

Achievement of strategic Procurement at Lextal

Master of Science Thesis in the Supply chain management Programme

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Abstract

Background: This work represents a six moth thesis, addressing purchasing concerns at a company named Lextal. The addressed concerns regard that of Lextal's purchasing organization and of how Lextal should pursuit their purchasing endeavors. Due to the concerns with their purchasing they experience issues with negotiation power and supplier selection. Added to that the company also lack a strategic purchasing function.

Purpose: The aim of this thesis is therefore to propose specific solutions from purchasing theory that should/will address each of these concerns and also provide added benefits if possible.

Method: The method for this thesis has been a single case study preformed at Lextal, the case study has been performed using a holistic design. This since this works is to done to suite the need of the entire group and not just one specific unit.

Results: The results for this thesis include a purchasing structure specifically designed for Lextal and a portfolio model. The purchasing structure is an adaptation of different structures that exist and is create to suite Lextal's needs. The portfolio model is a mix of Kraljic's portfolio model and Olsen and Ellram's portfolio model.

Implications: This work will hopefully help Lextal with their needs of developing a more professional approach to purchasing. Further it is the authors' perceived belief that this might also help Lextal further with their supply management. This by offering a structure and ways of working to help Lextal become better at managing their suppliers and supplies.

Keywords: purchasing, strategic purchasing, purchasing organization, development of purchasing.

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1 Introduction

Lextal is a pan - European small medium enterprise with an annual turnover in excess of 30 million Euros in 2014. Lextal's business is to produce laminates that cater a wide variety of industries, from automotive to the bedding industry. To date Lextal have four manufacturing facilities, located in Belgium, Sweden, Portugal and Czech Republic.

To further explain about Lextal and also to present the aim of this thesis, this section will start of by giving a background of Lextal and also explain about Lextal's products. The paper will then continue by explaining Lextal's current purchasing structure and also the concerns which Lextal are currently facing with their purchasing.

1.1 Background

Lextal was first established in 1962. Since then Lextal have been producing a wide range of laminations for their customers. With planned expansions and investments in new units within Europe, the company has grown from a small to a medium enterprise.

In 1970 Lextal secured business with the automotive sector and started lamination of textiles for that industry. Soon the automotive industry became their biggest client and with that Lextal were laminating fabrics on a large scale. Following that event and considering the future prospects which at that point seemed positive for Lextal, they decided upon investing in a new unit in Belgium in the year of 1987. Lextal achieved this in 1989 by first entering Belgium through a joint venture (JV) with another company and then becoming an independent operator post the JV in 1998.

Lextal later bought a facility in Portugal. That investment was part of Lextal's strategy to reach the markets in Western Europe and North of Africa. In order to access a larger market and be able to manage their operations more efficiently Lextal had to be more strategic. The need for being more strategic was felt by Lextal as their existing clients were now insisting on cost reductions. Considering the large business value some customers represented and to avoid the loss of such important customers, Lextal decided to establish a facility in Czech Republic. The motivation for choosing that location was due to its closeness to the sewing industry. Sewing is a subsequent operation to lamination which is performed by other suppliers.

1.2 Material composition of laminates

Having explained about Lextal's background and how they came to be, the next section will explain about Lextal's product i.e. lamination composition. This due to the need to understand Lextal's products as they serve the basis for Lextal's need for purchasing.

Lextal purchase three main materials. A face material which consist of three types, fabric/textile, vinyl (also addressed as PVC) and artificial suede. The second material is foam, in which there are two types, polyether and polyester. The third material is known as scrim or backing. The three products are laminated using a certain production process. The process will be explained in detail

in the empirical section. Figure 1.1 provides a cross sectional view of a lamination with the three layers i.e. the face material, foam and scrim/backing. As indicated in figure 1.1 in most laminations the foam is the thickest material.



Figure 1.1: A section cut of a lamination, where the composition of the face, foam and backing/scrim is visible.

1.3 Short overview of Lextal's purchasing roles and sourcing procedures

The previous section dealt with Lextal's background and also the material composition of laminates. The following section will explain how purchasing is currently done at Lextal including the different roles and responsibilities, the sourcing procedures and supplier selection. This will provide a good basis to understand the concerns that are associated with Lextal's purchasing. Lextal have four units in total as mentioned earlier, each unit procures material for their own production needs. Purchasing at Lextal is project based, typically Lextal receive a request from a specific customer for a certain price and volume, for which Lextal will have to provide the requested material over the complete lifecycle of the product. When an order is received the company start by procuring materials which are needed to fulfill that specific order.

As seen in figure 1.2 project leaders are assigned to handle purchasing related activities for the plants in Portugal and Czech Republic. Purchasing related activities which were previously under the responsibility of the plant managers in Czech Republic and Portugal. These activities were to maintain necessary stock of raw materials and to procure materials for their respective units. However due to an increase in the number of projects, leading to an increase in work related to purchase, a project leader was assigned to the Czech Republic and the Portugal facility. As indicated in figure 1.2, it can be seen that the positions of project leader are in blue for the Portugal and Czech Republic facility, this because these positions currently exist in these locations. However for the Swedish and the Belgian facility there are plans to introduce the position of project leaders, which is why the position of project leader is in orange. The purpose for introducing a project leader is to relieve the plant manager of the purchasing responsibilities. The project leader is involved with all the sourcing activities like receiving requests from customers, collecting necessary specification to facilitate quotation, contacting suppliers for quotes, sampling, selecting suppliers, etc. till the component is ready for production.

Now coming to the last role in figure 1.2 in each facility in labeled as operational buyers, these are personnel, who are referred to as *customer care* at Lextal. They are located in every unit, their main role is to deal with purchase orders.

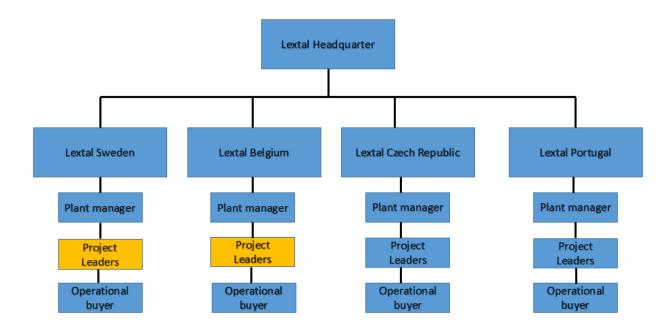


Fig 1.2: Lextal's current purchasing organization.

As for sourcing procedures it is observed that there is no standard process. Sometimes a certain unit selects a local supplier with a single unit instead of an already existing group supplier. The selection of the local supplier is done on the basis that the supplier is close to the unit and it is easier for the unit to purchase from that supplier. The choice of the unit to select the local supplier versus group suppliers has an impact. This impact will be explained later in the section.

In other cases there are senior managers that tend to discuss strategic matters as to which supplier would be the most beneficial in a particular scenario and then recommend a specific unit to source from that supplier. However the latter scenario is not a frequently occurring phenomenon, this is because the senior managers do not always have time as there are many other tasks which demand their attention.

Supplier selection is not always performed by Lextal, in some cases it is performed by Lextal's customers. This is mostly applicable when it comes to Lextal's automotive customers. This is because the customers have already developed a certain material with the supplier and prefer that the same supplier supplies it. Also because the client believes that the supplier possess the required technology to develop the part. Apart from suggesting which supplier to procure the materials from, the price for the material is negotiated by the client. In some cases both the price and conditions such as delivery times, lead times, etc. are also negotiated by Lextal's clients which in some cases are not favorable to Lextal.

In cases where the conditions are not negotiated by the client, Lextal have the possibility to and are also encouraged by their customers to negotiate conditions such as quality claims, delivery times, and delivery methods with these suppliers, except for price, but often they are not in a position to do so due to a lack of resources i.e. time and dedicated resources.

Once the supplier selection, volumes and prices have been established the operational procurement team in each unit take over the procurement activities like placing orders. The operational procurement is the only part of their procurement where they have a documented process on how to perform their work.

Due to the way Lextal purchases some discrepancies have been observed, to elaborate one of these, an example will be given.

With regards to figure 1.3 below, the squares in blue are the units of Lextal, and the black triangles represent the group supplier X's facilities, with whom Lextal have negotiated certain benefits. The figure below will cover three units of Lextal. These units will be the ones in Belgium, Czech Republic and Portugal. In the top left of figure 1.3 it can be seen that the Belgian facility is located close supplier X, and therefore the unit in Belgium purchase from supplier X. This also applies to unit in Czech Republic. However it differs when it comes to Portugal as it can be seen in figure 1.3 that there is a red circle located next to the unit in Portugal. This circle represents a local supplier, which the Portugal unit chooses to purchase from. By doing so, Lextal looses out on the added benefits of pooling supplies to gain price reductions and the group as a whole suffers.



Figure 1.3 Illustrative example of group- vs single supplier.

1.4 Lextal's purchasing concerns

This case serves as an example of how Lextal is losing out on certain benefits due to the units of Lextal exercising autonomy and not acting as a group. Based on this example it can be observed that there are concerns with regards to how Lextal carry out purchasing related activities. The following section will highlight some of these concerns in detail.

Lextal state that at present they have concerns with negotiations, supplier selection and a lack of strategic purchasing function. These concerns will be explained in detail as follows.

1.4.1 Concerns associated with negotiations

When a plant of Lextal would like to change a certain unfavorable condition that is negotiated by the client with a directed supplier- a supplier who the customers insist that Lextal purchase from. In such a situation it is often difficult for the plant to approach the supplier and request for a change as that plant represents only a small volume to the supplier. Therefore the request for change is often not accepted.

In cases where the conditions are not negotiated by the client Lextal have the possibility to and are also encouraged by their customers to negotiate conditions such as quality claims, delivery times, and delivery methods with these suppliers, except for price, but often they are not in a position to do so due to a lack of resources i.e. time and dedicated personnel.

1.4.2 Concerns associated with supplier selection

When it comes to supplier selection, where certain units choose a local supplier instead of a multiunit supplier who is already a supplier to the other units of Lextal. Lextal express that this causes them to forego certain benefits .e.g. price reductions, better terms and conditions, service, flexibility etc. Benefits that they could gain as a group from a group supplier in terms of flexibility of supply from various locations in contrast to a local supplier with only one unit. However the local supplier is still preferred by some units as it is perceived as the most suitable option when catering to a particular unit of Lextal.

1.4.3 Concerns associated with a lack strategic purchasing function

Lextal state that at present they do not have a designated strategic function that overlooks everything from above and suggests, what should be best thing to do and how it should be done. To provide an example of what is the best thing to do, they mean a function that could compare and evaluate different suppliers and suggest which supplier to source from. Suppliers that will be beneficial for the company in the long run. However due to the lack of such a function, Lextal state that the units are selecting suppliers based on the easiest option available regardless of the impact it has on the group.

1.5 Purpose

Based on the concerns stated above, the aim of this thesis is to propose specific solutions from purchasing that will address each of these concerns.

2 Problem analysis

In order to fulfill the purpose of this thesis, it is necessary to first analyze specifically which aspects of purchasing are connected which concerns. By establishing this link and understanding the impacts of each aspect of purchasing on a particular concern, a solution can be proposed. Therefore the next section will focus on this task.

The problem analysis will discuss each concern in detail, and establish a link to particular areas of purchasing. Based on how these areas can address the concerns.

With regards to the concern with negotiations. Lextal feel that if there is one unit requesting a supplier to change a certain unfavorably negotiated condition. It is most often not accepted, as the unit only represents a small portion of business to the supplier. However, there is a possibility that the supplier is also supplying to the other units of Lextal and if Lextal were to approach the supplier as a group their negotiation power would considerably increase thereby resulting with the supplier granting the requested change. As Corey (1978) argues that by pooling demand a company can receive high purchasing power thereby negotiate lower prices, and also better terms and conditions. Corey (1978) further argues that this can be done in certain structures.

The other concern with regards to negotiation i.e. lack of resources suggests that there is a need for adding more purchasing dedicated personnel. Personnel who carry out certain activities for example in this case someone who deals with contracts. Van Weele (2010) classifies purchasing activities as strategic, tactical, and operational. According to the classification, establishing contracts with suppliers qualifies as a strategic activity. Based on the type of purchasing structure these activities are generally carried out either centrally or decentrally. So based on this argument, the lack of dedicated resources for handling contracts could be solved by adopting a certain structure and allocating personnel to carry out strategic activities of which establishing contracts is one of them.

The above discussion indicates, how a purchasing structure help Lextal to overcome the concerns associated with negotiations.

Coming to the concern associated with supplier selection and the lack of a strategic purchasing function. According to Van Weele (2010) be it a central purchasing organization or a decentral organization. Both structures have strategic, tactical and operational activities. Some of the strategic activities include decisions regarding supplier selection, drafting guidelines and procedures for tasks, establishing contracts with suppliers. Again depending on the type of structure the strategic activities are either carried out by a function centrally or decentrally. Thereby providing some guidance as to how certain purchasing activities for example supplier selection should take place. If Lextal were to adopt a structure in which there is a strategic function

it would help overcome the issues with supplier selection, by ensuring that all decisions are taken at one point for the entire group and it would also compensate the lack of a strategic purchasing function as well by carrying out the strategic activities that are mentioned above.

These concerns indicate the need for Lextal to have a clear structure, however both central and decentral structures have advantages which Lextal can gain from.

According to Corey (1978) the reason for companies to choose a central structure are common requirements, cost saving potentials and supply environment. In terms of common requirements Corey states that the reason for companies to have a central purchasing structure is that more than one unit of the company have the same needs. Corey (1978) argues that by pooling demand a company can receive high purchasing power thereby negotiate lower prices, and also ensure efficient use of procurement resources. By doing both of these companies can save money. If the supply environment of a company is oligopolistic or if the supplier is in a strong position, centralization can help to keep prices at a reasonable level, and can also help negotiate favorable terms and services and ensure long-term product availability (Corey, 1978). There are quite a few advantages to a central purchasing structure however there are some advantages that only a decentral structure can offer. They will be addressed in the next paragraph.

According to Van Weele (2010) the advantages of decentralization of purchasing are direct responsibility for profit centers, stronger customer orientation towards internal users, less bureaucratic purchasing procedures, less need for internal coordination and direct communication with suppliers.

Both central and decentral have advantages and disadvantages. The disadvantages of central would be the advantages of decentral purchasing (Van Weele, 2010). For example as stated above direct communication with suppliers is a clear advantage in the case of decentral purchasing, however in the case of central purchasing with procurement located at mostly the headquarters of the company, such close interaction with the suppliers located near to a particular unit, would be difficult. For Lextal, having many units in different countries, this would be a problem when choosing centralized purchasing. However there are instances when Lextal could benefit from centralization. For instance the pooling of demand in order to negotiate better prices and conditions with suppliers to give them a stronger position. By choosing either decentral/central or a mix Lextal can benefit in many aspects and also suffer in others. Therefore it is quite important to investigate what type of structure would be appropriate for them from which the benefits outweigh the drawbacks. Hence the first research question would be the following.

