping out potential suppliers. Companies look for information about suppliers on the internet, in magazines and publications, as well as at exhibitions and company visits (Burt et al. 2003, p. 329–331). It is sought more, the more important and strategically significant the procurement is for the company. In the global world, the number of potential suppliers has increased, which can

enable the company to find a better supplier than before, but at the same time, the buyer must evaluate, among other things, possible exchange rate changes, logistical challenges and cultural or political factors (Monczka et al, 2005).

After the survey, those suppliers who do not meet the criteria important to the company are cut off. These suppliers are thus excluded from the selection options. The purpose of narrowing down the suppliers, or pre-qualification as it may also be called, is to screen out those who clearly cannot meet the supplier selection requirements based on the available information about the suppliers. The purpose of this step is to separate the potential suppliers from the crowd so that the comparison of the remaining options can be more thoroughly focused. Limited resources exclude the possibility of getting to know all the candidates in depth. The organization may have several different criteria at its disposal for prequalification. As such important criteria Monczka et al. (2005, p. 212–213) present a financial risk analysis, an evaluation of supplier performance, evaluation of supplier-provided information.

When the pre-qualification of suppliers has been completed, the buying organization must decide how to evaluate the remaining potential suppliers who might seem to be equal at first glance. This requires more detailed research than the information used in narrowing down the suppliers. Similarly, to the mapping, the more is invested in the supplier evaluation, the more strategically significant and long-term partner the supplier is for the company. Finally, based on the evaluation, a supplier is selected and a contract is negotiated with him. (Monczka et al, 2005)

The supplier selection process has also been described as having five stages (Figure 4). According to Murphy and Wood (2011, p. 117–118), the process starts, as in Monczka's (2005) model, with the identification of a need, which can arise, for example, in a situation when a new supplier is needed for a new product or the contract with the current supplier comes to an end. This is followed by a so-called situation analysis, in which the company assesses the purchase in more detail, among other things, according to quality, quantity and

delivery date. The analysis of the situation includes the examination of the company's internal environment as well as the external environment.

After the situation analysis, the company begins to actively map supplier prospects and evaluate potential candidates. The company identifies potential suppliers through various channels. These can include, for example, various industry publications, trade exhibitions and the internet. After identifying potential suppliers, the company's task is to evaluate them and based on these selected criteria, where based on success, the company finally makes its decision and selects its supplier. One or more suppliers can be selected, and it is precisely this number of selected suppliers that is the subject of constant debate. The fifth and final step of the process is the evaluation of the decision, where the company compares the actual, detected performance of the supplier with the evaluation made before the selection. (Murphy & Wood 2011, p.117–118)

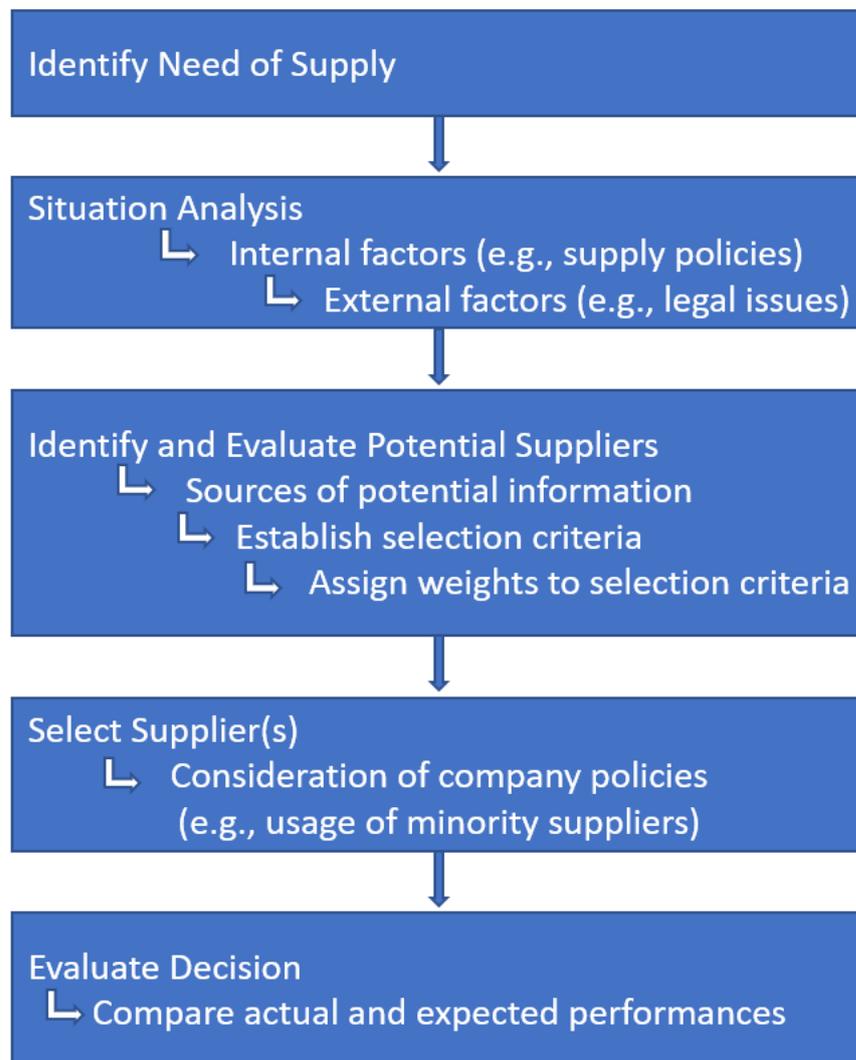


Figure 6 Supplier selection process according to Murphy and Wood (2011)

As we can see, the supplier selection processes of Monczka et al and Murphy and Wood are very similar to each other and contain very similar steps. The biggest differences can be seen in the number of steps when Monczka et al break down the process into more phases when looking at it a little deeper than Murphy and Wood. The difference is also that the Murphy and Wood process does not end with the selection of the supplier but continues even after that as a continuous evaluation. The supplier selection process has also been described as five-stage by van Weele, but the second stage of the process ending with the selection of the supplier is the so-called subcontracting method, where the core question of the procurement evaluation is whether the company should buy the product or service from outside or

manufacture it itself (van Weele 2002, p. 54–55). The selection process of Monczka et al (2005) starts from the assumption that this make-or-buy decision has already been made.

Since all this evaluation, definition and process as a whole takes a lot of time and resources from the company, it is, therefore, worth the company to try to divide its purchases into different groups so that it is possible to invest and allocate more resources to strategic and operationally vital purchases than to less important purchases. The categorization of procurements is therefore key in terms of the procurement strategy. (Iloranta & Pajunen-Muhonen, 2008)

3.1 Kraljic's portfolio and procurement strategy formation

Supplier selection is a critical part of the procurement process, as it greatly affects all subsequent stages of the process as well as the final result. The depth of supplier selection largely depends on the product to be procured and its importance to the company. The most used model for defining a product's procurement strategy and the supplier selection guided by it is the portfolio model created by Peter Kraljic in the 1980s, which is still used in almost every company and is still referred to in scientific studies (Cousins, Lamming, Lawson & Squire 2008, p. 47). The portfolio model can be used to define the type of procurement and place it in the correct category based on its characteristics. Based on the category, the right procurement strategy and supplier can thus be selected. In this Kraljic portfolio model, also called a purchase matrix, products are examined based on two variables, so they can be placed in a four-court in a position that is in line with the importance and value of the purchase as well as its supply market. Since all the segments of the square have different characteristics, different strategies and methods of operation must be defined for them, according to Kraljic. Once they are defined, they can in principle be used in every purchase situation by at least slightly modifying them. (Koskinen et al. 1995)

In addition to purely different product characteristics, different strategies must be formed for the categories also because the suppliers have their own interests regarding the buyer (van

Weele, 2002 p. 148). Forming strategies also helps the company to prepare for various disruption situations, as Kraljic's purchasing matrix reveals business deficiencies (Lysons & Farrington 2006). In his article, Kraljic (1983) highlighted various threats to companies from the depletion of resources, the scarcity of raw materials, political influence, public administration interference in the supplier market, intensifying competition and accelerating technical development, which increases the possibility of unpleasant surprises. Because of these reasons, companies had to change their perspective from traditional purchasing to strategic supply management.

How the buyer determines his procurement strategy depends on these two dimensions. According to Kraljick (1983), it is formed on the grounds of the strategic value of the procurement and the supply risk. The first factor, the strategic importance of the purchase, refers to the financial impact and typical features of the product or service itself in producing added value. It is about, for example, what is the share of the purchased material in the total costs or what is the impact of the purchase on the sales margin and thus on the profitability of the entire business. The profit impact of the product groups is evaluated annually in financial terms. The focus of the examination of the second factor, the supply risk, is the supply market itself, its complexity, its circumstances, and its environment. Now, the market is assessed according to, among other things, the number of suppliers, possible substitute products and existing technology. By looking at these two factors, the aim is to be able to define the procurement strategy and selection standards, which are helpful in the purchasing situation, when the evaluation of suppliers becomes more simple and possible risks can be detected and thus avoided. Kraljic introduced in his article a four-stage approach to determine a supply strategy. The approach comprises of the following phases: 1) Classification 2) Market Analysis 3) Strategic Positioning 4) Action Plans. (Kraljic 1983)

3.1.1 Classification of purchased products

As stated earlier, Kraljic's (1983) purchase portfolio analysis categorizes purchases based on their strategic importance and supplier market complexity into four categories with the aim

of maximizing the buyer's purchasing power and minimizing supply risk. The basis for categorization on the vertical axis is the strategic significance of purchase, i.e., how important the purchase is to the company. Influential factors include the amount acquired, the share of its costs in the total costs and the effect on the profitability of the business. The horizontal axis depicts the second main variable of the model, supply risk, which describes the nature of the market. Factors affecting the nature of the market are, for example, the number of suppliers operating there, the prevailing competitive situation, the costs of changing suppliers and substitute products. For example, in a situation where there are plenty of suppliers on the market and changing suppliers does not cause large costs for the company and is easy, the supply risk is low. In a situation where the number of suppliers on the market is small and the buyer purchases the product from only one of them, there is a high supply risk associated with the purchase (van Weele 2002, p. 146). By looking at these two variables, it is possible to form a quadrilateral, where procurements are divided according to them into four different segments, which are: leverage products, strategic products, routine products and bottleneck products. This can be seen in Figure 5 (Kraljic 1983).