RQ1: Based on the benefits and disadvantages offered by different types of purchasing structures, what kind of purchasing structure would be suitable for Lextal?

The above section deals with the concerns of supplier selection, negotiations, and the lack of strategic purchasing. However Lextal also claim that they need a strategic function which evaluates

various supplier and also proposes how Lextal should deal with them. The following section will discuss as to how Lextal could use a portfolio model to help them make their purchasing more strategic.

Irrespective of the kind of purchasing structure that will be adopted, there will still be a need for Lextal to interact with suppliers. Lextal at present do not have a classification system for suppliers nor is there any significant indicator that different suppliers are viewed differently. However Bensaou (1999) states that there is a need for handling suppliers differently and that not all buyer-supplier relationships should be managed the same way. Olsen and Ellram (1997) state that portfolio models are excellent when classifying resources and suppliers and provide useful inputs on how each supplier should be handled. Based on this Lextal could use a portfolio model to classify their suppliers, which could also facilitate decisions regarding supplier selection. The portfolio models are important when it comes to utilizing the resources on the buyer's side efficiently, as the personal interaction with the suppliers staff can prove to be a burden on individuals belonging to various functions at different levels at the buyer's company (Turnbull 1990). Portfolio models can therefore help in distribution of resources to handle/manage the relationship with the supplier (Turnbull 1990).

Apart from the above mentioned advantage Gelderman and Van Weele (2005) state that a portfolio model provides a framework to understand and focus the supply strategy. It makes the difference between unfocused and ineffective purchasing to effective and focused especially in a firm that has not been systematic when it comes to its purchasing. Further Faes, Matthyssens and Vandenbempt (2000) explain that in international/global companies, enterprises can gain synergetic effects by coordinating the process for handling their supplier.

Based on what Bensaou states Lextal could benefit by adopting a model or framework that will guide their approach when dealing with their suppliers. Considering that Lextal do not possess a lot of purchasing resources - *time and dedicated personnel* a portfolio model would result in efficient use of resources. Additionally it is evident that Lextal do not have a coordinated effort in handling their suppliers. As in some cases not all purchase from the same supplier. This causes them to lose out on the synergetic effects of handling a supplier with a coordinated approach. Therefore it can be said that Lextal should use a portfolio model. Hence, the second research question is as follows

RQ2: Based on selected product/supplier classification, what kind of purchasing portfolio models would be applicable for Lextal and how should Lextal use them

3 Method

In order to be able to answer the stated research questions a method for collection of data was established. This method will be further explained in the next section, as it is essential for the analysis and also since it impacts the results.

The following chapter presents how this thesis was conducted and what choices were considered for this specific thesis. Apart from that this chapter also presents the different alternatives that were considered and why only a particular choices was made and the rest were eventually disqualified. The following chapter is divided into three different subchapters. The design of this study will be dealt with in the first chapter, followed by the chapter explaining method of data collection. The third subchapter provides insights into the validity of this thesis.

3.1 The design of the study

For this thesis a case study was seen as the preferable design of study. As according to Yin (1994) a case study is an empirical inquiry that investigates a phenomenon within its real life context when the borders between the context and the phenomenon are not clearly defined.

Based on Yin's explanation of case study it was considered ideal in the case of Lextal. The reason for stating this is because many aspects of the way purchasing is carried out at Lextal would not be clear otherwise. It would only be clear as to how purchasing is done in a particular way, but not why. It is considered both important for this thesis and the reader to know for example why Lextal purchase the face material from specific suppliers.

Therefore a case study was helpful in providing insights on all aspects of purchasing in Lextal. Insights which were also needed in order gain a holistic view of Lextal, as there are other factors that have an impact on how purchasing is currently conducted at Lextal. Like the customers insisting on directed suppliers.

A case study can be performed as a Single case study or a multiple case study (Yin, 1994), for this research a single case study was chosen. A single case study can be viewed as an equivalent to a single experiment (Yin, 1994). In this case only Lextal was studied and the phenomenon of purchasing in Lextal. Whereas in a multiple case study, other companies or cases that have a similar context to that of Lextal would be studied, to find out how they overcame the problems or issues. Based on that study a proposal would have been presented to Lextal to overcome their current concerns.

The rationale for choosing a single case study is due to the uniqueness of the question and therefore no other cases can be used to gain further insights (Yin, 2011). Another reason was to ensure that the proposed solution is specifically suited for Lextal, and not a common solution that other companies have employed in situations that seem similar to that of Lextal.

The unit of analysis for this case study was Lextal's purchasing organization, this included Lextal's purchasing structure, and how purchasing is conducted at Lextal. This thesis looked at Lextal's purchasing organization as a whole to understand how Lextal as a group work with purchasing. There were two way of studying purchasing at Lextal, holistic design and embedded subunits.

Holistic design was the preferred choice in this case, as using a holistic design it was possible to

get an overall idea of how purchasing is conducted at Lextal as a group, which was of interest for this thesis. However if an embedded subunit style was used, it would go about studying how purchasing is carried out in each unit of Lextal. In Lextal's case this would be the units in Sweden, Czech Republic, Belgium and Portugal. Since the objective of this research was to provide a proposal for the entire group and not a single unit of Lextal, the holistic design was used.

The reason for rejecting the usage of embedded subunits is due to the fact that it would have hindered the ability to gain an overview (Yin, 1994), which could only be gained by a holistic design (Yin, 1994). Based on the data obtained using a holistic design, it was used to explore the available options for Lextal and in proposing a purchasing structure and portfolio strategy that would be applicable to Lextal.

3.2 Data Collection

This study has collected and presented two types of data, primary data and secondary data. Primary data is data which has been collected by the researchers (Kumar, 2011), while secondary data is data which has been collected by others and has only been extracted by the researchers (Kumar, 2011). The Primary data was collected through interviews. Interviews were chosen as a way of collecting primary data since it allowed the researchers to decide on the formulation and content of the questions (Kumar, 2011). Apart from that, the interviewer also has the option of asking certain questions in a certain way, in any order he/she chooses to do so (Kumar, 2011). In this particular case, interviews were seen as even more helpful as it was observed that interviewees also provided inputs and information that were not necessarily relevant to the questions, but were equally important to the context (Kumar, 2011). Another option was to use were questionnaires, where a standard set of questions would be sent to an interviewee which he/she would be expected to fill in themselves (Kumar, 2011). However in this particular research, it was decided not to use this approach as the interviewee may not completely understand the context of a particular question and could find it difficult to provide a relevant answer.

Coming to interviews there are two types of interviews, structured and unstructured. The structured interviews are strict and follow a particular sequence when it comes to questioning, which would make it easy to compare the answers provided by different interviewees to the same question (Kumar, 2011). Unstructured questions do not follow a sequence and can also include questions that may be spontaneous, as result of the need to gain further information on an answer to a previous question (Kumar, 2011).

The interviews with the employees of the Swedish facility were conducted in person at Lextal, Sweden. The interviews with employees belonging to the other facilities were conducted over a video calls due large geographical distances. The interviewees would first be contacted by email to decide upon an ideal time for the interview. At the time of the interview, the interviewees would be given a brief introduction of the aim of the thesis. This in order to give them a context to relate to when providing answers to the questions.

As stated earlier the questions were sent to the interviewees prior to the interview to help reflect upon the questions and incase of any ambiguity concerning the questions there were again explained during the course of the interview.

Having discussed that the data would be collected through interviews, it was also important to identify who would be able to provide the information relevant to this research. Therefore the following interviewees were identified and suggested by the managing director of Lextal, Sweden. The interviewees included one of Lextal's biggest foam suppliers and also the purchasing agents across the divisions of Lextal. From Lextal, there were five interviewees out of which two are project leaders from the Czech Republic and the Portugal facility respectively and one is a plant managers at Lextal Belgium, the managing director of the Swedish facility and the last is the operational manager in Sweden. Representatives from all of Lextal's facilities were interviewed. In total six interviews were conducted (table 3.1 provides a list of the interviewees). The reason for interviewing each of these individuals was to get a perspective on the different levels of purchasing and also what the supplier of Lextal thought about Lextal's purchasing efforts.

The strategic perspective of purchasing was obtained by interviewing the managing director, the operational manager at Sweden and also the plant manager at the Belgian facility. While the tactical and the operational details of purchasing were obtained from the project leaders of the Czech Republic and Portugal facility.

Apart from that, the information obtained from these individuals was also dependent on the location of their respective facilities. It was important for this thesis to understand as to what kind of activities take place in these locations. Mainly the distribution of strategic, tactical and operational activities.

The interviews were initiated through e-mail by first providing the interviewees with the questions. The reason for doing so, was because it would give the interviewees some time to prepare by reflecting on the questions. The interviews were conducted in an unstructured manner, as there was a need for both flexibility and focus. Flexibility which was achieved through not having a specific sequence for the questions, and focus by posing follow up questions to gain more insights on a certain aspect.

Table 3.1: List of interviewees

Company	Location	Position
Lextal	Sweden	Managing director
Lextal	Belgium	Plantmanager
Lextal	Czech republic	Project Leader
Lextal	Portugal	Project Leader
Lextal	Sweden	Operational Manager
Foam supplier	Belgium	Sales representatives

The secondary data was collected through a literature review available in Chalmers database and financial data provided by Lextal. The theory was within the field of purchasing structure, portfolio strategies within purchasing. This was found by the usage of search engines. The search was conducted in summons, Chalmers library data base, with the search words or combination of the following words purchasing, procurement, structure, and portfolio strategies. Other articles of interest were also discovered through literature which was deemed to be of importance for this research. As these articles had a reference list of other articles which were equally useful when referred to. The literature that is deemed to be of importance dealt with the various structures that are available in purchasing, the advantages and disadvantages of the different types of purchasing structures, product classification models, supplier classification models, the application of such models. Some of the literature was even checked against how many times it was referenced. Added to that, in an effort to contextualize the literature, literature pertaining to purchasing in small and medium sized enterprises was also referred. The literatures were reviewed by studying the abstract to get an idea of the articles and the subject they deal with and also the conclusion to see what a specific article could offer.

There was some data obtained from Lextal as well. The data given by Lextal was financial data concerning distribution of spend on products and suppliers, this was provided by the plants of Lextal. This data was useful to get an idea of spend on purchase, the split of spend on the various materials purchased, the main suppliers for each material, the suppliers with whom Lextal have group contracts. Overall it was quite useful in providing a picture of the supply market of Lextal, as the name of the supplier coupled with words such as turnover when used in search engines

provided information of how big the suppliers where it terms of turnover. Further Lextal provided data pertaining to their top ten customers, the data included the names of the customers and also the amount invoiced to these customer. By typing the name of these customers in search engines, the researchers gained a perspective of the type of industry the customers belonged to. This coupled with the amount which the customers spent indicated the mix of customers that Lextal dealt with. All of the secondary data which has been provided through Lextal was given to the researchers in electronic form.

3.3 Validity

In order to establish validity, this thesis used the test of construct validity (Yin, 1994). This was done by the usage of multiple sources of evidence and by having key personnel from Lextal review the information. The usage of multiple sources of information was as previously stated through documentations and interviews. The interviews were conducted with several key employees at Lextal which further helped to establish the validity of this thesis (Yin, 1994). By having key personnel from Lextal review the research for inconsistency and misunderstanding, the researchers made sure that the information presented was consistent and also in line with what Lextal perceived to be the truth. Construct validity is used to ensure that the data collection is correct and also to establish that the composition of the data matches reality (Yin, 1994). Other tests which can be used for ensuring the validity of a case study is by using internal validity and external validity (Yin, 1994). Internal validity is used to test if the data analysis is correct (Yin, 1994). This is done by pattern matching, by doing explanation building or by performing time serial analysis (Yin, 1994). This type of test is typically done when a researcher tries to find out if a certain event x leads to an outcome y i.e. causality (Yin, 1994). External validity tests are typically done when a researcher wants to find out if a certain research result can be generalized, this is typically done by redoing the research in other cases to see if the results still hold true (Yin, 1994). Since the concern about validity in this thesis is neither to find generalization which holds true for all cases, nor to find out causality. Neither external nor internal validity was tested. The important concern in this case, was that the information which was analyzed holds true for Lextal. This since the proposed purchasing structure and the proposed portfolio models depend on this.

4 Theoretical framework

The previous section explained as to how the method of this thesis was conducted, continuing on this thesis will cover the literature that is necessary for answering the research questions. This section will be referred to as the theoretical framework. The motivation for this section is to introduce and explain the concepts and models, based on which the analysis will be performed. The following section will include all relevant literature which is considered important in order to answer the research questions. It will start with literature explaining the different kinds of purchasing structures that currently exist under the heading "Types of purchasing Structure". This will form the foundation to the first research question. Additionally this section will also review specific portfolio models that address the need for developing differentiated supplier strategies and product categorizations titled as "Types of Portfolio Strategies". This information will be the basis for addressing the second research question.

4.1 Types of Purchasing Structure

As explained above this section will deal with the various purchasing structures that currently exist. Additionally the various structures will be discussed in detail including where the responsibility for purchasing in each structure lies, the responsibility split, the decision authority, and prerequisites for choosing a particular structure. Furthermore this section will also discuss in detail the activities that are typically handled by the center and the facility.

From the information provided in the background it is clear that Lextal is a multi-unit company with four units in total and according to Van Weele (2010) for a multi-unit company there are several options that are available in terms of purchasing structure. A multi-unit company can choose a centralized purchasing, decentral purchasing or a hybrid structure.

4.1.1 Central purchasing structure

(Van Weele, 2010) explains that in this type of purchasing structure, the strategic and tactical procurement is fully lead by a central procurement department on a corporate level. Decisions like product specification, supplier selection and contract preparation and negotiation are made by the central organization. These contracts are typically made with specific suppliers. The contracts typically also state general and specific purchasing conditions. According to Van Weele (2010) and Lysons & Farrington (2006) this structure is appropriate to use when different business units are purchasing the same type of products, which also are considered of strategic importance to them. i.e. to gain economies of scale, control and coordinate important purchasing activities. Van Weele (2010) also explains that this type of a structure is typically undermined by the different business units who often are convinced that they can negotiate better deals by themselves. Added to that Corey (1978) states that in companies that have had decentralized profit management, it would be natural to expect resistance as a result of loss of control over purchasing. This because the divisional manager would still be held accountable for departmental profits, but no longer would have control over costs of purchase, which typically represent more than half of the cost structure.

4.1.2 Decentral purchasing structure

This structure as the name suggests is the opposite of centralized purchasing. How it exactly differs will be explained going forward. According to Van Weele (2010) and Lysons & Farrington (2006) in this type of purchasing structure each unit is responsible for their own procurement. According to Van Weele (2010) this is due to the fact that each unit in these type of structures is responsible for their own profitability and therefore it is also natural that each of the units should be responsible for their own purchasing.

Another aspect which is also explained which may be applicable to Lextal are the benefits that they get as a group from a single supplier over coordinated approach versus the benefits they receive as a single facility. Van Weele (2010) explains that one of the negative aspects of this structure is that the different business units typically might negotiate with the same supplier, but get different results in terms of prices and conditions. Lysons and Farrington (2006) State that the negotiation power will typically be lower than in consolidation efforts. Van Weele (2010) further explains that this type of structure is best suited in conglomerates.

4.1.3 Hybrid purchasing structure

As the name suggests, a hybrid structure is a mix between central purchasing and decentral purchasing. According to Van Weele (2010) some examples of this form of structure are *voluntary* coordination, lead buyership and lead design concept. There is often a fourth type also described as a hybrid structure *line/staff organization*..

Voluntary coordination in these situations considerable amounts of information is exchanged between the central purchasing departments and the different units. Based on the information exchanged the different units decide on whether they want to participate in a joint contract with the other units or if they would benefit from purchasing as a single unit. Lysons & Farrington (2006) describe this type of purchasing structure as coordination.

Lead buyership in these situations the business unit that has the highest volumes of a certain product is the unit in charge of negotiating a corporate agreement with a specific supplier. The business unit in charge of the negotiation collects the relevant data from the different units, in order to negotiate on behalf of the entire group.

Lead design is a situation when "the design house" for a certain product is the unit which is in charge of purchasing the materials involved for that type of product. An example of this is if a certain unit develops a new product which the other units might benefit from using. Then the unit that developed that product is also responsible for all purchases related to that specific product.

Line/staff organization is a type of organization found in some major manufacturing companies. In this type of an organization there is a corporate purchasing department at the corporate level while the units carry out both strategic and corporate activities. This is a situation when the central purchasing unit is in charge of establishing procedures and guidelines for purchasing. In these

cases the central procurement unit serves as a support function, and the decentralized units are in charge of all the procurement, they also serve as a medium which facilitate and solve coordination issues. Lysons & Farrington (2006) describe this type of purchasing structure as Consultative. The different forms of hybrid structures explained above are some forms that are most relevant to the purchasing situation at Lextal. However Van Weele (2010) further mentions that these are just some examples of how a hybrid structure can look like and are not necessarily representative of all the forms of hybrid structure which are visible in the industry.

4.1.4 What to consider when choosing a central or decentral organization

In order to establish what type of purchasing structure a company should use Van Weele (2010) and Corey (1978) suggest certain prerequisites to consider, these will be further explained below. Before proceeding to select a particular purchasing structure companies can evaluate themselves with respect to certain criteria which need to be considered prior such a decision

Commonality of purchase requirement with this Van Weele (2010) explains that the more homogeneity there is of the purchased materials between the different units, the more benefits they can achieve by coordinating their purchasing efforts. Typically these types of products are raw materials and packaging. Taking into consideration the raw materials that Lextal procure, i.e. the face material, foam and the screening are common to all plants of Lextal. Corey (1978) also mentions this as a requirement, stating that when two or more than locations of the same company have the same requirements, it serves as a prerequisite for centralized purchasing.

Geographic location Van Weele (2010) explains that when choosing to have a coordinated effort, having business units situated in different locations can have an adverse effect on coordination. This is due to different cultures and also due to different business practices.

Supply market structure when it comes to the suppliers that Lextal deal with, there are certain suppliers that are big players for certain raw materials and some suppliers that are relatively small. In cases when a company is confronted with an oligopolistic market, it is good to have a coordinated purchasing effort. Coordination can help achieve leverage against these types of suppliers (Van Weele, 2010). Corey (1978) supports the statement by claiming that it would be better to negotiate with such suppliers from a single point, especially when there a few large suppliers. However when the suppliers are quite small with limited geographic presence it is best dealt by negotiating at the local facility level to avail benefits such as quick service.

Saving potential can be apparent in different type of products which are sensitive to volume, in these cases coordination can provide advantages. This is both the case for standard products and high tech solutions (Van Weele, 2010). This can be related to Lextal considering that all their units have a huge amount of common requirements. In addition, Corey (1978) states that centralized purchasing can be used when there is a scarcity of purchasing expertise. By doing so the resources are used efficiently.

Expertise required. When there is a need for having expertise of procurement of a certain product or a certain product group, it is more appropriate to use centralized procurement for these type of

products (Van Weele, 2010). Corey (1978) supports the previous statement as well by stating that by concentrating of such expertise for example cost estimation experts it supports the purchase.

Price fluctuation. In the case when a purchased product price is highly dependent on macroeconomic and political factors, it is advisable to coordinate procurement efforts.

Customer demand. When there is a case where the customer demands that a specific supplier is used for a certain product/product group then, coordinated efforts for purchasing become more difficult for those products (Van Weele, 2010).

4.1.5 Central and decentral activities

Having discussed the various types of structures it would be interesting to know what kind of activities are generally central and the ones that are decentral. The following section will cover this topic.

In situations where there is a hybrid structure Lysons and Farrington (2006) suggest to divide the labor in purchasing structures by classifying activities as either central or decentral.

Lysons and Farrington (2006) state that typically central activities are, procurement of capital equipment and different systems, contract negotiation for large homogeneous items used by several of the divisions. Research on market conditions, vulnerability etc. Procurement of leverage, Strategic and bottleneck products (these products will be explained further in section 4.2). Determination of strategies. Training and development of staff and control of group inventory.

Lysons and Farrington (2006) further explain that decentral activities consist procurement of MRO (maintenance repair and operations) items. Items which are specific to a single plant. Emergency purchases, staff purchases, and local purchases to save in term of logistics costs.

4.1.6 Tasks and responsibilities in structures

The previous section highlighted the activities that are typically central and decentral. The following section will cover the different levels that are present in purchasing structures. This is relevant to this research as it would help in allocating purchasing personnel to a specific location based on the tasks performed by them.

According to Van Weele (2010) who explains that the concepts of how tasks and responsibilities can be divided in different levels. They can be differentiated as the strategic level, tactical level and operational level

Strategic level cover the purchasing decision which influence the company's market position in the long run, these decision are primarily taken by the top management. Some examples of these types of decisions are procurements of new buildings and certain capital equipment. The development and establishment of operational guidelines, procedures and task descriptions which provide authority to the procurement departments. Decisions related to policies in terms of transferring-prices and intra-company suppliers. Another important strategic activity is establishing long term contracts and contacts with preferred suppliers.

Tactical level covers issues of purchasing functions affecting products, processes and supplier selection. This level typically works with medium term decisions (1-3 years). Typical examples of the type of work which is carried out in this level are annual agreement on corporate level with certain suppliers. Selecting or contracting of suppliers in general.

Operational level refers to all the activities related to ordering and expediting functions. The operational level is related to ordering processes, all expedition related to released orders, troubleshooting: solving daily problems on quality, supply and payment. Other responsibilities related to operational level is monitoring and evaluation of suppliers.

4.2 Types of Portfolio strategies

The above section covers all aspects of a structure that are necessary for this thesis, however there is another aspect that needs to be addressed and that is, the need for differentiated supplier/product approach or strategies. The following section will form the basis for developing of such a strategy for Lextal.

This section will explain in detail the Kraljic's model and Olsen and Ellram's model. The main objective of this section is to provide a basis for analysis, as to how Lextal could use these models to develop a differentiated supplier/product approach.

Before moving on to explaining portfolio models, the reason as to why only certain models have been chosen for this research will be explained. The motivation for choosing the Kraljic's model is because it is considered as a standard in the field of purchasing (Lamming and Harrison, 2001). Apart from that the Kraljic model has become a model that is most frequently used by companies (Cox, 2007). The previous statements about the model being considered as a benchmark and about it being widely accepted in industries are significant motivation that the model will also serve the purpose of being good standard for this particular thesis. Considering that Lextal will have to apply a model that will facilitate differentiated supplier strategies, it is important for Lextal as a company to be convinced that the model they apply will be inspired or influenced from a model that is widely accepted by the industry. Now coming to the model by Olsen and Ellram, it is inspired by the Kraljic model, this is based on Gelderman and Van Weele (2005) who state that other authors have come up with models that have more similarities than differences among them. Gelderman and Van Weele (2002) also state that other authors have used Kraljic's basic ideas for the development of similar models. The model presented by Olsen and Ellram is chosen because it is frequently cited, which is a little more than 600 times. Further the model presented by Olsen and Ellram offers a more complete picture on how to evaluate suppliers, this by using more parameters to evaluate them on. Since Olsen and Ellram's model offers many dimensions to evaluate the supplier, therefore this model will surely help in terms of establishing on what basis Lextal should evaluate their suppliers.

Only two models stated above are consciously chosen in an effort not to introduce too many models that vary from each other drastically and cause confusion. Instead the models are closely related in their ideas but differ in the ways they approach the concept. This will be helpful as it reduces the number of different factors to consider when performing the analysis.

To further be able to analyze how Lextal's portfolio model should look, the models will be explained to get a basic understanding and how they serve the purpose of classification. The Kraljic model and the model by Olsen and Ellram share similarities in the way they address the topic of categorization. Therefore they will be presented based on their commonalities to help the reader

understand how they both serve the same purpose with one model analyzing one area with limited factors and the other with many more. Hence the information will be presented based on areas of categorizations starting with products categorization, supplier classification and finally what action plans they suggest.

4.2.1 Product categorization

Based on what was stated above the following section will explain how these models classify products. The objective of this section is to categorize or classify products based on certain parameters in the models. Using this classification the company can approach each of the products differently.

Kraljic product categorization

Kraljic bases his product categorization model on two dimensions i.e. profit impact and supply risk. The profit impact should according to Kraljic be based on volume purchased, percentage of total purchase cost, or impact on product quality or business growth. The supply risk should according to Kraljic be based on availability, number of suppliers, competitive demand, make or buy opportunities, storage risks and substitution possibilities. These dimensions are summarized in table 4.1. With reference to fig 4.3, the products which have a high importance of purchase and high supply risk, should be viewed as strategic. When the product is classified as being of low importance of purchase but has a high supply risk, the item should be considered a **bottleneck** item. In the case where the importance of purchase is low and where the supply risk is low, the item should be considered as a *noncritical* item. When the importance of purchase is high and the supply risk is low the item should be considered as a *leverage* item (Kraljic, 1983). After this classification each product is approached in a particular way based on the implications the component could have and its importance to the company. Refer fig 4.3 for example strategic items would require detailed market data, risk analysis. Bottleneck items would require analysis of a specific or particular market. The study of the supply market is important, considering that some items which are abundantly available making them non critical at one time may be scarce now, thereby making them strategic items for example coal. As a result the components have to be approached differently (Kraljic, 1983).

Table 4.1 Kraljic's factors for product classification

Kraljic's purchasing portfolio model		
Dimension 1	Dimension 2	
Profit impact	Supply risk	
Factors of dimensions 1	Factors of the dimensions 2	
Volume purchased	a. Availability of supply	
Percentage of total cost	b. Number of supplier	
Impact on product quality or business growth	c. Possibility of substitution	
	d. Storage risk	
	e. Make or buy possibilities	

Based on the dimension in the table 4.1, the model establishes four types of product categories *Non-critical, leverage, strategic and bottleneck, refer figure 4.3*

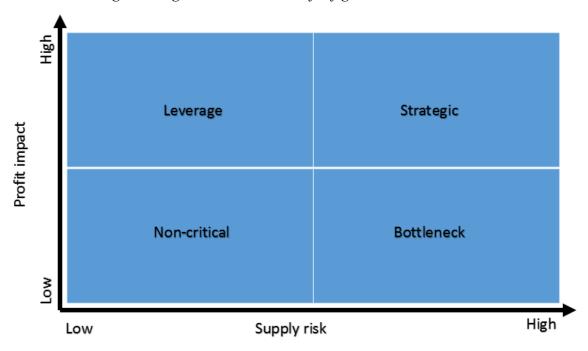


Figure 4.3 Kraljic's product classification model.

Olsen and Ellram's Product classification

The Olsen and Ellram's product classification model is a 2x2 matrix (refer figure 4.4) based on the dimensions of *difficulty of managing the purchasing situation* and *strategic importance of the purchase* (Olsen and Ellram, 1997).

The first dimension "difficulty of managing the purchasing situation" of this portfolio model is further based on three factors supply market characteristics, environmental characteristics and product characteristics.

The three factors are again based on more factors, supply market characteristics is based on Supplier's power and Supplier's technical and commercial experience. Supplier power according to Olsen and Ellram (1997) is dependent on suppliers size, the number of available suppliers, criticality of purchased item due to lack of substitutes and resource dependence.

For product characteristics, Olsen and Ellram mention it is novelty of the product and the complexity of the product and finally the environmental characteristics are based on environmental risks and uncertainties in the environment.

The latter dimension, "strategic importance of the purchase" is based on competence factors, economic factors and image factors. Competence factors relates to if the purchase can increase the company's core competencies, if there are knowledge gains and technological gains which can be received by buying a material. Economic factors refer to volume or value of purchasing, value added by a specific material, how a certain product affects the profitability and to what extent a purchase can be used to leverage other purchase. Image factors are based on supplier image/brand name and potential environmental/safety concerns. Since the two dimensions are based on multiple factors, and those factors are further based on other sub factors, table 4.1 summarizes the dimensions along with the factors they are dependent on, in order for the reader to have a quick overview.

Table 4.2 Olsen and Ellram's factor for product classification

Olsen and Ellram's Dimension	n for classification of product
Dimension 1	Dimension 2
Difficulty of managing the purchase	Strategic importance of purchase
Factors of the dimensions 1	Factors of the dimensions 2
Product characteristics	Competence factors
1. Novelty	1. The extent to which the purchase is part of the firm's core competence
2. Complexity	2. Purchase improves knowledge of buying organization
	3. Purchase improved technological strength of buying organization
Supply market characteristics	Economic factors
1. Supplier's power	1. Volume or dollar value or purchases
Supplier's technical and commercial competence	2. The extent to which the purchase of part of a final product with great value added
	3. The extent to which the purchase of part of a final product with good profitability
	4. Criticality of the purchase to get leverage with the supplier for other buys
Environmental characteristics	Image factors
1. Risk	1. Supplier critical image/band name
2. uncertainty	2. Potential environmental/safety concerns

Based on the dimension in the table 4.2, the model establishes four types of product categories *Non-critical, leverage, strategic and bottleneck, refer figure 4.4* (Olsen and Ellram, 1997).