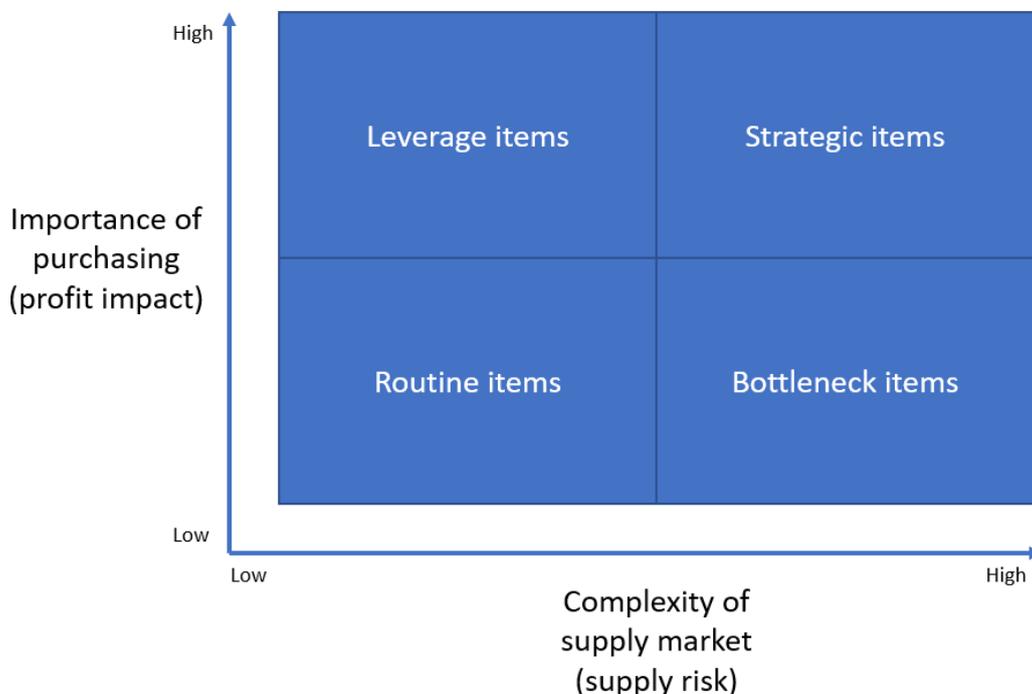


Figure 7 Kraljic's portfolio model (adapted from Kraljic 1983, Iloranta and Pajunen-Muhonen 2008, p. 145)

Leverage products are often the raw materials and products needed for the company's production (van Weele 2002, p. 148) The consumption of these products, as well as the purchase volumes, are large, and since there are many suppliers operating in the market and there are several alternative channels for purchasing products, the supply risk with leverage products is small. This quarter makes up most of the the organization's purchases, even if there are not many titles in quantity. In this category, the buyer organization has many opportunities, and should engage in aggressive bidding and negotiation tactics. (Iloranta & Pajunen-Muhonen 2008, p. 145–146) With competitive tendering, it is possible for the company to achieve significant savings due to the characteristics of the products and the supplier market. Even a small saving when procuring products, which make up the majority of the company's procurement costs, has a positive effect on the profitability of the entire business operation. The change of supplier does not cost the company much as it is easy and the market offers numerous alternatives. The company often procures its leverage products from several suppliers. (Iloranta & Pajunen-Muhonen 2008, p. 146; Caniëls & Gelderman 2005, p. 20)

Even if the company usually receives its leverage products from several suppliers, it might be able to reduce procurement costs by concentrating its purchases on only a few suppliers, with whom the company should strive for long-term contracts. (Monczka et al. 2005, p. 179) The characteristics of purchasing volume products are presented in table 1.

Characteristics	Procurement departments main tasks	Information required for the procurement
<ul style="list-style-type: none"> - Purchased in large volumes - Low supply risk - Several suppliers in the market - Price plays a significant role 	<ul style="list-style-type: none"> - Exploitation of full purchasing power - Targeted pricing strategies/ negotiations - Contract/spot purchasing mix - Order volume optimization - Vendor selection - Product substitution 	<ul style="list-style-type: none"> - Good market data - Short- to medium-term demand planning - Accurate vendor data - Price/transport rate forecasts

Table 1 Characteristics and requirements of leverage products and their procurement (adapted from Kraljic 1983)

Strategic products are of great value and critical to the company's operation and success as they create significant added value. The number of suitable suppliers on the market is limited. In addition, purchases in this category are often complex and pose the biggest challenges for the purchasing organization, as the products are usually tailored to meet the buyer's needs. Traditional tendering models are not functional because the number of alternatives is limited (Iloranta & Pajunen-Muhonen, 2008).

When the delivery risk is really high due to the bargaining power of the supplier and the dependence of the buying company, the company must strive to deepen its cooperative relationship with the supplier, in which case the delivery risk is reduced as a result of increased commitment and trust. Large-scale cooperation requires new kinds of versatile skills from individuals and non-traditional operating models from the entire organization. (Caniëls & Gelderman 2005, p. 144; van Weele 2002).

Koskinen et al. (1995) point out that however, the situation might not be as hopeless as one might imagine from the buyer's point of view. There may also be only a few buyers for the product in the market, in which case the relationship is important for both parties, and neither has significant bargaining power over the other. In situations where the number of buyers is also small, the power may lie specifically with the buyer when the supplier has to agree to the buyer's needs, wishes and demands (Van Weele, 2002).

Characteristics	Procurement departments main tasks	Information required for the procurement
<ul style="list-style-type: none"> - They create added value and are often customized - Significant for the company's business - Only a few suppliers in the market - High supply risk - Quality and delivery capability play a significant role 	<ul style="list-style-type: none"> - Development of long-term supply relationships - Accurate demand forecasting - Detailed market research - Risk analysis - Contract staggering - Contingency planning - Logistics, inventory, and vendor control 	<ul style="list-style-type: none"> - Highly detailed market data - Long-term supply and demand trend information - Good competitive intelligence - Knowledge of industry cost curves

Table 2 Characteristics and requirements of strategic products and their procurement (adapted from Kraljic 1983)

Routine products typically consist of many very different purchases, the value of which is not high and there are plenty of competing suppliers on the market, so the delivery risk is low. This segment is characterized by the fact that the procurement process itself causes relatively high costs compared to the value of the procurement, so it is a goal for the company to strive to simplify and streamline the procurement process of these products so that time and resources can be allocated to more important procurements. The company can therefore strive to control purchase costs by, for example, automating purchases and procuring products in large quantities at once. (Iloranta & Pajunen-Muhonen 2008, p. 146) For this reason, according to the procurement strategy of routine products, which as the name suggests are routine consumables in terms of operation, the company should strive to standardize its purchases and optimize the entire process (van Weele 2002, p. 149). The characteristics of the procurement of routine products are presented in table 3.

Characteristics	Procurement departments main tasks	Information required for the procurement
<ul style="list-style-type: none"> - Usually noncritical commoditys - Low financial impact on the company's performance - Low supply risk - Easily replaceable with substitutes - Several suppliers in the market 	<ul style="list-style-type: none"> - Product standardization - Order volume monitoring/ optimization - Efficient processing - Inventory optimization 	<ul style="list-style-type: none"> - Good market overview - Short-term demand forecast - Economic order quantity inventory levels

Table 3 Characteristics and requirements of routine products and their procurement (adapted from Kraljic 1983)

The volume of bottleneck product purchases is relatively small, and there are few potential suppliers operating in the market, usually only one. Although the purchase volume and value of the products to be purchased is small, their absence may cause significant problems for the company's production, so the company's main task is to secure their continuous availability, for example by storing the products sufficiently and developing various contingency plans. (Iloranta & Pajunen-Muhonen, 2008)

Even though the products are not very significant in terms of financial impact, they are critical from the point of view of the company's operation, and their procurement involves a large supply risk due to the small number of suppliers operating in the market. The company should actively look for substitute products, although it can be challenging to find them, as bottleneck products may involve, for example, high technical expertise. Even if there are several suitable suppliers, there are costs for the company to change the supplier when the bargaining power of the supplier is high (Caniëls & Gelderman 2005, p. 144; van Weele 2002). Due to the limited price negotiation possibilities for critical products, Iloranta and Pajunen-Muhonen (2008) urge the company to actively look for more suppliers and alternative ways of procurement in the category. The characteristics of the procurement of bottleneck products are shown in table 4.

Characteristics	Procurement departments main tasks	Information required for the procurement
<ul style="list-style-type: none"> - Products have special requirements - Low financial impact on the company's performance - High supply risk - Hard to replaceable with substitutes - Only a few suppliers in the market - Significant for the company's business 	<ul style="list-style-type: none"> - Volume insurance (at cost premium if necessary) - Control of vendors - Security of inventories - Backup plans 	<ul style="list-style-type: none"> - Medium-term supply/demand forecasts - Very good market data - Inventory knowledge - Maintenance plans

Table 4 Characteristics and requirements of bottleneck products and their procurement (adapted from Kraljic 1983)

3.1.2 Market analysis

The second phase of Kraljic's supply strategy shaping is called the market analysis, where the company compares its strength and bargaining power to the supplier's position in the market. Table 9 shows the evaluation criteria that Kraljic recommends for market analysis. Kraljic emphasizes that no evaluation criteria apply to all cases.

Company strenght	Supplier strenght
Purchasing volume versus capacity of main units	Market size versus supplier capacity
Demand growht versus capacity growht	Market growht versus capacity growht
Capacity utilization of main units	Capacity utilization or bottleneck risk
Market share vis-à-vis main competition	Competitive structure
Profitability of main end products	ROI and/or ROC
Cost and price structure	Cost and price structure
Cost of nondelivery	Break-even stability
Own production capability or intergration depth	Uniqueness of product and technological stability
Entry cost for new sources versus cost for own production	Entry barrier (capital and know-how requirements)
Logistic	Logistics situation

Table 5 Market Analysis, company bargaining power versus supplier bargaining power (adapted from Kraljic 1983)

The buyer company evaluates the supplier market, the availability of strategic materials, both qualitatively and quantitatively, and the relative bargaining power of the suppliers operating in the market. After looking at these, the buying company analyses its own needs and supply chains to assess its ability to get the supply terms it wants. (Kraljic 1983)

3.1.3 Strategic Positioning of products in the portfolio matrix

In the third step, the products that were classified as strategic products in the first phase are positioned in the procurement portfolio matrix (Figure 3). By doing so, it is possible to detect opportunities and threats, evaluate supply risks and to take strategic actions. The purpose of this activity is for the matrix to show the position of the buyer by comparing the company's strengths in procurement with the supply market strengths and supplier bargaining power.

In the matrix, the company's strengths are on the vertical axis and the supply market's strengths are on the horizontal axis. The products can have three values on the axes and these axes form a table in which three types of strategies can be seen for the products (exploit, diversify and balance), and with the help of these, different procedures are applied to the suppliers who sell the products, and the procurement can be conducted with a suitable supply strategy. In a situation where the company has strong bargaining power in the market and suppliers have medium or low strength, the company can pursue a reasonably aggressive strategy (exploit). For products where the company's role in the supplier market is secondary and the suppliers are strong, the company should be on the defensive and look for the possibility of material substitutes or new suppliers (diversify). For products for which there are neither big risks nor big benefits in sight, an overly defensive strategy can become expensive. On the other hand, unnecessarily aggressive means could damage supplier relations and lead to countermeasures from the supplier's side. In these cases, a middle-ground strategy (balance) is in order. (Kraljic 1983).