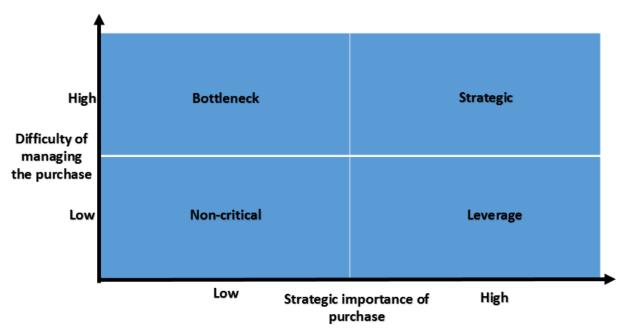


Figure 4.4 Olsen and Ellram's product classification model.

Strategic category include the type of products that are difficult to handle but which also are of strategic importance to the company. The company should view the suppliers in this category as close collaborators and having a close relationship with them should be of utmost importance. Other aspects that are important are early joint product and service development, maintaining a long-term relationships with the suppliers and also lowering poor performance costs (Olsen and Ellram, 1997).

Leverage category refers to products which are easy to handle, but which are of high strategic importance for the buying company. In these cases the buying company should identify value added from these products and leverage volumes across units and suppliers. This in order to achieve low prices (Olsen and Ellram, 1997).

Bottleneck category refers to products which have low strategic importance, but are difficult to manage. For these type of products, the company should try to standardize the products and/or substitute them for other products (Olsen and Ellram, 1997).

Non-critical category includes all the products which are easy to manage and which are of low strategic importance. This category is best managed through standardization and consolidation, the company should reduce the number of suppliers and duplicate products and services (Olsen and Ellram, 1997).

4.2.2 Supplier classification

As stated in the beginning of this section, the models will be explained in a pattern that would help the reader to understand the models. The first part of this section titled product classification explains how the Kraljic model and the Olsen and Ellram model classify products, however this thesis also deems it necessary that Lextal have a way of classifying their suppliers in order for them to have a differentiated supplier approach. Therefore the next section will explain how the models categorize suppliers based on multiple factors.

Kraljic's approach to supplier classification

In this step the buyer surveys the market to see if there are suppliers who can provide certain components, for example at the right quality and desired quantity (Kraljic, 1983). The buyer also compares his purchasing power with the strengths of the supplier. The buyer can assess this by considering certain factors, for example *uniqueness of a product*. The more unique a product for reasons such as scarcity of material, complex production technology, high entry barriers the lesser the chances are for new suppliers or more suppliers to emerge in order to expect price reduction as a result of competition. (Kraljic, 1983) Another example of a factor could be supplier's break even stability. For example if the supplier is able to achieve break even at a lesser utilization when compared to another supplier who can provide the components at a lower cost. The supplier achieving low prices at lesser capacity utilization will be hard to bargain with as he can accept underutilization of his capacity and can deal with the delay in business due to long or delayed negotiations. There a many other factors which are more dependent on the industry. (Kraljic, 1983) Based on the supplier's strength against its own strength, the company can plot a graph as seen in figure 4.5.

Figure 4.5 helps the company identify three strategic positions. In the case where the supplier strength is higher when compared to the buyer's strength. The company's should take up a defensive position and look to "diversify" where it looks for substitute suppliers or material substitutes.

From figure 4.5 in cases where the buyer's strength is more when compared to that of the supplier. The buyer can take an aggressive position and look to "exploit" by working towards price reduction through contracts. As in this particular case the risk presented by the supplier is low. However it is equally important that companies do not overuse or completely exploit this advantage as it may affect the relationship.

For items where the risk is less and no profit/benefit seen in shifting business. The buyer can seek to pursue a "balanced" strategy. It is important to note that the buyer is not too aggressive or defensive as being too aggressive would result in retaliation from the supplier's side and being defensive would prove to be costly

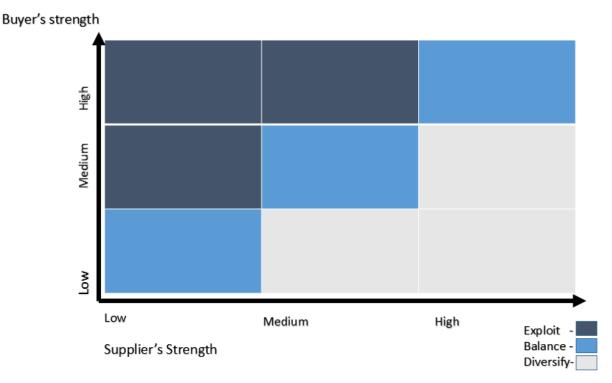


Figure 4.5 Kraljic's supplier classification model

Olsen and Ellram's approach to supplier classification

Olsen and Ellram's analysis of supplier relationship is based on two dimension *relative suppliers attractiveness* and *the strength of the relationship*. These dimensions are rated as low, medium or high.

Attractiveness of supplier this dimension is affected by five factors financial and economical, performance, technology, organizational cultural and strategic factors, the last factor is other factors (Olsen and Ellram, 1997). According to Olsen and Ellram (1997), the following are factors on which the attractiveness of a supplier can be evaluated

Financial and economic factors consist of the supplier's financial stability, the supplier's scale and experience in the market, the supplier's barriers to exit and enter the relationship, the supplier's financial margins and slack which measures the supplier ability to reduce costs over time through refining internal process.

Performance factors measures a supplier's ability to deliver as per the desired quality and the price of the customer.

Technological factors measures a supplier's ability to deal with changes in technology, the supplier's capacity utilization, how strong the supplier's patent protections are, the pace at which the suppliers can develop their technology, the suppliers design development capabilities.

Organizational, cultural and strategic factors measure how the strategic fit is between the supplier and the focal company, the influence the relationship has on the supply chain, the internal and external integration of the supplier, compatibility of supplier and buyer across different levels and

functions. The risks and uncertainties associated with the suppliers, the level of trust with the supplier, top management capabilities and their attitude/outlook for the future.

Other factors measure how the supplier is able to cope with changes in the environment and the safety records of the suppliers.

The factors above are what the dimension "Attractiveness of supplier" is based on. Next, the other dimension i.e. "Strength of the supplier relationship" will be explained followed by the factors it is dependent on

Strength of the supplier relationship this dimension focuses on important factors when creating a bond between the companies. This dimension is measured through *economic factors*, characteristics of the relationship, cooperation between buyer and supplier, distance in the relationship (Olsen and Ellram, 1997).

According to Olsen and Ellram (1997), the following are factors on which the Strength of the supplier relationship can be evaluated.

Economic factors are measured through value of procurements, how important the buyer is for the supplier and finally costs of exiting the financial exchange.

Characteristics of the relationship is measured by the number of other potential partners in the market and how high in the hierarchy the relationships exist and the number of contacts between the companies. It is also affected by what is being exchanged, if it is only products or services (If there are other forms of exchange like information exchange which are knowledge related) and also the duration of the relationship.

Cooperation between buyer and supplier here the procurement agent should measure the level of cooperation with the supplier in development, how willing the supplier is to cooperate technologically and how well the integration of the management is between the two companies.

Distance in the relationship measures social-, technological-, cultural-, time- and geographical distances. The distance in culture could be that both the buyer and supplier could be from different cultures. The technological distance refer to the difference in processes between the two companies. The geographical distance speaks of the physical distance and the time distance is with regards to time taken from order placement to receiving delivery.

4.2.3 Action plans

The above section deals with dimensions in both models for supplier classification and the factors they are further based on. The next section will explain as to what are the different options a company has when it performs an analysis based on the supplier classification models above.

This section will describe action plans which Kraljic and Olsen and Ellram suggests for their supplier classification model. The section will start by first describing Kraljic's action plans and will then continue by describing Olsen and Ellram's action plans.

Kraljic's action plans

Before proceeding with the action plan, figure 4.5 will have to be referred. The purpose of this figure is to first identify a strategy that will have to be used for a particular supplier based on the buyer and supplier strength. Based on the strategy adopted for a particular situation. The

implication it has with regards to a certain factor, volume, price, contract coverage, new suppliers, and inventories can be seen in table 4.2 below.

Table 4.2: Kraljic's Action plans

Strategy Key- Issues	Exploit	Balance	Diversify
Volume	Split volumes	Keep or shift	Consolidate
Price	Aim to reduce	Opportunistic	Agree
Contract coverage	Encourage spot purchasing	Combine spot and contact	Ensure supply
New suppliers	Stay in touch	Selected vendors	Actively seek
Inventories	Reduce	Keep buffers	Advocate for stocks

With reference to table 4.2 to explain one such components where the company's strategy is to diversify. In the short term the company should consolidate all its volume and procure it from one supplier. Agree to the high prices demanded by the supplier and at the same time ensure supply through contracts. However in the long term the buyer should actively seek other new sources, or materials, or even consider the possibility of insourcing. As for inventories Kraljic's suggests that the company should advocate for stocks to ensure supply.

Considering the scenario where the supplier strength is lower than that of the buyer from figure 4.5, the buyer should seek to exploit. The buyer should aim to reduce prices, split volume over multiple suppliers and also encourage spot purchasing. Further the buyer should stay in touch with new suppliers and also the buying company should aim to reduce inventory costs.

When the supplier strength is equal to that of the buyer, the buying company should aim to balance based on figure 4.5. In this case, the company should be careful not to be too defensive as it may prove to be costly and at the same time taking an over aggressive stance as well may not serve the purpose. For example when it comes to price Kraljic suggests that companies should be opportunistic and when it comes to new suppliers the companies should have selected suppliers they can work with. For inventories Kraljic suggests that the buying company should use stocks.

Olsen and Ellram's action plan

The Olsen and Ellram's action plans differs from the Kraljic model's action plans in terms of the model addressing how a company can develop, maintain or switch a supplier based on which cell the supplier lies (refer figure 4.6) after performing an analysis based on the dimensions relative supplier attractiveness and strength of the relationship.

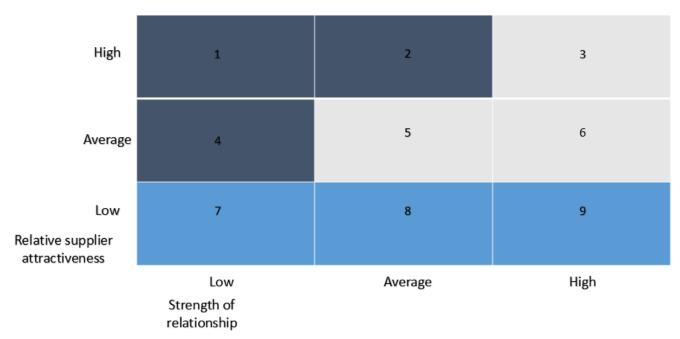


Figure 4.6: Olsen and Ellram's Supplier classification model

With regards to the three types of action plans which Olsen and Ellram suggest they depend on where the supplier ends up in their supplier classification model. Therefore the three strategies develop, maintain and shift shall be further explained.

Develop

With this Olsen and Ellram (1997) suggests that the buying company either should develop the suppliers attractiveness or develop the strength of the relationship. For example if the supplier ends up in cells 1,2, and 4 refer figure 4.6 then this relationship should be viewed as rather desirable, since these are attractive suppliers. If one of these companies also happens to have a strategically important product, then the buying firm should develop the relationship with these supplier (Olsen and Ellram, 1997). This could be done by, increasing purchasing volumes bought from the supplier.

Another instance of development, which Olsen and Ellram (1997) suggest is when a supplier ends up in cells 7, 8 and 9 (refer to figure 4.6), and there is no possibility to switch supplier then the buying company should develop the supplier attractiveness.

Maintain

If a supplier ends up in cells 3, 5 and 6, refer figure 4.6, Olsen and Ellram (1997) suggests that the buying company should reallocate resources among these in order to maintain a strong relationship with these suppliers.

Switch supplier

If a certain supplier ends up in cells 7, 8, 9 as seen in figure 4.6 and there is a possibility to switch supplier, Olsen and Ellram (1997) suggest that this should be done. Before switching the supplier the company should evaluate the importance of the supplier on their network and what impact it could have.

5 Empirical data pertaining to Lextal

The Theoretical framework covers all topics that are considered relevant and necessary to this thesis. The topics covered in theory include literature pertaining to the different types of purchasing structures, the roles and responsibilities in purchasing structures and activities related to these structures. Then, the types of portfolio models are explained along with how they are used to classify products and suppliers. Finally the action plans they recommend based on the situation. However, in order to perform an analysis it is also required that necessary empirical information concerning this thesis is gathered from Lextal. This in order to contextualize the theory to Lextal's case, therefore the next section will explain aspects of Lextal that are connected directly to purchasing at Lextal and that in any way affect how purchasing is undertaken at Lextal.

The information in this section will be divided in three sections. The first section will include information about Lextal, the second section will contain information about their suppliers and finally Lextal's customers. The information in this section will help design a suitable purchasing structure and a portfolio model for Lextal and be used to contextualize the theory presented earlier.

5.1 Lextal

The following section will start by first explaining the three main materials that Lextal purchase, followed by how much Lextal spend on these materials and on which material they profit as a company. Further this section will explain the application of different laminates which are produced by Lextal. Finally, this section will describe the different purchasing roles, how purchasing is performed, Lextal's demand on suppliers, and how Lextal evaluate their supplier's performance.

5.1.1 The main materials purchased by Lextal

In Lextal there are three main products which are purchased, they are the face material, foam, and scrim also known as scrim or backing. Each material will be discussed in detail in the following section.

Face material, in a lamination the face material is the top most material. It is the material that is visible to the end user. According to Lextal the face material is the most expensive material, and contributes significantly to the final price of the laminate. It is typically also regarded as the most important material by both Lextal and their customers. This is because it is visible to the end consumer and also as these it constitutes a major portion of the final part price. Further there are different types of face materials; they will be explained in the following section.

Types of Face material, typically there are three types of face material. These are textile, vinyl or artificial leather and artificial suede. Occasionally Lextal also laminate on real leather. However for this research the focus will be just on face material as a whole and not the different types that are available.

Foam is the material that is generally in between the face material and the scrim; however this is more dependent on the final product as some laminates depending on their application do not use

foam. The foam can be used as padding or filler and also as an adhesive. Just as face, there are different types of foam materials these will be explained in the following section.

Types of Foam, there are mainly two types of foam, polyether and polyester. The two types are also addressed as polyurethane, as polyether and polyester are types of polyurethane.