Company strenght		High	Exploit	Exploit	Balance
		Medium	Exploit	Balance	Diversify
		Low	Balance	Diversify	Diversify
			Low	Medium	High
			Supply market strenght		

Figure 8 Procurement portfolio matrix (Kraljic, 1983)

3.1.4 Construction of action plans

The fourth and last step is building action plans. The three basic strategies found in the procurement portfolio matrix (Figure 3) have direct effects on procurement strategy components such as procurement volumes, pricing, supplier selection, material substitutes and storage practices. In the short term, in the procurement of those strategic products where the supplier's strength exceeds the company's strengths and where the indicated strategy is diversification, the company should consolidate its supplier position by centralizing fragmented procurements to one supplier, accepting high prices and cover full volume requirements with supply contracts. In order to reduce the risks of long-term dependence of buying from one supplier, the company should also look for alternative suppliers or material substitutes, or even consider reducing the subcontracting of the product by taking more responsibility for the production of the product. If, on the other hand, the company's position

is stronger in relation to suppliers, it can distribute volumes among several suppliers, utilize pricing methods, increase one-time purchases and reduce its inventory quantities. At this stage, the company should utilize a wide range of different supplier scenarios to secure long-term supply security and take advantage of short-term opportunities. It is also necessary to systematically document the strategies aimed at purchasing products so that they can be utilized in future operations. (Kraljic 1983)

3.1.5 Weaknesses of the portfolio model

Kraljic's purchasing matrix has been the subject of much discussion and debate, with some seeing it as a "miracle solution" while others see it as having very limited applicability. The model is criticized for describing the situation only at a certain moment, and when viewed in practice, it does not give a sufficient picture of what would be needed to control the purchasing situation in each part of the square. Some researchers have argued that the definitions of the axes of the principal variables must be very precise in order to gather meaningful information. It has also been argued that there is too much subjectivity when applying the model. Related to that, the model has been constantly criticized for looking at things only from the buyer's point of view. (Cordell & Thompson 2018, p. 80)

The model has also been criticized for the fact that, even if it could provide good conditions for the categorization of procurements and suppliers, the strategies and measures proposed by Kraljic are not sufficient as such to form a supply strategy. For this reason, decision-making requires additional information about the company, a broader knowledge of the market, and a more thorough assessment of the supplier. (Gelderman & van Weele 2002.)

Kraljic's matrix has also received criticism that the matrix does not encourage cooperation with the supplier but abuse of power, which is not the case in line with today's cooperation trend, which is needed in today's complex procurement environment. The matrix does not recognize the power of strategic procurement cooperation and Kraljic himself has

commented in 2008, that he would like to increase the importance of trust in the model in the long-term in supplier relations, because without trust, a win-win situation cannot be created. (Keith et al. 2015, p. 25-29)

4. PURCHASING MANAGEMENT AND PURCHASING STRATEGY

Companies' interest in procurement strategy has grown in recent decades. Large companies have acted as pioneers in development activities, while smaller companies and various non-profit organizations have either not yet fully understood the importance of a procurement strategy or, due to limited resources, have not been able to invest in the research and development of it. Even today, it is fairly common that SMEs do not have an actual procurement strategy, and procurement management has not been focused on thoroughly. Since the relative share of procurement costs in the company's total costs is often significant, even smaller companies and organizations should pay more attention to procurement strategy and procurement management. (Anttila et al. 2013, p. 3–11)

A procurement strategy is a company's longer-term plan, the goal of which is to steer the company's procurement activities in the right direction (Anttila et al. 2013, p. 11). According to Watts et al. (1992), procurement strategy includes a set of actions that enable the company to purchase the necessary materials and services for operational activities as efficiently as possible. These actions must not conflict with the company's business strategy and the procurement strategy should always be integrated as part of the company's business operations.

As said, the role of both procurement management and procurement strategy has recently grown in companies and the strategic role of procurement has changed. This change has been driven forward by the increased importance of information, technological complexity, globalization, and digitalization. (Möller et al. 2005) The strategic approach is moving from a company-centered way of thinking towards a broader perspective, which also includes value creation systems and networks. The need for companies to find new ways to create a competitive advantage drives companies to form networks with stakeholders and other operators in the industry with the goal of this networking to make procurement more

efficient. (Cousins et al. 2008) According to a study by the University of Tennessee, companies today are looking for highly collaborative supplier relationships instead of traditional transaction-based buyer-seller relationships. Their goal is a win-win situation, where both the company and the supplier benefit from the relationship. (Vitasek et al. 2013, p. 2) In this way, procurement can be made more efficient and the synergy benefits of the relationship create value that cannot be achieved with a traditional competitive procurement relationship.

Each procurement strategy model has its pros and cons. It is important to know how to examine and understand different models so that it is possible to choose the most important parts from the models and the parts best suited to the situation for the company's own procurement strategy. In this way, not only better procurement results are achieved, but also better business results. (Keith et al. 2015, p. 32-37) Due to the diversity of procurement environments, procurement strategies can be very different. The strategy is influenced, among other things, by the procurement itself, its timing, established practices and operating methods, the nature of the supplier market and the buying company itself. The buying company's resources, negotiation power and procurement principles are always individual, and the strategy should be tailored to suit the company in question. (Corey, 1978)

The content of the procurement strategy should define the right direction, the right quality, and the right quantity for procurements. As mentioned earlier, the products to be procured are usually significantly different from each other, and that is the reason why there is not one strategy suitable for all products. The procurement strategy consists of a set of different regards for different product groups. The procurement strategy defines, among other things, the content and duration of contracts with suppliers, supply risks, supplier and product selection criteria, number of suppliers used, incentive systems and procurement management strategies. (Hawkins et al. 2011, p. 567-568)

4.1 Formation of procurement strategies

In terms of forming a procurement strategy, it is essential to classify different products from each other, which makes it easier for the organization to identify the characteristics and operating methods needed to deal with the procurements. By examining the classification of purchases, it is possible, for example, to identify items that have a large impact on the company's profit or the company's operations otherwise. In addition, the classification of purchases can be used to measure and monitor the success of the procurement strategy. In the procurement strategy, for example, you can define the desired placement of procurements in the portfolio analysis and thus monitor the success of the procurement strategy. (Iloranta & Pajunen-Muhonen 2008)

The location of the procurement in the categorization model serves as the frame of reference for the procurement strategy recommended for the procurement. Because of this, different categorization models give different recommendations for procurement strategies depending on the perspectives of the dimensions used in them. Strategies based on Kraljic's original portfolio model presented earlier generally recommend optimizing and streamlining the procurement process for routine procurements, efficient utilization of purchasing power for leverage procurements, reducing supply risk for bottleneck procurements, and developing supplier cooperation for strategic procurements (Kraljic 1983).

However, it is not profitable to directly determine the procurement strategy to be applied to the procurement, based on the procurement's placement in the portfolio model. Gelderman and van Weele (2003) state in their research that the creation of a procurement strategy should be based above all on the interpretation and comparison of the results of strategic categorization. Designating the purchase in the categorization model must be considered as the starting point for the formation of procurement strategies and not as the final means for defining strategies. Analyzing the purchases is one of the most important steps in forming procurement strategies, as it enables a deeper understanding of the characteristics of procurements. In order to implement this, information is needed especially about the

business strategy of the company, the situation of the supplier market, and the suppliers' performance and goals. The perspectives in question help the buyer to assess whether the purchase is in a suitable part of the square and what are the possibilities for implementing a position-based procurement strategy. Quite often, manual changes must be made to the categorization provided by the portfolio model in order to determine the final categorization.

In addition, it is important to observe that the application of a certain procurement strategy in practice means that the procurement moves to a different place within the model. Because of this, the determination of procurement strategies can also be approached based on how the company wants the purchases to move within the categorization model. Based on this, Gelderman and van Weele (2003) state that two different main directions can be chosen in the application of procurement strategies, the first of which is to maintain the current position of procurement in the categorization model and the second is to achieve a new position in the model.

Maintaining the current position in the categorization model means that the company considers the current conditions relatively unchanging. There may be both positive and negative reasons behind accepting the current placement. In the most optimal case, the position of the purchase is seen as the best possible space for it. On the other hand, the company may feel that transferring the procurement requires too many resources compared to the benefits that can be achieved. When the current position of the procurement is perceived as both unpleasant and a change of place is possible, the company decides on the desired position for the procurement in the matrix and plans a new procurement strategy for it based on this. (Gelderman & van Weele 2003)

Next, an example is presented of the differences in procurement strategies applied to Kraljic's matrix, depending on whether the goal is to maintain the purchase's current position or to reach a new position in the matrix (Figure 6). The starting point of the procurement strategy for bottleneck products is to reduce the supply risk. If the company ends up maintaining the current position of procurement in the matrix, it must accept its dependence

on the supplier and strive to reduce the negative effects associated with it (1). The most important thing is to make sure of the availability of these products, and this can be done, for example, by entering into binding contracts with the supplier, storing the product sufficiently and developing alternative backup plans. However, it can be a good idea for the company to try to reduce its dependence on products with a low financial impact and try to alter bottleneck purchases to routine purchases (2). This happens through reducing supply risk and supplier dependency by reducing the number of procurement specifications and/or finding new supplier opportunities. In maintaining the current location of routine procurement, the operating model is to simplify, streamline and optimize the procurement processes in order to free up resources for managing the more significant categories (3). By standardizing purchases and/or purchasing larger quantities of routine products at once, purchasing power can be increased and thus an effort can be made to alter purchases to the leverage procurement category (4). (Gelderman & van Weele 2003)

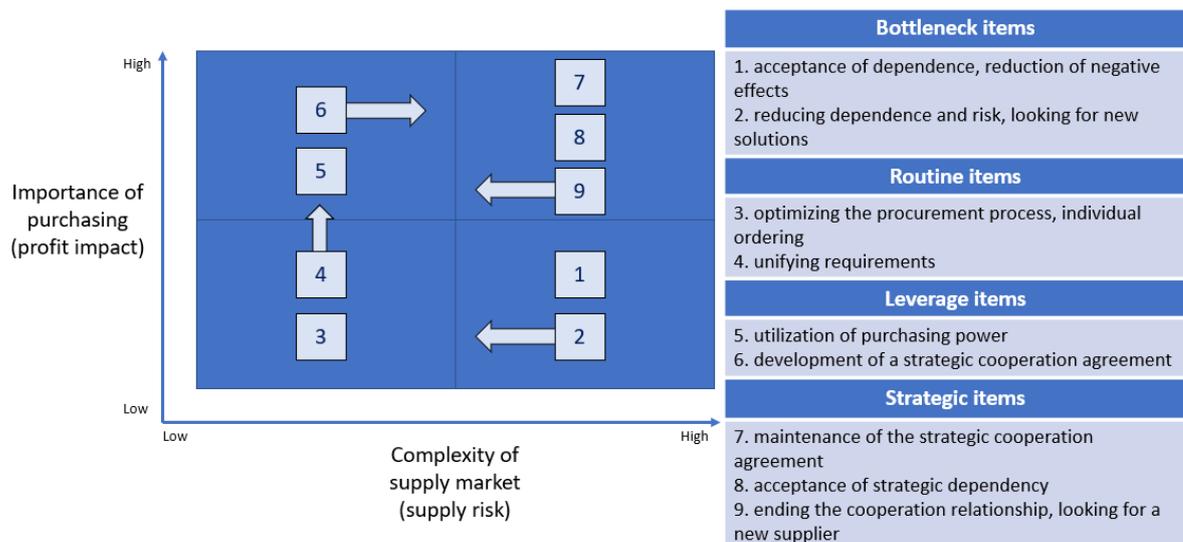


Figure 9 Strategic directions for categories in Kraljic's portfolio model (adapted from Gelderman and van Weele 2003).