Scrim also referred to as backing is the third layer or the last layer in the complex or laminate, depending on the application. It serves as a support, and helps make working with the laminate easy as it helps when sewing the laminate. The laminate might slip easily off the work table if not for the scrim, however with the scrim on the back this is prevented. Even when the laminate is put on the seat of a car, it can be done easily due to the presence of a scrim. Another function of the scrim is to bring stability to the shape of the face material, especially in cases where the face material tends to stretch. Similar to the face and foam materials, there are different types of scrim. Types of Scrim, there are many variations when it comes to scrim. However the most common ones are circular knit and nonwoven.

5.1.2 Lextal's spend on purchase materials and profit per part

Now that the materials have been explained, the next section will explain the distribution of spend over these materials. The reason for including this information is to get an understanding of the economical factors associated with the materials i.e. volumes purchased and value of purchase. When observing Lextal's spend on top ten supplier there is a pattern that emerges with respect to spend on the three materials, refer figure 5.1. Lextal's highest spend are reserved to face material, this material typically contributes to between 60-75 % of Lextal's spend on

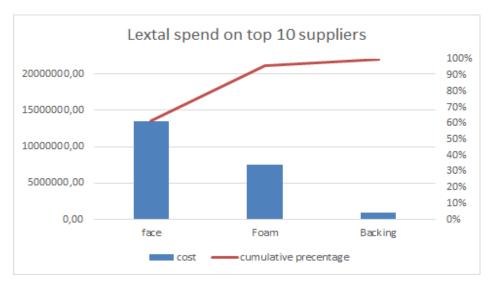


Figure 5.1: Lextal's spends on top ten suppliers

purchased materials. In numerical value, spend on the face material amounts about 13 million Euros. The face material is the most expensive material among the three materials with the highest

value of 24 Euros per meter. Which also further serves as an important parameter since lamination is typically measured in the amount of meter sold/bought. The second largest category which Lextal spends money on is foam materials. This material typically represents about 20-35 %, in numerical value it represents 7.5 million Euros. Further this material is the second most expensive material per meter, this material can vary from a price of 4 to 0.7 Euros per meter. The third and smallest category of Lextal's spend is scrim, this category represents between 4-10% of Lextal's spend, in numerical value this material represents about 900 thousand Euros. The cost for this material can vary from 0.7 euro/meter to 0.34 euro/meter.

As stated in the introduction the face material is purchased from directed suppliers. The price and conditions for which are already negotiated by OEMs. As a result of this Lextal do not make any profit when it comes to the face material. However for foam and scrim, Lextal purchase these materials from suppliers of their own choice for which they negotiate the prices and conditions themselves. So in the case of foam and scrim, Lextal do make a profit. According to Lextal the profit for foam is higher compared to scrim.

5.1.3 Application of Laminates

Now that Lextal's purchased materials have been introduced, and Lextal's spend on purchased materials have been described along with the profit Lextal make per part. The following section will list a few applications of the laminates. The purpose for this section is for the reader to know a few applications of the products that use the laminates produced by Lextal and to get an idea of their customers.

Door panels of cars, are always a single lamination. By single lamination it is meant that it is a face fabric laminated with foam. There is often no back scrim used because the laminate is just glued on to the plastic insert.

Pillars of cars; which are the A, B, C, and D pillars in the cars. This is an example of a product which does not use the foam, but only the face material and the screening. These two materials are stuck together using an adhesive. As stated earlier the adhesive serves the function of sticking two materials together.

Seats of a car do not use an adhesive. The polyurethane foam is used as the glue, it is heated on the sides with the help of propane gas due to which it is turned to liquid. After this the face and scrim are pressed to the foam as a result of which a complex is made, there is no additional glue to the complex. Here the scrim serves an additional function, of enhancing the effect of the stitch in the seams. Due to the presence of a scrim each stitch is more effective as each stitch is holding on to the scrim for support.

5.1.4 Different purchasing roles at Lextal

The following section will describe the people who are responsible for purchasing the materials that are used to produce the above laminates. It is important to know the different roles of purchasing at Lextal, as this will influence the analysis of various purchasing structure and also the final structure that will be proposed for Lextal.

This section will be divided into three sections; senior managers, plant managers/project leaders and operational buyers. Further this section will also describe the activities which are performed by these individuals.

Senior managers, two of whom are from the Swedish facility and one from the Belgian facility generally are involved in strategic activities. They also serve as a support function to the plant managers and project leaders in sourcing for certain cases. The strategic activities include trying to evaluate the different options available to the group in terms of the suppliers, setting group contracts with certain suppliers, sending out the price list of the group suppliers to the units and updating any changes in those price as well. These individuals are also in charge of sourcing and overlooking the sourcing for key accounts. Key accounts refer to the accounts where large automotive clients are involved. With regards to serving as a support function the senior managers offer their expertise and act as consultants for the plant managers and project leaders.

Plant managers and project leaders, in the past all quotes for all kinds of projects be it big or small were generally handled by the plant manager. However Lextal soon realized that the plant managers will be overwhelmed by working on both the purchasing related activities and other responsibilities that are generally associated with the plant. So it was decided that a project leader would handle all purchasing related activities. The role of project leader is currently active in Czech Republic and Portugal. There are however plans to soon have a position in Belgium and Sweden as well. The activities that plant managers/ project leaders typically perform are receiving the requests from customers, gathering information from all relevant individuals within the company, working with the quotations, working on prototypes. and submitting a final offer to the customer.

Operational buyers, In Lextal's case there are no operational buyers. The activities such as quality assurance, invoicing issues, etc, are handled by the different functions at Lextal. For example quality assurance is handled by the quality managers supported by one quality personnel. Sending out orders to suppliers and operational purchase of raw materials is handled by customer care. Further invoice issues and invoice approval are handled by the financial manager and the operational manager.

5.1.5 Sourcing process

The above section describes the different roles in Lextal and their responsibilities. How these individuals work during sourcing activities will be explained in the following section, this as to gain an understanding for how it is done now. As Lextal currently experience certain concerns with supplier selection, this information will be useful in the analysis of their purchasing structure. Sourcing at Lextal is based on the situation. In some of these situations the customers direct Lextal to source from a particular supplier known as directed suppliers. In other situations Lextal have

the option of selecting suppliers based on their choice. Depending on if it's a key account, an account where a large automotive supplier is involved and if the material to be sourced is new, the sourcing process looks different. Therefore the sourcing processes will be explained based on these situations.

Directed supplier, in a situation where a directed supplier is involved the customer sends the request for a particular project to any facility. With reference to figure 5.2 in step 1 once the request is received, the specifications are also collected from the customers. Then in step 2, Lextal contact the directed supplier to negotiate the conditions. Once there is confirmation of acceptance on the conditions from the supplier. Lextal prepare a final price offer and send it to the customers as step 3. Lextal sometimes go ahead and send the final price offer to the customers despite not receiving confirmation from the suppliers on the conditions. Lextal do this as they have less time and people to follow up with the supplier for confirmation, as a result when there is an issue that arises in the post-delivery stage, it becomes difficult to resolve as the conditions were not agreed upon previously between Lextal and the directed supplier. In some situations Lextal do not even negotiate the conditions as that is already done by the customers. In this case Lextal just contact the supplier for confirmation of the conditions negotiated.



Figure 5.2: Sourcing when a directed supplier is involved

Key account and new part, in this situation the clients involved are major automotive players and the material to be sourced is also new. Referring to figure 5.3, in step one the facility receives the request from the client along with the specifications, with the senior managers in copy if it is an email. Since the part is new, in step 2 depending on the facility they will either contact Belgium or Sweden for consultation on how to proceed. Typically in Belgium they contact the senior manager in Belgium, whereas the Czech Republic and Portugal facilities contact the managers in Sweden. Then in step 3 they contact certain suppliers based on the recommendation of senior management. In step 4 after having received, the quotes from the suppliers they again contact senior management to decide as to which supplier to select. Based on the decision in step 4, they finally select a supplier in step 5. According to Lextal when there is a key account involved the senior managers are almost always consulted.

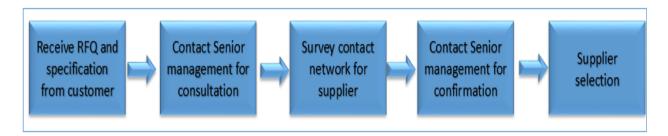


Figure 5.3: New part and key account.

Key account standard part, the sourcing in this situation is not very different from the previous situation. The only difference being that the material involved is a standard part. So when the facilities receive a request from the customer for a standard part in step 1. They contact preferred suppliers for quotes in step 2. The suppliers contacted are also generally group suppliers with whom conditions are negotiated by Lextal for the whole group. Then in step 3 the facility consult with the senior managers to come to a decision as to which supplier should be selected and then they go ahead and select a supplier in step 4.



Figure 5.4: Key account and standard part

Standard Part, in this situation there is no key account involved and the material that is to be sourced is a standard material. It starts with the facility receiving a request from the client as seen in figure 5.5 below. Then Lextal have a set of preferred suppliers with whom they have negotiated certain conditions especially when it comes to foam and scrim (these suppliers are generally group suppliers). The facility based on the request contacts these supplier for their quotes and based on the best quote selects a supplier in step 3.



Figure 5.5: Standard parts

5.1.6 Supplier evaluation

To further understand sourcing at Lextal the next section will continue by explaining how Lextal evaluate their suppliers. The objective of adding this information is to see what factors are important when Lextal evaluate a supplier. These factors help in contextualizing the portfolio models. Such that only factors that relevant to Lextal are considered when proposing factors to consider when evaluating suppliers.

Prior to awarding business to a supplier Lextal consider many factors that are important. The factors can be considered as pre requisites that a supplier needs to have, in order for the supplier to be awarded business. This section will further explain how Lextal monitor the performance of a supplier once the supplier starts deliveries. This is to ensure that the supplier is delivering as per the required specifications. By evaluating the suppliers, Lextal try to reduce the risk associated with poor quality, and other factors which would eventually affect Lextal.

Prerequisites for a supplier to work with Lextal

Lextal perceive the following factors as important, when it comes to evaluating a supplier prior to awarding business. These factors are performance factors, technological factors, organizational, cultural and strategic factors, financial factors and other factors. All of these will be further explained below

Performance factor

For performance factors Lextal view quality, flexibility, service and price as important factors. *Quality* refers to the quality of the parts that the supplier can deliver. The supplier should be able to deliver the parts with the required quality level.

Flexibility, the ability of the supplier to adjust to fluctuating demands. A factor that is a strong point for Lextal considering that they cater to the automotive industry which is subjected to fluctuating demands

Service, the responsiveness of the supplier in terms of issues related to the product and other day to day transactions that involve exchange of the information and support from the supplier.

Price refers to the price of the part supplied by the supplier. The pricing of the product should be competitive.

Technological factors

The most important factor that Lextal really want from the suppliers is to adhere to the OEM standards, which are changing all the time. For example their demands are getting higher especially on environmental aspects. So Lextal want the suppliers to always be on top of that. Also the ability to cope with changes in technology. They want suppliers to be able to adapt to new demands from the market and always develop new grades to meet the requirements. Added to that Lextal rely heavily on their suppliers when it comes to knowledge about the purchased materials. This is with regards to the supplier suggesting which material should be used for a certain case or project.

Organizational, Cultural and strategic factors

For this factor Lextal expresses that trust, difference in culture and strategic fit are important, these will be further explained below.

Trust and relationship with the supplier, if there is no trust in the relationship. Lextal do not want to do business with those suppliers. Trust has to be there in the relationship

Differences in culture, Lextal think that this point is more important for the people doing day to day business and that there should be a right contact person who can coordinate the day to day activities. There were situations where a supplier was changed as they could not work with the people in a good way and understand each other. The people involved in this case were not at the management level but people who belonged to the lower level of the organization.

The strategic fit between the buyer and supplier, Lextal consider this as important. For example if Lextal were to consider expanding into other markets, it would be beneficial to purchase material from same supplier who also has a unit in the same market as Lextal

Financial factors, Lextal expresses that financial stability and experiences are important aspects to consider

Experience possessed by the supplier, Lextal think that it is important the supplier knows about the automotive market. Mainly, with regards to knowing the type of work in the automotive industry. As they are Lextal's main clients.

Financial stability is also something that is quite important to Lextal. As they do not work with suppliers who have financial issues.

Image factors

For Lextal it is important to purchase from suppliers who have a good reputation in the industry, as this gives them a competitive advantage. The advantage gained is when they are competing for a bid with a certain customer. In this case, Lextal want to be seen as a company that use high quality materials and not as a company associated with experimenting with low cost products.

Supplier performance tracking

The above section lists out factors that Lextal consider prior to awarding business to a supplier. The next section deals with how Lextal evaluate a supplier, once the supplier starts delivering. This process is part of the purchasing process. Based on how it is currently performed at Lextal will have an influence the purchasing structure that will be proposed.

According to Lextal they have a system or a process in place known as supplier performance rating. In this process Lextal keep track of every delivery that is taking place from the supplier to Lextal. The quantity is checked and tracked to make sure that it is the requested quantity that is delivered. Added to that, the incoming lot is also checked and tracked to make sure there are no problems such as quality issues. Lastly, the delivery is also tracked against the delivery time/schedule i.e. on

time delivery or if the delivery took place on the time promised. Once all this information is compiled, the results are sent to the supplier. In a case where the results are not satisfactory, the supplier will be required to send a control plan wherein the supplier explains why a certain problem occurred and what will be done to ensure that it will not happen again.

Lextal state that they have a system for supplier evaluation which is performed by the quality managers on a quarterly or six month basis. With regards to the evaluation process itself the quality managers see each other every six months, to discuss what synergies they can gain from the process and how they can benefit from it. For now however to elaborate on the inconsistencies present in the process, there are instances where some local suppliers supplying to one particular facility are evaluated to be good, but no one is aware of it as the evaluation of this one supplier is not put together with the group's other evaluations of suppliers.

5.1.7 Structural advantages for Lextal's purchasing

The next section will highlight some aspects about the current way of working in Lextal, which is considered to be advantageous and important according to Lextal. It is essential to make sure that what is currently beneficial in the present way of working is maintained. Therefore the next section will cover all those aspect with the current way of working that are considered to be advantageous according to the employees of Lextal.

As it has been previously stated Lextal's purchasing occurs in a more decentral manner, where each unit is in charge and decides over their own purchasing. This gives Lextal some advantages. The advantages with Lextal's current purchasing are flexibility, closeness to suppliers and less bureaucracy. The flexibility comes in several different forms e.g. advantage today is every unit has its own purchasing department as they are in close contact to the customer and the timing between the request from the customer and the answer to the customer is quite short so it makes Lextal flexible in providing their answers. The closeness to supplier is regarded in a geographical sense, the closeness in geography gives Lextal advantages of fast deliveries and less transportation cost.

5.2 Lextal's suppliers

This section will explain in detail about Lextal's suppliers, this information is important as parts of it will serve the basis for the analysis of the portfolio models and other parts of it will be used for the analysis of the purchasing structure.

This section will start by describing how Lextal negotiate with different types of suppliers. The section will continue by describing Lextal's relationship with their suppliers. Lastly Lextal's supplier size and also the risk associated with suppliers will be explained.

5.2.1 Negotiations with different types of suppliers

The section will discuss about the types of suppliers that Lextal work with, directed suppliers and regular suppliers and also how Lextal works with them in terms of negotiations and conditions.

Directed suppliers, a directed supplier is one that the customer directs Lextal to source from. The reasons for Lextal's customers to have directed suppliers are many, one of the main reason is that sometimes the customer has previously developed a certain material with a certain supplier and chooses to source that material from that particular supplier. Sometimes it is because the customer wants to ensure that a specific material is used with the right quality and therefore they direct Lextal to use a certain supplier.

There are two scenarios when it concerns negotiation of price and conditions with directed suppliers. In the first scenario the customer negotiates only the price with directed suppliers and in the second customers negotiate both price and condition with directed suppliers.

Scenario one - when the client negotiates only the price, in this scenario the clients of Lextal negotiate only the price with the directed supplier and then request Lextal to source from that particular supplier. However the customers leave the negotiation of other conditions such as quality claims, delivery conditions to Lextal. Scenario one affects Lextal when they do not always negotiate those conditions with the supplier ahead of business or prior to commencing business. According to Lextal the result due to not negotiating such conditions on time or ahead of business leads to problems like who would bear the costs especially when an issue arises and costs are associated with it. An example of this could be when there is a certain quality issue with the materials delivered by the supplier or when the material is damaged during transportation from the supplier's facility to Lextal. However Lextal have understood this problem and are consciously trying to negotiate such conditions ahead of time to avoid problems especially when something out of the ordinary occurs.

Scenario two - when the client negotiates both the price and conditions, which is most often the case. In this particular scenario Lextal are affected especially if the conditions negotiated by the clients are not favorable to Lextal. An example of this is when the customer negotiated a delivery time of six weeks with a particular mandatory supplier and Lextal could not change the order or amend order within the duration of 6 weeks prior the order delivery date. This affects Lextal's ability to be flexible. In order to address this concern Lextal can sometimes request the supplier to reconsider the conditions and ask for a change, however it is very rare that the requests for changes are accepted by the supplier. In a case where the supplier refuses to change the conditions, Lextal apply the same conditions to the customers. This sometimes leads to customers influencing the supplier to change the conditions. Lextal state that another way of changing the conditions with the supplier is by renegotiating these conditions as a group. This is helpful when it comes to MOQs - minimum order quantity as the quantity can be split between two plants. However this is not normal procedure.

Regular suppliers this section will cover the suppliers that Lextal select themselves. This is applicable to foam and scrim suppliers. These type of suppliers are generally handled as group suppliers, meaning that group contracts are typically negotiated with these suppliers. The objective of doing this is to get the same price and condition for these type of supplies. For Lextal's Scrim

suppliers there are also some examples where Lextal use Group Suppliers, however these suppliers are generally handled by the individual units.

In the case of a group supplier the price and conditions like minimum order quantities and lead time are also agreed upon. The group suppliers and the prices for these suppliers are managed by senior managers. However when a supplier has a question or wants to change certain conditions, this is typically handled by the units at Lextal (in these cases headquarters are informed) and sometimes the headquarters also step in to ensure control of the supplies.

5.2.2 Lextal's relationships with their suppliers

The section above explains how Lextal negotiate with different types of supplier while the following section elaborates the relationship they share with the suppliers. This would provide information on how Lextal are perceived by these suppliers and how this affects their work.

Relationship with directed suppliers, Lextal work closely with their suppliers. However when it comes to directed suppliers, Lextal feel that these suppliers do not consider Lextal as their customers and instead see Lextal's clients as their customers. The reason they do so, is because Lextal's clients negotiate the price and in some cases even the conditions with these suppliers. The effect of these directed suppliers not treating Lextal as their direct customer is reflected in their attitude, where they do not respond on time to Lextal and often display a carefree attitude. Lextal also experience difficulty with such suppliers in the post-delivery stage if certain conditions like quality claims, delivery etc are not discussed in the pre delivery stage.

Relationship with regular suppliers, coming down to the suppliers that are not mandatory suppliers instead chosen by Lextal. Lextal claim that they share a good relationship with almost all of their suppliers and most of the relationships are long term relationships. Lextal are quite supportive when it comes to their suppliers. When their suppliers come to them with a price increase Lextal are always ready to hear the supplier out. However at the same, it is important to Lextal that the price increase demanded by the supplier is justifiable and in line with the market trends. In such a case where the price increase is justifiable, Lextal will approach their customer as well to reconsider the price. In a case where the price increase is not justifiable, then Lextal do not hesitate to switch business to another supplier. Coming to business with suppliers, purchasing larger volumes from the same supplier increases Lextal's importance with the supplier. As a result it helps them negotiate better deals with the supplier in other projects.

How Lextal are viewed by their suppliers

In an effort to describe how keen the suppliers are to work with Lextal. Lextal narrated an instance. The instance involved a large foam supplier who is currently supplying to some facilities of Lextal, but is keen to supply to all the facilities of Lextal. The reason for this according Lextal is that the foam supplier is seeing the growth that Lextal have and are currently experiencing. A growth that is supported by the right moves made by Lextal. According to Lextal they think that a lot of large suppliers see them the same way as the supplier in the above narration does.

Apart from that, the feeling that Lextal often get is that the suppliers really like to work with Lextal as they are a fair company. A lot of customers try to squeeze their suppliers by giving them a lot of fees and administration charges for everything, however Lextal are more of a company that try working together with their suppliers to find solutions to a problem. According to Lextal they feel that their suppliers see Lextal as a good customer to work with because Lextal also want to work towards a long term relationship. Another instance of a supplier keen to work with Lextal came to Lextal two or three times a year for three or four years. Despite Lextal not buying anything from that supplier it didn't stop them as they were very keen on selling to Lextal.

The paragraphs above emphasizes that Lextal are close to their suppliers, however there is one example provided by Lextal that highlights the fact that there is some inconsistency also that is present in the way the units of Lextal deal with group suppliers.

One such supplier is a multi-unit foam supplier, who has a facility in Belgium from whom the Belgian facility of Lextal procure foam. This supplier offers the Belgian unit of Lextal many benefits. One of these benefits has to do with storage, the supplier offered to store some stock of material for Lextal as they do not possess enough space in their Belgian facility. Additionally Lextal also have the possibility to change the mix of the material ordered as long as it is before noon a day prior to delivery from the supplier's facility. This is possible as the supplier's facility is only a few hours away from the Belgian facility.

However it is observed that the relationship between the other units of the same supplier and that of Lextal are not the same as in the Belgian case. For example the Portugal facility of Lextal do not source from the same foam supplier instead they source from another Local supplier.

Additionally, Lextal consider the following factors as important when they judge the relationship they have with a particular supplier

Factors affecting the relationship

No of contacts in between the companies, the contact is generally between the buyer at Lextal and the marketing of the supplier. It depends on the size as well. According to Lextal, with major suppliers it helps in making the bond stronger.

How suppliers view Lextal, According to Lextal they may not be the in the top ten list of customers for their suppliers. However it is important to Lextal, that they be treated as the most important customer by their suppliers. This is because how Lextal are treated by their suppliers affects Lextal. Distance between buyer and supplier, According to Lextal the distance between them and their suppliers is not very important. As there are other forms of communication, however there is still a need for face to face meetings at times.

5.2.3 Supply size and risk associated with suppliers

The section above deals with Lextal's relationships and describes them; the next part will deal with the supplier sizes and risks with suppliers of Lextal. This to provide an idea of the suppliers that Lextal deal with in terms of their size and numbers, this to understand

This section will provide more information on the supplier of Lextal in terms of the size of the suppliers in comparison to Lextal, the cost of switching a supplier, and the risk associated with the suppliers.

Supplier size in comparison to Lextal

As stated earlier Lextal purchases three different types materials face, foam and scrim which are supplied by different suppliers.

In terms of size, the foam suppliers who, tend to be rather big when compared to Lextal. The "small suppliers" tend to have a turnover which is 2-4 times more than Lextal, while the "big suppliers" have a turnover which is over 30 times more than that of Lextal. The number of suppliers from the foam industry tends to be rather low; about 2-4 of the top ten suppliers tend to be foam suppliers. The face material suppliers of Lextal are divided based on if they are automotive suppliers or if they are suppliers from the bedding industry. The bedding industry suppliers vary significantly in size from companies who are about 17 times smaller than Lextal in terms of turnover and with some who are about 6 times bigger in terms of turnover. The latter are typically the type of suppliers that Lextal tend to source from. With regards to the suppliers who mainly cater to the automotive industry, they are almost always mandatory suppliers who are in direct contact with the OEMs (Original equipment manufacturers) or Tier 1 suppliers. When further looking at Lextal's list of top ten suppliers typically 5-8 of them tend to be suppliers of face materials.

Coming to scrim, it is typically supplied by suppliers who are about 7-8 times bigger, however some of Lextal's suppliers in this group are almost the same size as Lextal.

To summarize this section, it can be said that very few suppliers are smaller than Lextal. Most of the suppliers especially the foam and the face suppliers are very large in comparison to Lextal.

Risks associated with the suppliers

From the above section it is clear that the suppliers are mainly large suppliers, however dealing with any supplier involves some kind of risk. In terms what kind of risk is associated with the suppliers, it will be explored in the next section.

According to Lextal when it comes to scrim, it is very easy to duplicate and there are many suppliers who can supply it. However for foam, there could be a problem. The problem in this case is with the customer preference. With foam, there can exactly be the same grade of foam that is produced by two suppliers. However the customer for some reasons prefers the foam from one supplier. In a case like this, if the supplier whose foam is preferred by the Lextal's client is in a position to no more produce the form. This is a risk for Lextal as they are responsible for sourcing foam for a particular laminate or complex as they call it. A risk in terms of finding another supplier as the customer already prefers the foam developed by that supplier.

Another risk that Lextal see with suppliers is if there is only one source. Or if Lextal are sourcing from a single supplier, in such a situation Lextal feel that it is better to source from two sources. *Strategy to counter supply risk: Single vs dual sourcing*

Lextal in most cases when given the choice prefer to source from two suppliers as this strategy helps them maintain competitive pricing. As a result of this they can push a supplier back if they are approached by the supplier for a price increase that is not justifiable or not in line with the market prices.

Lextal state that they need to have good control over the parameters that influences the raw material prices. Another thing that Lextal are doing every time is that they are comparing the prices regularly and know exactly what are the prices for a particular specification and what is right price. As a result of which, Lextal have built up knowledge over the years about different OEM standards. So the suppliers cannot come to Lextal and claim that the cost for a certain material has increased due to a certain aspect or reason which is unjustifiable.

5.3 Lextal's Customers

As seen in the previous section even the customers of Lextal have an impact on how Lextal conduct their purchasing, especially when it involves directed suppliers. In order to understand more about the customers of Lextal the following section will discuss about the customers of Lextal.

This section will start by explaining Lextal's customer mix, and then the section will continue by explaining what the customers expect of Lextal. The last part of this section will explain how the customers support Lextal when there is a supplier switch.

5.3.1 Lextal's customer mix

Based on Lextal's top 10 customers about 90 % of their customers are from the automotive industry, the rest of their customers are from the bedding and furniture industry. Based on the interviews and financial figures of the facilities in Belgium, Czech Republic and Portugal, the mix of customer is about 98% automotive and 2 % bedding. These figures however look a bit different for the Swedish facility where about 69 % of Lextal's customers are in the Bedding industry and the automotive industry represents about 31 %.

To discuss more on the mix of customers, Lextal deal with a large number of customers in the automotive industry instead of limiting themselves to just a few. According to Lextal this is an advantage because if they were to have decreased volumes for a certain project with an automotive customer then there are other projects from other customers that would compensate for the decrease in volumes in certain project. As with only a few customers the impact due to the decrease of volumes for a project would be very large. Coming to the customers in the bedding industry Lextal claim that their experience in purchasing with the automotive industries who generally have high requirements has helped them work with clients from other industries and also in getting better prices when it comes to procuring material for the bedding industry.

5.3.2 The expectations of Lextal's customers

Lextal's customers from the automotive industry demand flexibility from Lextal in terms of being able to quickly adjust and supply to changes in volume. Lextal believe that their ability to react and supply to fluctuating demands is their strength. However there are other expectations as well. Since the customers source the face material, Lextal don't think that the customers are so concerned or interested that Lextal should take care of it. However the customers think that it is very important

that Lextal should have very good knowledge about the foam and scrim. Knowledge on the price levels, about the competition present in the industry and the ongoing developments in the industry. Apart from that the customers think it is very important that Lextal take over purchasing, especially when the customers insist that Lextal should buy the face material of a certain grade from a particular supplier. In this case the clients want Lextal to be very professional with the supplier in terms of setting up a contract prior to starting business. This is an area where Lextal feel that they are not doing a good job today. The clients expect Lextal to deal well with the day to day business as well with regards to maintaining part quality and deliveries.

5.3.3 Customer support in Supplier switch and the costs involved

This section will deal with switching, only with respect to the suppliers that Lextal select. These suppliers are mainly foam and scrim suppliers. The most common reason for a supplier switch has been an increase in price. There are two factors that influence switching of a supplier. One is the price and the other the quality of the material being supplied by the suppliers of Lextal. If there is a price increase and if there is another solution involving another supplier providing the material as per the required specification with an even better or lower price, the customer is willing to change. The sampling cost is covered by Lextal and the customer will take up the testing cost by the customer.

The other reason for switch is quality, every time there is a situation where the quality has been so bad that Lextal are left with no option but to switch the supplier. Then the customer has been helpful in these situations as well. Reason being, that even the customer does not get the material as per the required quality level.

According to Lextal there has been a situation where they have had to cover all the costs, however it is considered extremely rare. The situation involved a supplier of Lextal who was no more able to supply a particular scrim material. This was a problem which concerned Lextal as they were responsible for procuring scrim. So it was something that Lextal had to fix themselves. In this particular situation Lextal had to pay for the testing costs on the customer's side as well, however the costs involved were not very high. So every time there has been a supplier switch needed, it has been done together with the customer.