With volume purchases, it is often recommended to maintain the current location, in which case the operating model is to utilize purchasing power through aggressive bidding (5). Even a small saving in products, which make up the majority of the company's procurement costs, has a positive effect on the profitability of the entire business operation. In some cases,

however, it is profitable for the company to try to shift purchases in the direction of a strategic supplier relationship, for example in a situation where the supplier is potentially able to offer the company a significant competitive advantage through, for example, advanced technologies (6). In the case of strategic procurement, there may be two different reasons behind maintaining the current location. In the most optimal case, the company operates in strategic supplier cooperation that benefits both parties and brings a significant competitive advantage to both parties (7). In some cases, the structure of the supplier market and the customer market can lead to a forced cooperation relationship. This dependence can be realized, for example, in a situation where the change of supplier incurs considerable costs for the company, there are no suitable alternatives on the supplier market, or the company's customers demand a certain feature or quality from the company's product (8). In some situations, previously fruitful and mutually beneficial supplier cooperation relationships develop into disadvantageous for the buyer, in which case the buyer should try to break away from the cooperation relationship and look for a new replacement supplier (9). (Gelderman & van Weele 2003)

5. SUPPLIER EVALUATION AND SELECTION CRITERIA

As stated earlier, a company needs to be able to recognize the characteristics and importance of procurement for its own operations. Different procurements involve different procurement strategies, and by utilizing them, the company can evaluate suppliers and choose the candidate best suited to each situation. Kraljic's (1983) portfolio model presented in the previous paragraph can be used for this identification and classification of procurements. When the company has identified the most strategically important and business-related procurements, it is able to determine the characteristics and selection criteria that it values most in these purchases. The evaluation of suppliers takes place on the basis of how the company believes the supplier is capable of performing and meeting these requirements set for procurement. (Iloranta & Pajunen-Muhonen 2008; Monczka et al. 2005)

In supplier selection, the selection criteria are compared among potential suppliers, and the selected supplier is the one that can best meet the selection criteria. The most optimal supplier is not necessarily the one that offers the lowest purchase price or the fastest delivery. (Swift 1995) According to Dickson (1966), in general, the most important criteria in supplier selection are, among others, quality, delivery time, guarantees, price, production abilities, technical abilities, managerial abilities, reputation and financial situation. Most of the criteria were quantitative until the 1990s, while nowadays qualitative criteria are increasingly included, such as culture, relationships, geographical location, trade restrictions and environmental issues (Arpan et al. 2014).

Now it is not only the product or service to be purchased, but also its supplier that must be evaluated. With the development of supply management and the tightening of competition on the global market, more and more attention has been paid to the supplier itself and the procurement process, as more and more is demanded of them. Fitzgerald (1998) divides the selection criteria into four areas: economic, supplier's service level related, supplier's characteristics related and product's characteristics related. Most of the selection criteria look

at the supplier itself, its characteristics and the service it provides and its nature. (Fitzgerald 1998, p. 20–22)

5.1 Price and costs

The purchase price has traditionally been one of the most important and easily measurable criteria. In a perfectly competitive market, demand and supply form a price equilibrium at the intersection of their curves, which is the market price. (Bailey, 2010). In reality, the situation is rarely this simple, but it is affected by, among other things, the competitive situation in the market and the characteristics of the product. These include, for example, the number of competitors and substitute products operating on the market, as well as the value of the product or supplier to the customer. (Lysons & Farrington 2006, p. 438)

When evaluating the costs of procurement, one should remember the previously discussed observation that the purchase price of the procurement forms only a part of the total costs, which are affected in addition to the purchase price by, for example, costs arising from transportation and negotiations (Sakki 2009, p.186). The classification of procurement according to the financial significance of the title has been one of the most traditional classification methods. Classification according to financial importance makes sense, because it shows a direct connection to the company's result. When evaluating the financial importance of an item, the amount of money spent on the purchase is usually taken into account. The actual cost structure of procurement consists of cost factors that the procurement organization should understand when comparing suppliers. Cost factors that significantly affect the price include labor costs, raw materials, technology, energy and logistics costs (Iloranta and Pajunen-Muhonen 2008). It is also important for the company to take into account the possible maintenance and service costs of the purchase (Desmukh & Chaudkari 2011).

A low price can also indicate lower quality, and Crandall and Julien (2010) show that the purchase is not cost-effective if the quality of the purchase has deteriorated so significantly that it incurs considerable costs, such as repair and maintenance costs, or if the reduced quality takes away a significant number of customers from the company, reducing the size of the company's profit. However, price is still a significant selection criterion, especially in the procurement of leverage products, where the purchase quantities are large and thus the effect of price on the profit is large (van Weele 2002). The purchase price and the resulting costs form Fitzgerald's (1998) economic selection criteria.

5.2 Quality

Quality has generally been seen as the second most important supplier evaluation criterion among companies (Desmukh & Chaudkari 2011). Quality and the perception of quality can be divided into different categories and defined in several different ways, but when observing the quality of procurement, it is most important to understand it as the ability of the procurement to meet the requirements set for it, in other words, the procurement can be considered to be of higher quality the better the given requirements are met (Crosby 1980, p. 15). Most of the time, however, it is not purposeful to aim for the highest possible quality since quality and price tend to go hand in hand, in which case the price also rises unnecessarily high (Dobler & Burt 1996, p. 182). However, minimum requirements should be defined for it to avoid problems (Lysons & Farrington 2006, p. 267).

As already stated, weak and uneven quality incurs costs for the company. In addition to avoiding costs and problems, it must be observed and evaluated purely for the reason that it is a value creator for the company and a source of competitive advantage. It can even be considered a vital factor for a company's survival and success today. (Crandall & Julien 2010, p. 14–15). Quality, together with technical characteristics, forms Fitzgerald's (1998) selection criteria related to product characteristics, which are especially important in purchasing strategic products.

Measures related to quality assurance and inspection take resources from the company and create costs. Nowadays, it is possible to reduce these by requiring certain types of quality certificates from suppliers, which act as a quality guarantee for the supplier. However, the costs of these certificates are high and are probably reflected in the price (Hwang, Radhakrishnan & Su, 2006).

When observing quality, its many forms must be taken into account. Quality includes, for example, the product's performance in its use, its reliability, i.e. how flawlessly the product functions during several uses and long-term consumption, and how long the product's life cycle is for its purpose of use. Other possible quality characteristics are the rapidity of product maintenance and its availability, the additional features offered by the product in addition to its main purpose of use, the aesthetics and comfort of use of the product, and the noticed quality of the product. (Garvin 1987)

5.3 Delivery time and reliability

The supplier's ability to perform deliveries on the agreed schedule, with the right quantity and quality, share operationally relevant information with the customer and keep all parties to the contract and procurement-related factors informed has become one of the most important evaluation criteria. The factors mentioned above form an image of the supplier's reliability, which is a key factor in today's procurement. A late or otherwise unsuccessful delivery by a supplier can stop the company's entire production process in several sectors and cause considerable shortage costs. When production stops, the final product cannot move forward in the agreed schedule, and this can have an impact on the company's own reliability. Along with production problems, storage costs also increase. (Baily 2010) Delivery consists of many things, including the supplier's ability to stay on schedule, delivery speed, delivery capacity, turnover and delivery quality (Desmukh & Chaudkari 2011).

Delivery time is in itself a competitive factor that enables a company to differentiate itself from its competitors in a positive way (Koskinen et al. 1995, p. 97). When time is money, a shorter delivery time can result in significant savings for the customer, even if the fastest supplier is not the cheapest. If it is in the interests of the company to be able to offer its customers products significantly faster than its competitors, the entire supply chain should operate quickly, which puts the delivery time at the center of the evaluation. (Bailey 2010). According to van Weele (2002), just-in-time delivery can be a real benefit for the company, when the delivery incurs as little storage costs as possible, but the delivery is not late, which would weaken the company's efficiency and reliability. Delivery time and reliability, together with delivery ability and punctuality, constitute Fitzgerald's (1998) selection criteria related to the supplier's service level, which are of great importance, for example, when procuring bottleneck products.

5.4 Supplier's financial situation

It is good to pay attention to the supplier's financial situation right from the beginning of the procurement process. It is pointless to spend time and resources on a more detailed evaluation of the supplier if it is immediately noticed that the company is ripe for bankruptcy. Since there are costs for the company in evaluating the supplier, negotiating with it, and changing the supplier, it is assumed that even short-term cooperation with a supplier that might soon be out of business is not profitable. Even if the supplier is not going bankrupt, a weak financial situation can signal other problems, such as a lack of funds, excessive dependence on the supplier, or internal problems, such as poor quality or uncertain deliveries. Due to the poor financial position, the supplier also probably does not have enough resources for additional investments that may be needed to develop its operations. (Monczka et al. 2005, p. 219)

However, fortunately, it is often easy for the company to find out about the supplier's financial situation, for example by looking at the company's financial statements and annual reports. From this available information, it is possible to create a picture of the company's

future based on key figures. The most important of these are related to the supplier's assets and liabilities, as well as its business performance. (Erridge 1995, p. 60)

5.5 Ethics and environmental friendliness of the supplier

Ethical and ecological businesses are growing trends and as they might give a competitive advantage, they also make limitations for companies. Companies must take into account ethical operating methods and environmentally friendly production possibilities more and more, some in pursuit of competitive advantage, some forced by the public authorities. In order for a company to stand out from its competitors as a "green choice", for example, it must be able to ensure that the entire supply chain and the life cycle of the product it sells are ethical and environmentally friendly. In this case, the supplier is under examination. (Hovisalmi & Niskala 2009) Environmental responsibility must extend to managing the environmental impacts of the partners. The aim is that environmental responsibility is reflected in the operation of the company's entire production chain, from product design to the final product. (Harmaala et al. 2012, p. 22.)

The buyer should also be aware of the supplier's ethics and environmental factors because the company's own image can take a hit from the supplier's actions. For example, if it turns out that the company's supplier conducts its business unethically, this can be connected to the company and this can result in financial losses as a result of damage to the reputation, for example, if customers start boycotting the company and choose a competitor. (Hovisalmi & Niskala 2009) According to Christmann and Taylor (2006), the best way to get a supplier to act responsibly is to emphasize the importance of sustainability to the supplier and direct, well-organized monitoring. In addition, the value and probability of the sanctions make suppliers follow the agreed rules and implement the required changes in their operations.

5.6 Location of Supplier

Van Weele (2002) suggests that the supplier's location plays a significant role in evaluating the supplier, especially when the company wants to be sure of delivery time and reliability. When the supplier is close, logistics costs are reduced, and it may bring companies closer to each other due to easier communication and easier management of cooperation. This can lead to smoother trading and even enable joint product development. However, large international operators are often a more attractive option for the buyer, as they can offer more advanced technical support and offer more competitive prices due to economies of scale. (Dobler & Burt 1996, p. 116–117).

Scheuing (1989) also sees the geographical location of suppliers as something that should be addressed in the procurement strategy. The procurement strategy should define whether the company wants to use domestic or foreign suppliers. Decision-making can be based, for example, on price, quality or the product to be purchased. The benefits of domestic suppliers are better delivery reliability, shorter delivery time, lower delivery costs and better communication with the supplier. Instead, using global suppliers may offer greater opportunities for the company. The supplier's location, as well as its financial status and ethics and environmental friendliness, form Fitzgerald's (1998) selection criteria related to the supplier's characteristics, together with supplier relationships and the supplier's technical competence.

5.7 Creating a supplier evaluation

For the company to be able to organize potential suppliers in a mutual ranking, it must have some kind of metric or system that can be used to evaluate the suppliers based on the chosen criteria and it is possible to score them. One of the most common comparison systems in use is the so-called weighted scoring model, with which it is possible to give scores to suppliers for each procurement situation and emphasize the most important evaluation criteria, based

on which supplier selection is made. (Laura, Bin & Lin 2008). The evaluation criteria are weighted percentageally in the same proportion as the company values them. However, a minimum requirement should be set for each criterion so that it is not possible to make up for a deficiency in a critical area with good performance in other areas. (Murphy & Wood 2011, p. 118) Based on literature sources, the weighted scoring method is the most popular method for supplier evaluation. (Dobler & Burt 1996, p. 253–254).

In the example described in table y, the buyer evaluates four companies based on three criteria: price, quality and delivery time. The best-performing company in each category receives 100 points, the second-best 75 points, the third 50 points and the fourth 25 points. Thus, by adding up the points, it is possible to determine which supplier is the best based on the selected criteria.

Criteria	Supplier A	Supplier B	Supplier C	Supplier D
Price	2. (75p.)	1. (100p.)	3. (50p.)	4. (25p.)
Quality	1. (100p.)	4. (25p.)	2. (75p.)	3. (50p.)
Delivery time	3. (50p.)	2. (75p.)	4. (25p.)	1. (100p.)
Total	225p.	200p.	150p.	175p.

Table 6 supplier evaluation example by scoring (adapted from Laura et al. 2008)

In table y, all criteria are valued equally. Although supplier A gets full points only in the quality measurement, it is the best choice when calculated in total points. However, it is typical that the company values certain criteria more than others, and thus the evaluation criteria can be weighted percentageally in the same proportion as the company values them. This is done in table 7.

Criteria	Weight	Supplier A	Supplier B	Supplier C	Supplier D
Price	40%	75p. X 0.4	100p. X 0.4	50p. X 0.4	25p. X 0.4
Quality	20%	100p. X 0.2	25p. X 0.2	75p. X 0.2	50p. X 0.2
Delivery time	40%	50p. X 0.4	75p. X 0.4	25p. X 0.4	100p. X 0.4
Total	100%	70p.	75p.	45p.	60p.

Table 7 weighted scoring model example (adapted from Murphy and Wood, 2011; Dobler and Burt, 1996)

In table k, percentage weightings are set for the categories in relation to how the company values the criteria. Now supplier B becomes the best choice as the company values price and delivery time more than quality. Such a case could happen, for example, when purchasing leverage products, where the quality requirements of a commodity or raw material are not necessarily very high, but the price and delivery time play an important role. When planning procurements, one should remember that it is goal-oriented to look for the most suitable quality, not always the best quality. The best quality is often synonymous with expensive, and using, for example, the most expensive material is not always favourable. (Juran 1974, p. 22)

A thorough evaluation of the supplier before making a deal is the only way to minimize risks in the future. Most procurement professionals agree that there are different evaluation criteria, and it is not possible to determine one best method for all selections and evaluations. Despite the different methods, the goal of the selection process is the same: to reduce the supply risk and maximize the benefit for the buyer (Monczka et al, 2005)

6. CONSTRUCTION INDUSTRY

This paragraph introduces the industry in which the case company operates. The presentation begins by discussing the social significance of the construction industry. After that, we move on to the current state of construction and special features, after which we look at procurement and its typical features in the construction industry. The construction industry has many special features that differ from other industries, which are good to understand when looking at the company operating there and its procurement activities.

6.1 The social importance of the construction industry

The field of construction is broad as a concept, as the main category in question includes in Finland specialized and general construction for house, land, and water construction, as well as construction-related installation and finishing work. Different areas of construction include new construction, basic improvement, repair construction, alteration, expansion, and renovation work. Companies in the construction industry are divided according to their main industry into house building, land and water construction, and specialized construction activities. (Tilastokeskus 2022) According to Razak Bin Ibrahim, Roy, Ahmed and Imtiaz (2010), construction is a term often used to describe the activity of creating physical infrastructures and superstructures. Construction can be understood as all activities related to the creation and repair of immovable structures. The construction industry has a long history and it plays a big role in turning people's needs and desires into reality through physical construction projects. The importance of the construction industry is highlighted as it is an essential part of the state's national economy and its development. The state cannot develop if the infrastructure is not built to accelerate the national economy. The construction industry does not only function as an enabler of the national economy and its development, but the end products of the construction industry itself, such as schools and hospitals, have an impact on people's wealth and quality of life.

In Finland, the construction industry is of great importance. The buildings, infrastructures and built-up land areas produced by the construction industry make up 565 billion euros of national wealth, which is more than 70% of the national wealth of the entire state (Rakennusteollisuus RT Oy, tilastot ja suhdanteet). The sector has a large national economic impact, the changes of which are reflected in the entire society, as it enables the operations of other industries as well. Different development directions and megatrends, in turn, are reflected in the construction industry. These can be seen, for example, in urbanization and an increase in consumption as the standard of living rises. (Ahonen et al. 2020, p. 20–21)

As mentioned earlier, according to the Construction Industry (2010), the great importance of the construction industry is not only due to the fact that it provides buildings and infrastructure which other sectors depend on, but it is also a large sector in its own, being the largest industrial employer in Europe. The construction industry is dominated by small businesses as it mostly consists of small local companies with less than 20 employees. These companies produce the majority of the industry's production, but there are also some large main contractors in the industry, whose incomplete competition can sometimes resemble an oligopolistic setup. Among the smaller contracting companies, the competition is more of a setup of perfect competition. According to Rakennusteollisuus RT (2019), the share of construction in Finland's gross domestic product in 2018 was just over 16%. According to Tilastokeskus and Forecon Oy (2019), the value of construction production in Finland in 2018 was around 35 billion euros. In 2019, the combined turnover of companies in the construction industry was 5 billion more, about 40 billion euros (Suomen virallinen tilasto 2022). The construction industry and the construction product industry employ a total of almost 260,000 people in Finland (Ahonen et al. 2020, p. 15).

6.2 Current situation and characteristics of the construction industry

In general, the construction industry is considered a relatively competitive and risky industry (MohammadHasanzadeh et al. 2014). The industry is characterized by a project nature, where operations are planned site-specific, focusing on individual projects, which is

reflected in decentralized project-specific decision-making and cost control. The order and contract practices in use are also primarily focused on improving the efficiency of individual projects. (Wood 2008) Eriksson and Westerberg (2011) show that in the construction industry, projects depend on many actors, such as architects, builders, contractors and material suppliers. These different entities are independent organizations with their own goals and methods of operation. There is often a lack of cooperation and communication between parties, which makes it difficult to plan, organize and manage construction projects. The focus on individual projects is also reflected in the structure of the supply chain, which Vrijhoef & Koskela (2000) describe as temporary, fragmented and unstable, often built around a single construction project.

Although the cooperation and contract models between the developer and the main contractor have developed, the same development has not continued in the subcontractor network. The models between the main contractor and subcontractors are still mostly based on fixed contract pricing or unit pricing. The main contractor or developer is responsible for the planning, and the subcontractor prices his contract performance based on these completed plans. Possible changes during implementation are priced using the agreed additional and change work pricing. A fixed-price contract has its advantages, such as simple tendering and comparison of offers, and at least apparently knowing in advance how much the contract will cost. Weaknesses can be considered to be that a fixed-price contract does not promote cooperation between the parties, the network's expertise cannot be fully utilized, extra work is done in planning, and changes during the construction site are expensive. (Kiiras et al. 2019, p. 23.)

The results of the research conducted on the productivity of the construction industry tell a harsh reality. During the last 30 years, productivity has not improved much but has remained at a low level. According to researchers, a change in processes and culture is urgently needed in the field (Koskenvesa 2011, p. 144–145). The fragmentation, complexity and lack of standardization of project management practices in the field prevent cooperation and productivity improvements in the field. According to Humphreys, Matthews and Kumaraswamy (2003), the project nature of construction often prevents the creation of trust

between the parties, which in turn leads to a reluctance to share information. For a complex and dynamic construction project, trust can be the basis for cooperation between companies. Trust facilitates negotiations, supports joint problem-solving, reduces conflicts, and improves performance and results. (Hartmann & Caerteling 2010, p. 355-356)

According to MohammadHasanzadeh et al. (2014), a change in culture and attitudes is required in the construction industry when moving from confrontational relationships to cooperative relationships, as the complexity, uncertainty and schedule pressures of construction projects increase the need for change. Toor and Ofori (2007) also announce the need for a change in the industry's culture. Khalifa et al. (2007) see that the construction industry needs to let go of the culture of blaming and move to a culture of solving problems. The change can already be observed to an increasing extent, as more and more cooperative procurement approaches, such as partnerships, joint ventures, and alliances, are used in construction projects around the world (MohammasHasanzadehin et al 2014).

Innovation and willingness to grow in the construction industry have not been as quick as in other industries. Only about 0.3 percent of the industry's turnover goes to R&D. In recent years, however, many startup companies and new technologies have entered the industry, which may have a positive impact on the development and innovation of the industry in the future. Only less than six percent of companies in the construction industry are strongly growth-oriented, while the corresponding number in other business sectors is over 11 percent. The majority of companies in the construction industry, about 60 percent, aim to maintain their current position. The business's willingness to grow is partly influenced by the industry's cyclical sensitivity. (Ahonen et al. 2020, p. 71.) The degree of digitization in the construction industry is also very low compared to other industries. Currently, only agriculture and hunting industries fall below it. This is one of the most significant reasons for the fact that in the last 20 years, the growth of labor productivity in the construction industry has been only 1% per year, while on average in all industries it has been 2.8% per year and, for example, in the manufacturing industry 3.6% per year (Mc Kinsey, 2017)

The construction industry is often blamed for a lack of innovation and is thought to be a conservative industry. However, this may be due to the inapplicability of traditional metrics for measuring innovation activity for interpreting innovation activity in the construction industry. The construction industry's long procurement chains and the complexity of construction processes when measured can give a false impression of the construction industry's innovation activities. When there are many different participants in a construction project, both on behalf of the suppliers of raw materials and the implementers of the construction project itself, it is difficult to create and especially measure innovations. (Bygballe & Ingemansson, 2014)

6.3 Procurement in the construction sector

Although short arms-length supplier relationships, whose goal was the lowest possible price, have been popular in the construction industry in the past, a trend towards longer supplier relationships can be observed. (Dubois & Gadden, 2000) According to studies, companies are buying more and more work and materials from suppliers. With procurement accounting for 75% of the company's total costs, it can be said that cooperative relationships play a more significant role than before, and conventional relationships are no longer sufficient. (Vrijhoef & Koskela 2000, p. 169–170) Operations in general can be considered quite networked in the construction industry, as cooperation between companies is common. Although operations are networked, the construction industry does not have the same close supplier and network relationships as the manufacturing industry. It is a well-established practice that project-specific procurements are tendered. Because of this, the parties change with each project, at least partially. (Ahonen et al. 2020, p. 21)

According to Hartmann, Ling, and Tan (2009), in normal procurement, the evaluation criteria of subcontractors must cover four main categories, which are: cost, quality, cooperation, and technical know-how. Customer satisfaction, contract provisions and company strategy can also be taken into account. According to the research, the price is clearly the most important criterion and companies are not ready to be flexible about it.