6 Analysis

In the following section the empirical data will be analyzed in combination with the theoretical framework. This will be done for gaining an understanding on what type of purchasing structure would suit Lextal and also to provide insights on how they should work with portfolio models. In this section a detailed analysis will be performed based on the theoretical and the empirical data of Lextal.

The first section will be an analysis of the structure of the purchase organization which is a pressing concern. In the second section the portfolio models will be analyzed against the benefits they could bring to Lextal and the features of each model that could be suitable when applied to the context of Lextal and how they could contribute when developing a model specifically for Lextal.

6.1 Analysis of Structure

The lack of a clear structure in Lextal is a pressing issue. Therefore the following section will involve a detailed analysis to see which of the following central, decentral, or hybrid structures would be suitable for Lextal. The section will describe the advantages and the disadvantages for each of the three types of structures and then be summarized in a table.

6.1.1 Lextal versus Central Purchasing organization

This section will present how Lextal would be impacted by using a central purchasing structure. This will be done by first analyzing the advantages which Lextal can gain by using central purchasing and then analyzing what would be the disadvantages of using a central purchasing structure.

Advantages with a centralized purchasing structure

To begin with the advantages will be stated in this section, three main advantages have been observed these will be described below.

Advantage 1: As it has been previously stated one of the biggest concerns due to the lack of a clear structure at Lextal is that in certain select cases, the local facilities select a supplier that is perhaps the most convenient option for that particular facility but is not always the best supplier for the group as a whole. Perhaps this is a result of the autonomy that is possessed by the units enabling them to take such a decision. A decision that does not always require consulting a senior manager or perhaps it is a result of a decision that is not based on coordination.

Based on theory on central purchasing structure Van Weele states that decisions like product specification, supplier selection and contract preparation and negotiation are taken by the central organization. It could be beneficial for Lextal to adopt this type of a structure, thereby ensuring that the selected suppliers are advantageous for the whole group and not only a facility.

Advantage 2: Lextal have also claimed that as a result of the facilities selecting such suppliers which are often beneficial to one unit, they lose other benefits that a group supplier could offer. Advantages such as reduced prices, flexibility of supply to different locations as the group supplier often possess many units in many places. When it comes to reduced prices the central purchasing structure overcomes this drawback as well, as in this type of a structure the central unit performs the negotiations. This structure is according to Van Weele (2010) and Lysons & Farrington (2006) is appropriate to use when different business units are purchasing the same type of products, which also are considered of strategic importance to them i.e. to gain economies of scale. Since the central unit represents the entire group's volume instead of that of a single plant they are in a better position to negotiate better terms and prices.

Another aspect of central structure is that it is appropriate to use when different business units are purchasing the same type of product which is the case in Lextal. The four units have three materials face, foam and scrim in common. Considering the commonality between materials purchased, the center can consolidate the requirement for all units and get a reduced price from the supplier, thereby benefitting from economies of scale.

Advantage 3: An example of a situation when a central purchasing structure can prove to be beneficial is, when there is a need for a particular unit of Lextal to request suppliers to change a certain negotiated condition. A condition negotiated between the supplier and Lextal's client, which may not be in favor of Lextal. Lextal claim that it is very rare that the suppliers accept a request for such a change. Perhaps if it were done by a central unit there are higher chances that the supplier may consider and even act on the request. This is something that even Lextal think could work in their favor, as negotiating as a plant is less effective when compared to negotiating as a group, considering that the group would represent significant business to the supplier.

Disadvantages with central purchasing

The central structure offers many advantages which are definitely important to Lextal, however it would also be interesting to see what the disadvantages are as well. There are three main disadvantages that have been observed.

Disadvantage 1: With most of the decision making power concentrated at the center, there are advantages for example when it concerns supplier selection. However there is a possibility that the facilities might feel neglected and experience a lack of control due to the sudden loss of decision making power when it comes to supplier selection. Another way of looking at this is that the center might experience an overload trying to take all major decisions for each unit.

Disadvantage 2: There are other concerns apart from the above stated potential concerns, if a central purchasing structure were to be adopted. The advantages due to the current way of working at Lextal could be negatively affected if a central purchasing structure is applied. The advantages based on the close relationship shared between Lextal and their customers and suppliers might be affected. Reason being that if all purchasing is centralized, it would affect the facility's ability to solve issues quickly and respond quickly when it comes to answering customers and suppliers.

Disadvantage 3: Another important factor to consider the impact central purchasing would have on the profit center on each facility, assuming that each unit is in charge of their own profit and have to ensure their own profitability. Losing control over one of their main contributors to cost i.e. purchasing, might create resistance. This is supported by Corey (1978) who states that in companies that have had decentralized profit management, it would be natural to expect resistance as a result of loss of control over purchasing.

Table 6.1: Advantages and disadvantages with central purchasing

Lextal versus Central Purchasing Organization	
Advantages	Disadvantages
Reduces or avoids situations where a local supplier is selected who is beneficial to only one facility	The facility might feel neglected and experience a loss of control due to sudden loss of power. A simultaneous overload of work at the centre as well.
Economies of scale due to volume consolidation and commonality	Negative effect on relationship between Lextal's facilities, customers and supplier
Increases the chance of obtaining supplier support to change unfavourable conditions with mandatory suppliers	Each facility would now feel the stress of showing savings in other areas as the purchasing of materials is no more under their cost centre.

Summarizing the section with the help of the table 6.1 it can be seen that adopting a central structure, has both advantages and disadvantages. Even though advantages are important, the disadvantage cannot be overlooked as it might have severe repercussions in the long term. Therefore, based on the table 6.1 it can be concluded that the central structure alone is not the best option for Lextal. Therefore the decentral structure has to be analyzed.

6.1.2 Lextal versus Decentral Structure

This section will focus on analyzing how adopting decentral purchasing structure would impact Lextal. This will be done by first analyzing the advantages which Lextal can gain by using decentral purchasing and then analyzing what would be the disadvantages of using a decentral purchasing structure

Advantages with a decentralized purchasing structure

To begin with, the advantages will be stated in this section, three main advantages have been observed these will be described below.

Advantage 1: Lextal does benefit in certain ways if a decentral structure is adopted. As in this structure each facility is responsible for procuring its own needs, by doing this each facility will be accountable for their own profit center.

Advantage 2: According to Van Weele (2010) in central purchasing structure all decisions related to strategic activities and tactical activities are all carried out at the center. However in Lextal there some activities that are taking place at the facility level. This is with regards to the project leaders who are in charge of receiving new requests from customers, prototyping and supplier selections for the facilities in Czech Republic and Portugal. A decentral structure would probably support some aspects of the way Lextal is working now. For example by applying a decentral structure the project leaders would be able to take decisions regarding supplier selection, which would not be

possible if a central purchasing unit is applied. Therefore applying a decentral structure may prove to be a solution giving the project leader and even the unit some sort of autonomy, regarding decisions.

Advantage 3: There are multiple activities that are carried out by the project leader at the Czech Republic and Portugal facility. However if a central purchasing unit is applied it would probably be difficult for someone from the center to carry out all these activities for each facility and at the same time focus on strategic activities. Therefore adopting a decentral organization would help, with maintaining these activities at the facility level.

Disadvantages with a decentralized purchasing structure

If Lextal were to adopt a decentral purchasing structure, the following three disadvantages would be noticed.

Disadvantage 1: In Lextal's case there is an inconsistency which can be seen in the way the different units deal with the same supplier and perhaps adopting a decentral structure may further increase the differences. A consequence might be different facilities negotiating different prices with the same supplier, if a decentral purchasing structure is adopted (Van Weele, 2010).

Disadvantage 2: Another disadvantage Lextal may encounter if the decentral structure is adopted is the lack of collaboration when it comes to approaching suppliers who are much bigger than Lextal. As a result a supplier may not treat a single facility the same way they would treat a group considering that the facility only represents a small volume.

Disadvantage 3: Additionally granting each facility liberty to choose any supplier may result in a supplier(s) that are only of benefit to a facility, but not necessarily to a group which is problem at Lextal currently.

Table 6.2: Advantages and disadvantages with Decentral purchasing

Lextal versus Decentral Purchasing Organization	
Advantages	Disadvantages
Each facility is responsible for their own purchasing, therefore they have control over their purchasing	Increased inconsistencies when dealing with the same supplier
Gives the facilities and project leaders power to take decisions ex regarding supplier selection	Reduced leverage with suppliers
Avoids overload of work at any one facility and close customers/supplier contact is sustained	High possibility of facilities selecting local suppliers

It is evident from the above analysis that both central and decentral structures contradict each other in terms of the advantages and disadvantages they offer. The advantages and disadvantages of adopting a decentralized structure is presented in table 6.2. Having discussed both central and decentral structures, it can said that both structures fail to completely retain what is currently good at Lextal and get rid of what is negatively impacting Lextal. Based on this observation the next section will discuss the impact of Lextal adopting a hybrid structure.

6.1.3 Lextal versus Hybrid Purchasing

Based on what is discussed above, the hybrid structure will be analyzed to see if it would be applicable for a company like Lextal. As the name suggests a hybrid structure is a mix of some aspects of central purchasing and some aspects of decentral purchasing. As explained in the theory there are different forms of hybrid purchasing. The different forms will be analyzed to see if any of these would be applicable to Lextal.

Lextal versus Voluntary coordination

Voluntary coordination is when the units after a certain amount of information exchange decide whether to be part of a joint contract with a supplier or instead decide to approach the supplier as a single unit (Van Weele, 2010). The advantages and disadvantage of adopting a voluntary coordination form will be discussed in this section.

Advantages with Voluntary coordination

There is certain amount of information exchange in Lextal also. This happens in Lextal when the project leaders consult with senior managers in specific cases, especially when it involves customers known as key accounts. However this information exchange could be viewed as consultation and not coordination. By applying Voluntary coordination, one advantage would be that there would be information exchange. By doing this there would be general awareness as to what is currently happening in each facility, and this information could prove to be useful at another point of time.

Disadvantages with Voluntary coordination

One of the concerns with Lextal now is that some units do what is best for themselves without considering what is best for the whole group. For example there are some units choosing a local supplier who is beneficial only to that unit, instead of choosing a group supplier who can offer more benefits to the whole group. By applying voluntary coordination to Lextal, it would further worsen the situation by giving units the choice of sourcing from which ever supplier they choose to do so based on their convenience. Therefore voluntary coordination would not bring about a significant positive change to the current way of working; instead it would legitimize current practice which is not considered beneficial for Lextal as a group.

Table 6.3: Advantages and disadvantages with Voluntary coordination

Lextal versus Voluntary coordination	
Advantages	Disadvantages
Introduces the need to coordinate.	Does not bring about a significantly positive change to the current way of working

To summarize based on table 6.1 voluntary coordination, if adopted would probably support the need for coordination prior to sourcing in Lextal. Apart from this the Voluntary coordination form does not seem to offer any other huge benefits. Therefore the analysis will continue with the next form of Hybrid structures known as Lead buyership

Lextal versus Lead buyership

The lead buyership form is another form of Hybrid structure. In these situations the business unit that has the highest volumes of a certain product is the unit in charge of negotiating a corporate agreement with a specific supplier.

Advantages with Lead buyership

The Lead buyership seems more applicable to the Belgian facility. This is based on the data provided by each facility of Lextal regarding the distribution of spend on different materials. From this data it is evident that the Belgian facility spends the highest on foam. The Belgian facility can probably take lead in purchasing foam for the whole group. Even more, this form ensures that all volumes are consolidated at one point and there is a high chance of reduced prices due to leverage of volumes. Apart from that Lead buyership ensures a one point contact with the supplier when it comes to negotiating, therefore it eliminates the possibility of various facilities having different prices with the same supplier (Van Weele, 2010)...

Disadvantages with Lead buyership

The lead buyership form does offer some advantages but on the other hand there are disadvantages as well, which will be discussed below.

As the facility will now be purchasing for the other units, any problem that arises between the supplier and the facilities, will have to be addressed by the Belgian facility. Added to that, from the data given about the customers list of each facility, it is apparent that the Belgian facility has a large number of automotive customers. Considering that the automotive clients are important, it is essential that the Belgian facility has enough time to provide sufficient attention to them in order to be responsive. However if the Belgian facility is overloaded, dealing with issues that arise

between the supplier and the other units. This might have a negative impact on their responsiveness.

There is also a possibility that the supplier might only be cooperative with the Belgian facility based on the fact they procure the highest volumes and that they negotiate prices. This may lead poor relations between the supplier and the other facilities of Lextal.

Table 6.4: Advantages and disadvantages with Lead buyership

Lextal versus Lead buyership	
Advantages	Disadvantages
Consolidation of volumes leading to reduced prices	Overload of work at Lead buyer's facility affecting the customer/supplier relations of Lead buyer
Single point of contact eliminating various prices between various facilities and the same supplier	High chances of differentiated relations between other facilities and the supplier

Lextal versus Lead design

Another form that is similar to the lead buyer concept in terms of a particular facility taking the lead is the lead design concept, where the facility that has developed or designed a particular product takes the lead. In the case of Lextal there is not much or rather any development at all when it comes to the products. Most of the products are purchased based on specifications provided by the customers. Considering this, the lead design does not seem applicable at this point of time for Lextal. Therefore the next form of hybrid purchasing structure will be analyzed.

Lextal versus Line staff

In the line/staff organization the central unit establishes procedures and guidelines on ways of working and purchasing practices. To summarize the central function serves more as a support functions to the local facilities who procure their own products. Added to that, they also serve as a medium that facilitate and solve coordination issues.

Advantages with Line staff

The line/staff organization this would enable Lextal to coordinate and share information between the units. An example of a situation where this can be applied is the area of supplier performance tracking. Here as explained by Lextal there are inconsistencies when one unit evaluates a supplier and the other units are not aware of this evaluation as it is not put together with the evaluation of the group's other suppliers. Another area is when three of the units choose to work with a group

supplier, while the unit in Portugal chooses a local supplier. Perhaps these situations can be avoided if there is sufficient coordination.

When designing procedures the center can set out guidelines and frameworks through which they can ensure uniformity in ways of working for example the sourcing procedure and supplier performance tracking throughout the whole group. Thereby removing inconsistencies caused as result of irregular processes between each unit. Another example where some uniformity could be achieved is the way the different units of Lextal deal with different units of the same supplier. Apart from that, the center acting as a support function will ensure that not all power is taken away from the facilities, thereby allowing units to still act autonomously.

Disadvantages with Line staff

Setting up guidelines would increase the bureaucracy in terms of procedures to follow, this may have an impact on the time required to carry out certain tasks. For example it might require more documentation of tasks, which would increase the time consumed per task.

The need for Lextal to act as a group when negotiating with suppliers is not addressed with this type of organization (By this it is meant a single point of contact which would negotiate for the whole group). This is a clear disadvantage with this type organization, as it is necessary for Lextal to negotiate as a group in order to gain better prices and conditions.