Procurement procedures, willingness to cooperate and pricing are directly affected by the market situation in the construction industry. Price competition and partial optimization of costs are emphasized as soon as the market situation weakens because about half of the costs are made up of building materials and products in house construction. (Ahonen et al. 2020, p. 21–22) In the past, the construction industry has focused only on price and authority and too little on trust, although as procurement has changed, the importance of cooperation has begun to be appreciated (Eriksson & Laan, 2007, p. 397)

The importance of procurement is one of the most significant factors in terms of the success of construction projects, like any other project, both in terms of schedule and finances. Procurements should be timely and well-priced in order to ensure the success of the project. The margin calculated during the bidding phase is quickly lost if suboptimal purchases are made during the project, both in terms of material and services. It is particularly important that the company has a functioning purchasing process and that the company's employees are aware of how to act in different procurement categories in order to make the process as efficient as possible.

7. PROCUREMENT AND SUPPLIER SELECTION IN THE CASE COMPANY

This chapter introduces the research method and the data collection and analysis method. The purpose of this paragraph is to examine how the case company evaluates and selects its suppliers and how its purchasing strategy is formed because both the selected supplier and the chosen purchasing strategy affect the company's success. This is the empirical part of the work, where, based on interviews, the aim is to form a comprehensive understanding of the company's supplier selection and find out, among other things, the evaluation criteria based on which the company measures suppliers and manages its purchases.

7.1 Research method

As stated in the introduction, the research was carried out as qualitative research. The starting point of qualitative research is the description of real life, and the general aim is to find and reveal facts, as well as to verify already existing claims. The goal of qualitative research is to understand the research object. (Hirsijärvi, Remes & Sajavaara 2007, p. 157)

According to Hirsijärvi et al (2007), qualitative research includes a set of the most diverse studies, one of which is the case study. According to Koskinen et al (2005), the case study is one of the most common qualitative research methods in business economics. It means a study in which one or at most a few cases selected by a certain selection method are studied. The case study is usually a company or, for example, one of its departments. The case may also be a process or a structural feature of the company. In this research, the subject of the case study is one company, so it is a single case study.

The data collection of the research material was carried out with semi-structured thematic interviews. Semi-structured themed interviews are freer in nature than structured interviews,

so that even though the interviewer determines the questions, the interviewee can answer in his own words and gets the opportunity to even propose his own questions. The questionnaire of the interview should be used more as a guideline, with which the interviewer tries to guide the conversation and keep it on the desired theme. The advantage of freer discussion is that it can bring out things that would otherwise remain hidden. Theme interview is the most commonly used form of interview in social and business sciences. Used well, it can be an effective method because the interviewer can control the interview without full control. (Koskinen et al 2005, p. 104)

In this case, when there is not much previous literature about the case company and its ways of working, and the so-called secondary data collected by others is not available, thematic interviewing is the best way to collect data. The construction site manager, sales director and CEO of the case company were chosen to be interviewed. The interviews were conducted as individual face-to-face interviews and each interview lasted 60 minutes and included the same questions. The questions were sent to the interviewees in advance, to reduce suspicions and make the interview flow more smoothly. The interviewees were also told about the purpose of the interview before starting. The set of questions, which is presented in Appendix 1, is quite extensive, as the research wanted to be done from many perspectives and dealt with in a broad area. The first topics of the interview were about the company and its operational environment to clarify some special features of the industry and to get the conversation going. From there the conversation was steered to better answer the research questions. All three interviews were recorded and transcribed into written form, first word-for-word, then into written language. It was easier to group and assemble the material in the written standard language form, as well as to compare it.

7.2 Sales director in the interview

The sales director of the case company says that the company's primary business is energy solutions for households. The company sells and installs its solutions and systems on a "turnkey" basis, i.e. as ready-made units for consumers. Although the company is relatively

young, the manager says that a lot has happened during its existence. The industry has developed a lot due to, among other things, rising electricity and energy costs, which have increased demand and competition. It is known that there are plenty of different actors and different ways of working in the fast-growing industry. Several competitors are known to suffer from problems and difficulties in accepting new orders due to their busy, full-order calendar and the fact that they have no desire to grow their business. The sales director suspects that many suppliers are overworked, and the limited resources do not allow for capacity growth at the desired pace. Several suppliers are also suffering from the problems of the current world situation, such as the difficulties caused by the corona pandemic, component shortages and the war in Ukraine. The supplier of the case company's main products has also had problems getting goods to Finland.

In a trendy and growing industry, there are plenty of threats as well as opportunities. The sales director believes that the number of competing companies will increase in the market as the industry is "fashionable" and based on the tightening of competition that has continued throughout the company's existence. However, the manager believes that there are enough customers, as interest in the industry is constantly growing and the company plans to invest heavily in marketing. So far, according to the sales director, most of the orders have come through contact requests sent by the supplier, and the sales director considers this cooperation extremely important. In fact, he says quite frankly that it is precisely this working cooperation with the right supplier that is vital and key to the company's success. In a trendy and developing industry, where in the current world situation there are enough customers and the biggest problems are the difficulties in obtaining goods, the company must be able to ensure the timely availability of the right products with the highest possible sales margin. The company has also figured that the best way to stand out from the colourful competition field is specifically with the quality of the solutions offered, and that is also why the supplier, and its products are at the center of the examination.

When asked about the procurement process and purchasing strategy, the sales director could not give direct, clear answers. He says that the procurement process starts with identifying a need. He said that the CEO is basically responsible for all purchases, at least for the main

products. Of course, unexpected needs that are discovered on the job site are taken care of by the foreman or the salesperson. These could be, for example, missing products, additional products, or things damaged from installation. In surprising purchases, the most important evaluation criteria are ease and availability. For small individual purchases, it doesn't make sense, for example, to go and get cheap products from abroad, because the saving in euros is too small compared to the effort involved. The aim is to get the entire package with all components from one supplier in one shipment directly to the site, so that the installer can install the system at once, efficiently without additional purchases. The procurements have been planned as carefully as possible and the sales director says that this standard order is usually enough. The supplier is responsible for delivery directly to the construction site, as the company does not have its own warehouse at all. Previously, before the cooperation with the current supplier, the company made its purchases from several suppliers and picked up and stored the products themselves. This caused inconvenience and costs for the company, and the quality of the products was not as good as with the current supplier.

The products of the current supplier are significantly better in quality than those of previous suppliers, which the sales manager raises as a really important issue. A better product sells better, and its repair or warranty issues do not cause as much cost to the company. The current supplier was met at a business event, at a trade fair. In the negotiations with the supplier, attention was paid to product quality, price, delivery, availability and functionality of cooperation and practical matters such as invoicing. Price is regarded to be a more important factor than quality. The sales director also emphasizes availability when the supplier is a big player with a large inventory. The credibility of the supplier was also seen as a selling point, as it increases credibility and offers well-known products with long warranties.

Although the fact that the supplier delivers the products directly to the construction site is slower and more expensive than picking up the products, it is easier, and it helps to streamline the entire business. The sales director considers delivery important for a company that does not have its own warehouse. Even in a sales situation, it is possible to directly plan the progress of the process and the schedule with delivery times in mind. When the

organization changed, the delivery was also seen as necessary, because when changing the supplier, the company used external installers whose job description did not include the pickup and delivery of the products, so the company should have needed to organize it somehow anyway. Now that the company has its own installers, delivery can be reconsidered. However, the sales director believes that even though the company has its own installers, the supplier will continue to deliver. This is due, among other things, to the characteristics of some products, such as their size, so their transport is difficult. The sales director was not very interested in the supplier's ethics and environmental friendliness, because he believed that the operations were very similar everywhere. Ships bring products from China, and they are driven to the site by trucks. The products themselves are environmentally friendly, although their production and transportation are not.

According to the sales director the company has been very satisfied with the quality and availability of the current supplier's products. Functionality and ease are assessed by sticking to agreed schedules and by finding the right products at the right sites. The suppliers have often stated their delivery times, so it has been possible to compare them with each other. The quality of the products is evaluated, among other things, by the warranty periods, which entity offers the warranty periods and whether the products are from well-known manufacturers. In the quality assessment, comparisons made by a third party have also been used. These comparisons the company does not make itself for the time being. The price was compared between different suppliers, as well as its change over time.

There is also a lot of evaluation of the suppliers with whom the company already is cooperating with. In this case, according to the interviewee, the true character of the supplier is revealed, because a large part of the evaluation criteria can only be seen through cooperation. The criteria for this evaluation are the same as in the selection phase. Continuous evaluation is a big part of the company's everyday life. All suppliers of goods and services are constantly evaluated, for example, invoicing and marketing services are diligently monitored. Suppliers are changed as needed when deficiencies appear or when better providers are found. The current supplier of the main products has not been changed for a while, but when problems have arisen, they have been fixed on behalf of the supplier

without hesitation. The sales director has seen no reason to change supplier, even though competing offers and contacts have been received. The supplier has been operating in the industry for a long time and its business is on a solid foundation. The supplier's business is also growing, which the director sees as a good thing. In that case, he believes that the supplier will work in the field for a long time and will be able to invest in product development, among other things.

In an effort to deepen the cooperation between the company and the supplier, the manager mentions, among other things, the contact requests forwarded by the supplier. Cross-visibility in companies' marketing on websites and brochures can also be considered cooperation. The feedback received is also forwarded from one side to the other, even if it is not actively collected. The sales director has not noticed any great advantages of centralization, nor does he feel that dependence on the supplier would be very harmful, as he believes that a new supplier will be found when the need arises. The company has slowly started to modify its offer and its projects to better match what is available from the current supplier, but not completely. Some products, so-called bottleneck products, have had to be sourced from elsewhere, but the company apparently has the effort to modify such bottleneck purchases so that they are closer in nature to routine purchases.

7.3 CEO in the interview

The CEO also says that the industry has developed enormously during the company's existence and says that the competition has intensified considerably. The number of competitors in the industry has grown, as has the number of suppliers. New actors and innovations are constantly entering the industry, so the number of alternative suppliers as well as substitute products is always growing. There is a lot of product development and as the industry grows, large manufacturers and suppliers who have been operating in the construction industry for a long time are making new territorial conquests in products related to energy solutions. A good example of the growth of the industry is the fact that when the company started and there were no contacts yet, only a few suitable suppliers were found.

Now the number of suitable suppliers has grown tremendously. In addition, operations have become international and, among other things, the growth of online stores has made it possible for the company to import products itself, and many competitors are known to do so. Even if there are savings by passing the middleman, the challenges are the difficult predictability of delivery times, the time and effort involved in the procurement process, and a lack of trust, because the risk is having to be responsible for the supplier's quality errors and deficiencies. Still, this possibility is reviewed every spring.

The CEO also says that the industry is plagued by availability problems and says that the products required to run the business have completely run out of suppliers operating in Finland already in the last two years. The products are really specific and if a certain solution has been sold to the customer, it is really difficult to find a replacement product on the market. In such situations, almost without exception, it has been necessary to renegotiate the contract with the customer, which has resulted in a decrease in the sales margin, inconvenience, and even possible damage to the reputation, while customer satisfaction of course takes a slight hit. The CEO names the problem of substitute products as the company's own strategy when it differs from its competitors in terms of quality. The company says it sells the current supplier's best product, a so-called high-end solution, and when it runs out, neither the current supplier nor its competitors have as good a product to offer. This is always a problematic situation for both the customer and the company itself, and the CEO illustrates it by comparing the situation to an imaginary situation where a car dealership would sell the customer an electric car, but deliver a hybrid. Even if the products partially have the same features, the customer does not get what was agreed and paid for. Thus, the company is dependent on the supplier and its products.

The company is constantly contacted by competing suppliers, and even if the products are better and cheaper than the current ones on paper, they have not dared to change the supplier. The CEO says that even if the offer received is better or cheaper than the current one, it can bring huge risks to the company, if the supplier is, for example, a one-man company that imports possibly unreliable products. In addition to the quality of the products, the risk is that the entire supplier will no longer exist in a year. The current supplier's financial

condition has not been analyzed by financial statements, but the history and market position of several ten years as one of the largest wholesale firms in Finland has been sufficient as a guarantee. The CEO considers the supplier's size and reputation also a selling point, as customers trust that the supplier exists and will be responsible for warranty issues also in the future.

The CEO says that the company evaluates its suppliers even after the selection. However, the so-called continuous evaluation is not actively carried out except for the main products, because this creates costs for the company. The CEO also assures that these costs are not significantly high since the evaluation is mainly based on the offers obtained from the contacts of competing suppliers. These competing offers are usually received in spring and autumn, due to the seasonal nature of the industry. If the company itself actively compared different suppliers, the situation would be different. Although attractive offers have been received, the supplier has not been changed due to the costs arising from the change. Since the company's salespeople are trained to sell the current supplier's products, as well as the company's brochures and offer charts are based on them, switching would cause significant costs. The CEO sums it up so that the more difficult the procurement process and supplier change process is, the more difficult it is to change, and even if there are offers and opportunities in the market that should be seized, this does not happen due to limited resources.

The company does not have an actual backup plan for a situation where the current supplier's products suddenly run out or if the supplier has to be changed suddenly. On the contrary, the case company has, even as planned, concentrated its purchases on the supplier, modified what it offers to fit better with the current supplier and is actively trying to deepen its cooperation with the supplier. The CEO mentions the so-called earmarking and deposit method as the advantages of centralization. In this procedure, the company earmarks part of a lot from the supplier at a certain price, and the supplier is paid a small fee or a deposit that the marked part of the lot is available from the supplier, and when the company buys this reserved amount from the supplier, the paid deposit is returned. If the company doesn't get the entire amount it signed up to go, the company loses the deposit, but this is still a good

way to make sure of availability. The company gets the products at a cheaper price when it reached the set goal, and the procedure certainly serves the supplier by encouraging the company to buy larger quantities from it. In the deposit procedure, the supplier acts as the company's warehouse, so that the company does not have to store the products it has earmarked but can buy them from the lot it has marked at a pre-agreed price.

Other mentioned actions with which the company aims to deepen its cooperation with its supplier include, for example, cross-visibility in marketing, constant communication, where the supplier also informs about new trends and industry developments abroad, and contacts mediated by the supplier. The CEO does not consider these contacts as important as the sales director but says they are of course welcome. The supplier also offers free training to the company's installers, and responsibility for problems and warranty issues has been borne flawlessly.

Based on the interviews, the delivery reliability of products emerged as one of the most important, if not even the most important, criteria when choosing and evaluating a supplier. In the theoretical part of the study, adequate storage of products is mentioned as a way to ensure availability, and this storage becomes an interesting branch of the issue in the discussion. The CEO, as well as the sales director, say that the company does not have its own warehouse. Of course, one can regard the earmarking procedure with the current supplier as an outsourced warehouse. The CEO also says that certain bottleneck products are bought into storage, so that their availability can be ensured. These bottleneck products were also sourced from a competing supplier.

When talking about the storage, the interviewees probably mean that they don't have an actual warehouse of their own, where all the products would be stored before they are transported to the construction site. However, this has been thought about and in the early days of the company's operation, the company had a warehouse. However, it did not make sense for the company to utilize its own warehouse so that a large batch of products was purchased from the supplier with its capital because this financial saving is lost in the costs

of logistics when all other components come from elsewhere. Own storage is not worth it, because in this case it is needed store everything. What is saved on securing delivery, buying a larger batch, and tying up equity is lost when you must order something for the construction site. The CEO says that you have to store everything or nothing.

Even though the CEO was not able to tell the more precise purchasing strategy in the interview, the classification of procurements and the utilization of different purchasing strategies were noticeable. The procurement process and supplier selection for the main products, the procurement of which has been discussed above, is time-consuming and carefully considered, while the procurement of routine products, such as hardware store purchases, is made much more uncomplicated. Just as can be seen in Kraljic's matrix, efficiency is important in the procurement of routine products so that the procurement itself does not cause large costs for the company. The CEO says that in the case of several procurements, the company deliberately pays a higher price than would be necessary through active tendering, but for these procurements, efficiency is the most important selection criterion. For example, when purchasing equipment and tools, product features and ease of purchase are valued more than price. According to the CEO, it can be considered as a rule of thumb that the more expensive the purchase, the more time and consideration are used in the procurement process. In this way, a different purchasing strategy can be seen depending on the economic impact of the purchase.

7.4 Construction site manager in the interview

Understandably, a construction site manager has a much more concrete and everyday point of view on the company's operations due to his job description. The manager makes seasonality a characteristic of the construction industry as the weather conditions affect operations and processes. For example, it is difficult to do work on the roof in winter, although contrary to common misconception, winter is the driest season. The company is currently building up its operations by, among other things, hiring its own installers, although the transition to exclusively own installers will take some time, in which case

external and in-house installers will certainly be used simultaneously for some time. The company has been aiming to increase its business and capacity due to future opportunities, which can be explained by the increase in demand for alternative energy solutions caused by the energy crisis. Awareness and interest in the field have increased, which has increased demand. The industry is competitive, and the competition is constantly getting tougher.

The manager sees the procurements as supporting the company's business strategy in the sense that the company strives to stand out from its competitors by investing in quality in all its operations, from start to finish. This means that the company strives to offer better products by working with reliable partners to offer a better overall customer experience. The manager sees that the company must be able to meet the set quality standards throughout the entire supply chain.

As a general rule, the first time the company is physically in contact with the purchased products is at the construction site, unless due to difficulties caused by the delivery time, some products are picked up by themselves. The products are requested from the supplier due to their specificity, so they cannot be found in, for example, hardware stores. Therefore, tendering is unnecessary. The procurement of routine products, which in the company's case are, for example, hardware store purchases and office supplies, has been centralized to other suppliers with whom the company cooperate. Cooperation has been undertaken specifically to facilitate and streamline procurement. This can mean for example that the company has an account in a hardware store. However, this is only the company's effort to concentrate its purchases in stores where it has an account, in reality, the purchase of routine products is often influenced by geographic location, as individual products and surprising purchases are sought to be obtained as close as possible to the work site. It is also advisable to get such products "in stock" so that it is not needed to pick up every little thing separately. In addition, buying larger batches is more affordable.

The manager says that the number of alternative suppliers in the industry is growing all the time and he is also constantly contacted by them. The manager sees this as a good thing

because in this case, the dependence on the current supplier decreases as the number of competing suppliers increases. The manager hopes that other suppliers and what they offer will be actively surveyed, although he says that he is not responsible for these decisions. Even if the supplier is not actually being changed, competing offers can potentially be used to advantage in negotiation situations with the current supplier according to the manager.

In terms of his work, the manager sees the supporting products and functions as more important than the main products. He believes that it would be possible to change their supplier, which is currently the same as for the main products if a better, easier, and/or cheaper alternative is found on the market. The foreman does not find it problematic that products are procured from different suppliers, even though this would of course have an impact on delivery and availability. The foreman justifies this with the characteristics of the supporting products, which according to him do not require a lot of storage, but the installers could carry them with them. However, the manager emphasizes that his job description does not include competitive bidding or active search and comparison of suppliers. Even though the manager says that he makes purchases and evaluates them in his work, the comparison and evaluation of purchases is mainly concerning products, not suppliers.

Basically, all products needed to the main business are purchased from the same supplier. As an advantage of centralization, the foreman mentions that the procurement process is straightforward when the company and its employees knows where all the products can be sourced from and that the products can actually be purchased from there. Fast delivery time and good service are also important things. The manager says that personal relationships have started to form between the company's employees but of course, this could happen with other suppliers as well. The manager does not believe that the company has any real backup plan for the supplier, but rather that they are very dependent on the supplier. For this reason, the manager emphasizes monitoring the market so that a new supplier can be found if necessary.

7. DISCUSSION AND CONCLUSIONS

In this last paragraph of the thesis, the findings and procedures that emerged in the study are compared with the previous research literature, which has been presented in the theoretical part of the thesis. In addition, the main and sub-research questions of the study will be answered. Finally, the thesis's reliability and limitations are evaluated and possible topics for further research are considered.

8.1 Comparison of theory and empiricism

Although the findings from the interviews are partly contradictory both with each other and with the theory, there are also similarities. The characteristics and features mentioned in the theory for the industry, procurement and supplier selection can also be observed in the case company, although differences and especially simplifications also come to the fore. The interviewees unanimously consider the construction industry to be competitive, and among other things, the unwillingness of companies operating in the field to grow, as mentioned by Ahonen et al. (2020), came to the fore. However, the lack of trust mentioned by Humphreys et al (2003) is not seen as problematic as it appears more in, for example, relationships between the main contractor and subcontractor than in supplier relationships.

Although the interviewees could not tell any official or formal purchasing strategy or how procurement and procurement processes are managed, there were still similarities in the company's methods with the models and methods presented by the theory. Basically, for example, the company's supplier selection process follows the process presented by Murphy and Wood (2011), although it is significantly more straightforward. This is due to the usual dynamism for a small company, limited resources, and the fact that each process is unique, and theories cannot be directly utilized in practice. However, the company's supply strategy can be seen to be in line with the company's business strategy, as the company strives to stand out from its competitors by offering its customers better quality solutions and a better

customer experience. In this way, procurements support the company's primary activities and create value, as in Porter's (1998) value chain model. However, the CEO also says that the same strategy causes challenges for the company as it is difficult to find substitute products due to the high-quality requirements.

Similar to Kraljic's (1983) purchasing matrix, the company also has different purchasing strategies for different purchases. The financial impact of the procurements and the supply risk determine to a great extent how much and in what way resources are used for which procurements. The more expensive the purchase is, and the greater the related supply risk, the more time and consideration is used in the procurement process. The procurement process for important and strategically significant procurements and the selection of a supplier is time-consuming and carefully thought out, while the procurement of routine products, such as hardware store purchases, is made much more uncomplicated. Just as can be seen in Kraljic's matrix, efficiency is important in the procurement of routine products so that the procurement itself does not cause large costs for the company.

Just as Baily (2010) points out in the theory section, one of the most important evaluation criteria for the company was the supplier's delivery reliability. The difference to the theory, however, is that the company has not tried to ensure product delivery reliability with backup plans but has tried to make sure of it by storing products and deepening its relationship with its supplier. Of course, Kraljic (1983) mentions the effort to deepen the relationship as a good way to ensure the availability of products, and one can see the effort to deepen the relationship to the strategic supplier cooperation presented by Gelderman and Van Weele (2003), which produces a competitive advantage for both parties.

In addition to delivery reliability, price and quality can be considered the most important evaluation and selection criteria for the company. Also in the research literature, these criteria are mentioned as the most common and in many cases the most important. As a difference between the criteria presented in the research literature and the most significant criteria from the point of view of the case company, among other things, the supplier's

environmental friendliness and ethics emerged, perhaps even a little unexpectedly. None of the interviewees considered these issues to be significant, as they did not believe that there were significant differences in the activities of the suppliers or the manufacturing of the products. Likewise, Scheuing's (1989) view of the geographical location of the supplier based on the country of origin was not considered significant, but the CEO considered this to be even misleading to consumers. In his opinion, it does not matter where the products or solutions are assembled, as the products are made from components manufactured abroad in any case.

8.2 Answering research questions

This paragraph answers the main and sub-research questions of the study. In order to get a clear and justified answer to the broader main research question, sub-research questions are initially answered, by answering which one is encouraged to form a view of what effect the right supplier selection has on the company's success.

8.2.1 What is the significance of the chosen purchasing strategy?

By answering the first sub-research question, it is possible to form a view of the significance of the selected purchasing strategy for the company. The purchasing strategy can be considered as a guideline for the management of procurements, which enables the company to allocate time and resources to important procurements and manage the procurement process effectively. According to Sakki (2009), a purchasing strategy that guides practical procurement work is needed as a basis for supplier cooperation. Just like in theory, based on the interviews, it was possible to form an understanding that it is not profitable for the company to spend a lot of resources on all procurements and their evaluation. Excessive evaluation and planning of small-scale procurements are not necessary when their financial significance is small for the company's operations. Time and resources should be focused on more important, larger procurements, which should be evaluated and analyzed more deeply.

A correctly chosen and implemented procurement strategy streamlines and makes procurement more efficient so that the company can benefit from it as much as possible. By classifying procurements correctly, it is possible, for example, to identify items that have a large impact on the company's profit or the company's operations otherwise. When choosing and implementing a purchasing strategy, a categorization model can be used to help you manage the procurement correctly. For example, strategies based on Kraljic's original model generally recommend streamlining the procurement process for routine procurements, efficient utilization of purchasing power for leverage procurements, reducing risk for bottleneck procurements, and developing supplier cooperation for strategic procurements (Kraljic 1983).

The purchasing strategies used in the case company adapted the recommendations of Kraljic's matrix, as well as instructions on how by modifying and reclassifying procurements, the company can potentially streamline its operations, make better arrangements, and gain a competitive advantage.

8.2.2 How are procurements managed?

The thesis's second sub-research question on procurement management is quite broad and aims to clarify how procurement and the procurement process are managed and what phases it consists of. The procurement process and the supplier selection process that is part of it have been explained in the theoretical part of the thesis and several models presented in previous research literature have been presented in it. In the case of the case company, the procurement process itself, as well as the supplier selection process, seemed to be significantly more straightforward than in the models presented in theory. Although the processes basically follow the same patterns, not every step seemed to be handled with the same care. In the case of several procurements, there didn't seem to be a need for situation analyses, aggressive tendering, or careful evaluations of suppliers. This is due to the limited resources of a small company, as well as the fact that there may not be enough suitable suppliers available.

However, by studying procurement management, a clearer overall picture of how the procurement process proceeds in theory and what the benefit of their active management is. By studying the procurement process, it is possible to detect the important stages in terms of procurement, which can be paid attention to depending on the situation. Since procurement can be seen as the management of the company's external resources, efforts must be made to utilize them so that the company's profitability and overall benefit are the best possible. (Iloranta & Pajunen-Muhonen 2008, p. 67)

8.2.3 What criteria is used to select and to evaluate a supplier?

By answering the third sub-research question, the aim was to find out the ways and methods by which the company can evaluate suppliers and to find out the criteria that the company values in its purchases and suppliers. Supplier selection is made based on these criteria. As can be assumed based on the theory, also in the case of the case company, price, quality, and delivery reliability emerged as the most important selection and evaluation criteria. The importance of price in procurement became even more significant than expected, and there was a lot of comparison of suppliers from a financial point of view. The importance of price was partly contradictory, with some of the interviewees considering it more important than quality.

Delivery reliability and availability also became a significant criterion. In an industry where there are enough customers, but availability difficulties caused by the prevailing world situation are mentioned as the biggest problem, it is vital for the company to find a supplier from which to get products. Ensuring this became the focus of the case company's supplier selection criteria in the study. Similarly, the fact that the supplier offers a delivery service is a viable solution for a small company. Both in theory and in the case of the case company, the evaluated and valued criterion varied according to the nature and significance of the procurement. Reliability of delivery is valued in important purchases, while simplicity is the goal for routine products.

A larger number of supplier evaluation and selection criteria were mentioned in the theory part than what influenced the case company's decision-making. Some of the criteria mentioned in the previous research literature are indeed taken into account, but their importance or the scope of the evaluation is not as thorough. For example, the supplier's financial situation is a criterion that affects the evaluation, but it is not evaluated very deeply, even if the necessary information is easily available. The case company also did not use any systems or metrics presented in theory to form a ranking of potential suppliers.

8.2.4 How can the company's success be improved with selecting the right supplier?

As the research progressed and by answering the sub-research questions, a broader understanding of the subject was gained, and it became possible to examine the actual main research question of the research. As Hallikas et al. (2011) state in their article, procurement has become one of the most important factors of a company's performance and competitiveness in recent years, as purchases made from suppliers form a significant part of the company's costs and, as a result, also of the company's potential profits. It is therefore clear that purchases and the suppliers from whom they are made have a significant impact on the company's success. In addition to costs, the right choice of supplier is important for the company, as the supplier can be responsible for up to half of the company's product quality problems (Monczka et al. 2005, p. 241).

As previous research literature has shown, the choice of supplier has a significant impact on the company's success, being a source of competitive advantage when it succeeds, but a significant burden when it fails. The matter can also be seen in this way in the situation of the case company, for example, when the sales director said in the interview that a well-functioning cooperation with the right supplier is vital for the company and plays a key role in terms of the company's success. For a company that aims to stand out from its competitors and gain a competitive advantage specifically through better quality, it is important to work with a supplier that meets the company's quality requirements. The interviewees said that the company must be able to meet the quality standards throughout the entire supply chain

because it is in the end responsible for the functionality of the solution for the customer. Consequently, low-quality products cause costs and damage to the company's reputation.

In addition to the products purchased from the supplier, choosing the right supplier has an impact on the company's success through cooperation. Effective cooperation is a mutually beneficial activity, whereas the cooperation relationship deepens, trust grows and information sharing increases. This is also the aspiration of the case company, which has gained a competitive advantage in the form of increased benefits by deepening the relationship. Information sharing has increased, benefits have been achieved in joint marketing efforts, and customer service has improved. With a correctly managed procurement from the right supplier, it is possible to achieve the aspiration according to Zenz's (1994) classic definition of procurement: the goal is to buy the right materials with the right quality and quantity at the right price and time from the right target to the right place.

8.3 Evaluation of research

When evaluating the research, the quality and reliability of the research must be evaluated. The reliability of research can be assessed using reliability and validity. Reliability refers to the repeatability of measurement results, and validity refers to the ability of a measure or research method to measure exactly what the study is intended to measure. (Hirsijärvi et al, 2007, p. 226)

The aim was to increase the reliability of the research by choosing interviewees that make purchases in their work, and thus they have an awareness of the matter. The interviewees were also provided with the interview questions in advance and an effort was made to clarify the aim of the study before the interview. Of course, it is possible that the sample of three interviewees is not large enough and there is also the possibility of human errors in the form of misunderstandings. Similarly, the validity of the research was also sought to be increased

by selecting interviewees from different organizational levels, as well as by striving to achieve a broad and diverse understanding of the company's ways of working.

The thesis aimed to investigate and find out the effects of the right supplier selection and the selected purchasing strategy on the company's success. When studying the procurement process, supplier selection, and procurement strategy, quite a lot of previous research literature and theory were used as help. As the work progressed, a considerable reality gap was noticeable between theory and empiricism, although there were also plenty of similarities. It should therefore be noted that the models and practices presented in the theory can not be directly implemented in the case company in light of the research results. This is explained by the ad hoc nature of the topics, with companies' procurements, operating environments, and situations being different, and the theory cannot be directly utilized in practice but must be applied on a case-by-case basis. Since the research was limited to researching specifically the case company to obtain more reliable research results, the research results are significant specifically for the case company, a small company operating in the construction industry. The research results can possibly be at least partially utilized by other companies or companies operating in the same field.

With this thesis, a few further research questions arose. Perhaps the most significant of these is the development and deepening of the relationship between the construction company and the supplier and its benefits. The case company has intensified its cooperation with its supplier, possibly with the goal of strategic supplier cooperation. It would be interesting to research what benefits this could have for the company and the supplier.

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APPENDIX

Interview questions

Could you tell me briefly about your organization in your own words? What does your organization do? What are the characteristics of the company's business environment, i.e. the construction industry, and are there any special features in your field?

What are the biggest challenges/opportunities of the business environment from the company's point of view? How will the business environment change in the future?

What are the company's strategy and goals? How does the purchasing support the company's strategy?

Does the company have an established procedure or protocol according to which purchases are made (is the company organized with procurement in mind)?

Does the company have a strategy for purchasing? What does the strategy aim for? How is procurement managed?

What initiates the procurement process? How does the procurement process proceed?

How and through which channels does the company survey potential suppliers?

Do you tender for all purchases? If you do not tender all procurements, when do you not tender?

Could the products be divided according to their importance to the company?

Do you emphasize any factor in procurement (e.g. price or quality)? What are the most central and important evaluation criteria for the company in procurement?

Are substitutes or alternative products easily available for the products (or services) offered by the supplier?

How does the company evaluate suppliers based on these evaluation criteria? What qualities does the company look for in a supplier? What is a good supplier like? How is the supplier assessment formed?

How does a company create a final evaluation of a potential supplier after the evaluation, i.e. how does the company rank the suppliers? Does the company use some metrics in these evaluations?

Are suppliers evaluated only before supplier selection or is this also done for suppliers with whom we already cooperate with the so-called continuous evaluation? If so, what criteria are used to evaluate?

What is done if the supplier relationship becomes less favorable or does not match the assumption?

Has the company tried to deepen its relationship with the supplier? Is there any cooperation? Have you tried to get rid of dependency? Has negotiating power or purchase volumes been exploited?

Has the company tried to adapt its purchases to suit itself or the supplier market?

Has there been a concrete benefit from the active management of procurement and/or the above-mentioned actions?