Table 6.5: Advantages and disadvantages with Line staff

Lextal versus Line staff	
Advantages	Disadvantages
Supports information sharing and coordination	Increases bureaucracy thereby increasing time for some tasks
Introduces uniformity processes and work throughout the group.	Negotiation power does not increase

From the above analysis the line staff form does not affect the benefits that are experienced by Lextal due to their current way of working and it also adds value in terms of developing procedures and achieving uniformity. At the same time it does not address one of the the most important needs of Lextal, which is increased negotiation power. To conclude it can be said that except for the lack of addressing the concern associated with negotiation, it seems to be an appropriate form for Lextal for the time being.

6.2 Portfolio models

The above section analyses how the different structures can be applicable to Lextal with certain benefits to offer and some drawbacks as well. However there is a still an area that has to be analyzed, it is the analysis on classification of the parts/suppliers based on the portfolio models.

Therefore the following section will analyses portfolio models in order to see which model or which aspects of each model will be applicable to Lextal.

This section will analyze specific portfolio models in order to classify the materials that are purchased by Lextal. However the portfolio models have more to offer than just product classification. As described in theory, the models also offer ways of classifying suppliers and the approaches that need to be adopted when dealing with different suppliers in different situations. The portfolio models described by both Olsen and Ellram, and Kraljic are designed in three step solutions, i.e. product classification, supplier classification and action plans. For the following analysis the product classification system and supplier classification system from Kraljic and Olsen and Ellram will be analyzed. The reason for not analyzing action plans described by both Kraljic and Olsen and Ellram, is because they are a consequence of the portfolio model chosen.

6.2.1 Product classification models

In this section, the Kraljic purchasing portfolio model and Olsen and Ellram model will be analyzed. The objective of this analysis is to contextualize the information presented by the models. This will be done by analyzing what factors and dimensions are applicable or relevant to Lextal, supported by the empirical information collected from Lextal

Starting with Kraljic's model, his way of using product classification is based on two dimensions, profit impact and supply risks. The dimensions profit impact and supply risk are further based on several other factors. Table 6.6 provides the complete list of the dimensions and the factors they are based on.

Table 6.6: Dimensions of Kraljic's product classification model

Kraljic's Purchasing portfolio model	
Dimension 1	Dimension 2
Profit impact	Supply risk
Factors of dimensions 1	Factors of the dimensions 2
Volume purchased	a. Availability of supply
Percentage of total cost	b. Number of supplier
Impact on product quality or business growth	c. Possibility of substitution
	d. Storage risk
	e. Make or buy possibilities

Then coming to Olsen and Ellram's system for product classification, it is based on the two dimensions difficulty of managing the purchase and strategic importance of purchase. The first dimension i.e. difficulty of managing the purchasing situation is based on the supply market characteristics, environmental characteristics and product characteristics. The second dimension i.e. strategic importance of the purchase basis its dimensions on the supplier's competence, economical factors and also on image factors. The factors on which these dimensions are based are further based on many factors. Table 6.7 provides a list of these factors.

Table 6.7: Dimensions of Olsen and Ellram's system for product classification

Olsen and Ellram's system for classification	
Dimension 1	Dimension 2
Difficulty of managing the purchase	Strategic importance of purchase
Factors of the dimensions 1	Factors of the dimensions 2
Product characteristics	Competence factors
1. Novelty	1. The extent to which the purchase is part of the firm's core competence
2. Complexity	Purchase improves knowledge of buying organization
	3. Purchase improved technological strength of buying organization
Supply market characteristics	Economic factors
1. Supplier's power	1. Volume or dollar value or purchases
2. Supplier's technical and commercial competence	The extent to which the purchase of part of a final product with great value added
	The extent to which the purchase of part of a final product with good profitability
	4. Criticality of the purchase to get leverage with the supplier for other buys
Environmental characteristics	Image factors
1. Risk	1. Supplier critical image/band name
2. uncertainty	2. Potential environmental/safety concerns

Profit impact or Strategic importance of purchase?

The reason for analyzing these two dimensions together is because they both have similarities. The similarities being, that both these dimensions address the economic aspects of business. When viewing the dimension *profit impact* from Kraljic's model it constitutes factors that are similar to the ones under economic factors of the dimension *strategic importance of the purchase* for the Olsen and Ellram model, refer the table 6.8.

Table 6.8: Comparing the economic factors of Kraljic product classification and the Olsen and Ellram's system for classification of products

Kraljic's model	Olsen and Ellram's system for classification
Dimension : Profit impact	Dimension: Strategic importance of purchase
	Economic factors
Volume purchased	Volume or dollar value or purchases
Percentage of total cost	The extent to which the purchase is part of a final product with great value added
Impact on product quality or business growth	The extent to which the purchase of part of a final product with good profitability
	Criticality of the purchase to get leverage with the supplier for other buys

From table 6.8 it can be seen that the first three factors are more or less the same, however the fourth factor "criticality of the purchase to get leverage with the supplier for other buys" is an additional point considered by the Olsen and Ellram model. Based on empirical data this factor is applicable to Lextal, as there are instances when they source from the same supplier for more than one project requirement. In such cases Lextal have achieved reduced prices, based on the business already awarded to the supplier.

Considering the similarities between the two dimensions on the economical aspect, they will be merged into one. With the addition of the factor "criticality of the purchase to get leverage with the supplier for other buys"

Now to discuss the other factors that are listed under dimension 2 of the Olsen and Ellram model. While the Olsen and Ellram dimension strategic importance of purchase also considers supplier competence and brand recognition in addition to Economical factors. When viewing this from Lextal's point of view economic factors are considered as important. However when viewing the addendums of Olsen and Ellram i.e. *competence factors* and *image factors*. The competence factors are important factors for a company to consider. However taking Lextal's situation into account, it is perhaps not the most important factor for the time being. This is because the purchasing organization at Lextal is still underdeveloped and by adding these factors it could complicate their analysis further. However, this should be considered as the purchasing organization gains maturity over the years.

Image factors which constitute "critical image/brand name" and "potential environmental/safety concerns". Out these two factors, brand name is an important factor for Lextal. From empirical

information, Lextal state that in some instances they gain competitive advantages by sourcing a certain material from a supplier who is recognized by the customers. By quoting for the business involving a well-recognized supplier, Lextal achieve a competitive edge. Therefore this criteria needs to be considered important for Lextal's product classification.

Supply risk or difficulty of managing the purchase?

Analyzing the other dimension of the models, which are "supply risk" for the Kraljic model and "difficulty of managing the purchase situation" for the Olsen and Ellram model. There are certain similarities between the above mentioned dimensions. In this case from the Kraljic model it is with reference to the factors under the dimension *supply risk* i.e. availability of supply, numbers of supplier and possibility of substitution. From the Olsen and Ellram's model it is supply market characteristic, which is based on supplier power (refer table 6.9). The object is therefore to merge the factors from both the models as they address the same aspects. With reference to table 6.9, it can be seen that availability of supply, numbers of supplier and possibility of substitution are equated to supplier power. This since supplier power covers all these factors according to Olsen and Ellram's model. Since many of Lextal's supplier are large and also have a big position in the network, the supplier power should be regarded as an important factor for Lextal.

Further Lextal rely on their suppliers for technological knowhow and to know how the purchased items should/could be used. This suggests that the factor of technological competence of the supplier should also be regarded as an important factor. With regards to product novelty and complexity nothing has been identified even in the empirical section to correlate these points to Lextal and the same is observed for the factor environmental characteristics. This suggests that maybe only supplier market characteristics should be regarded as important.

Table 6.9: Comparing the supplier related factors of Kraljic model and the Olsen and Ellram's system for classification

Kraljic's model	Olsen and Ellram's system for classification
Dimension : Supply risk	Dimension: difficulty of managing the purchase situation
	Supply market characteristics
Availability of supply	
Number of supplier	1. Supplier's power
Possibility of substitution	
	2. Supplier's technical and commercial competence

6.2.2 Supplier Classification model

The previous section is an analysis of the product classification model, however Lextal also require a supplier classification model. This following section will analyze how Lextal's supplier classification models should look like based on theory and on the empirical data collected.

Kraljic's classification of supplier is done by viewing the company's strength and comparing it with the supplier's strength. This can be done by viewing the uniqueness of products, barriers to enter a certain market and also by comparing the buyer's purchasing power with the supplier's power. The Kraljic model recommends three strategies based on the supplier/buyer strength *exploit*, *balance and diversify*. The following paragraphs will discuss if these strategies will be suitable for Lextal or not.

The exploit strategy suggests that the buyer should try to induce competition to achieve reduced prices. This strategy is rather opportunistic, and if overused could make Lextal lose its reputation of being a good customer. The strategy results in increasing the stress on the suppliers gradually. According to Lextal they do not believe in squeezing the suppliers for price reductions, at the same time they would also not encourage unacceptable price increases. Lextal would only switch a supplier if they see an unacceptable price increase, not to achieve constant price reductions.

The other strategy suggested is to diversify (which is a defensive strategy), which states that the buyer should accept the conditions of the supplier. This would probably be the situation which Lextal would face if they were to use Kraljic's model for supplier classification, as their supply market consists of suppliers that are larger than Lextal some of whom dominate the market. So adopting a strategy like this would make Lextal more defensive which is probably not the best approach to every situation. Since this could also lead to suppliers being more opportunistic.

The Olsen and Ellram's model of supplier classification is based on the dimensions of *supplier attractiveness* and the *strength of the relationship*. Olsen and Ellram's way of classifying suppliers yields three types of strategies: develop supplier relations, maintain good supplier relations and switch supplier. This classification and the action plans suggested seem to be applicable to Lextal. The motivation for this being that this model deals with supplier relationships, and based on empirical data it is evident that Lextal are a company that believe in long term relationships with suppliers. Therefore by applying this model, Lextal can work towards strengthening their relationship with attractive suppliers.

When viewing the two models of supplier classification it can be argued that Kraljic's model uses leverage to find the solution for how suppliers should be handled. While the Olsen and Ellram model tries to establish who the best suppliers are and how to strengthen the relationship with them.

In terms of which model is applicable to Lextal, it can be observed that Kraljic's model of supplier classification is not suitable. This is because of the fact that Kraljic's model goes against Lextal's way of conducting business, Lextal do not believe in pursuing opportunistic strategies for handling suppliers. Furthermore Lextal typically do not have much leverage in most situations, therefore this model would not help them.

When it comes to the supplier classification model of Olsen and Ellram, this model seems to fit better and is more relevant to Lextal's context. The reason for this is because it facilitates Lextal in recognizing the best suppliers and building relationship with them. Lextal are also seen as a company who works towards long term relations, so this model would serve them well.

However not all of the dimension of what an attractive supplier is, are relevant characteristics to Lextal. The same applies to the factors that which are enlisted for valuing the strengths of the relationship. Therefore an analysis of which factors should be considered for Lextal's case will be examined.

Supplier attractiveness

When viewing Olsen and Ellram's factors for an attractive supplier it is based on the following; economic factors, performance factors, technological factors, organizational, culture and strategic factors and other factors.

Regarding economic factors, Lextal state that it is important that the supplier is financially stable and also that the supplier has experience and scale to be able to supply to Lextal. Since their biggest customers are from the automotive industry, Lextal feel that it would help to work with suppliers who possess experience from that industry.

In performance factors Lextal consider price, quality, flexibility and service delivery as important factors. Further for technological factors, Lextal view the supplier's ability to cope with technological changes as an important aspect. With regards to Olsen and Ellram's factor organizational, culture and strategy, Lextal view trust and the strategic fit between the Supplier and Lextal as important factors, added to that Lextal views general risk of supplier as something important.

Table 6.10: Lextal adaptation of Olsen and Ellram's dimension of attractive supplier

Attractive supplier

Economical factors

- · Financial stability
- Experience and scale to supply

Performance factors

- Price
- Quality
- Flexibility
- Service delivery

Technological Factors

Ability to cope with technological changes

Organisational, Culture and Strategy.

- Trust
- · Strategic fit between the supplier and Lextal

Other factors

General risk

Strength of the relationship

When reviewing what are important factors, for valuing the strength the relationship. The economic factors that are of importance to Lextal are volume or value of purchase. Further in economical factor, there is a belief that the importance of the buyer to the supplier is equally important. Since it indicates how keen the supplier is to work with Lextal.

When viewing the character of the exchange relationship, Lextal think the type of exchange is an important factor. Lextal also state that the number of exchange (social, transaction, etc.) and the level of personnel contact as contributors for creating a strong bond.

Further Lextal believe that social and cultural distances are factors which can affect the relationships on unit level.

Table 6.11: Lextal adaptation of Olsen and Ellram's dimension of strength of the relationship

Strength of the relationship

Economical Factors

- · Volume or value of purchase
- · Importance of the buyer to the supplier

Character of the exchange relationship

- · Types of exchange
- · Level and number of personal contacts

Distance between the buyer and the supplier

- Cultural distance
- Social distance

7 Results

In the analysis, the various purchasing structures and models have been analyzed. As stated the purpose for analysis was to mainly contextualize the theory using the empirical information collected from Lextal. By doing this the thesis was able to recognize factors and aspects that are applicable to Lextal. Based on this, the result section of this thesis will continue to propose both a structure and a portfolio model that is specifically applicable to Lextal, and also answer the research questions that were initially posed in this thesis.

In the problem analysis two research questions were proposed. The aim of this section is to answer those research questions.

RQ1: Based on the benefits and disadvantages offered by different types of purchasing structures, what kind of purchasing structure would be suitable for Lextal?

RQ2: Based on selected product/supplier classification, what kind of purchasing portfolio models would be applicable for Lextal and how should Lextal use them

7.1 Structure

In this section RQ1 will be answered.

This section will not only propose a structure for Lextal but will also include suggestions addressing allocation of resources, the split of work between the facilities and what activities will be centralized and decentralized.

7.1.1Proposed purchasing organization

The central and decentral structures when applied to Lextal, offer some advantages but are outweighed by the drawbacks associated. Based on analysis of the different structures the line staff form of hybrid purchasing structure seems to be an appropriate form for Lextal. However with line staff form it is observed that the current drawbacks with the way the purchasing is handled at Lextal are not completely overcome, i.e. concerns with negotiation power. In order to overcome this set back in line staff form, it is proposed that the center also perform negotiations on behalf of the entire group thereby making it a central activity in Lextal.

Further Lextal state that there is a need to have a function that can overlook everything and handle all strategic tasks. In order for the function to have an overview, it is recommended that this function be centralized as well.

Therefore the structure proposed for Lextal will be as presented in figure 7.1.

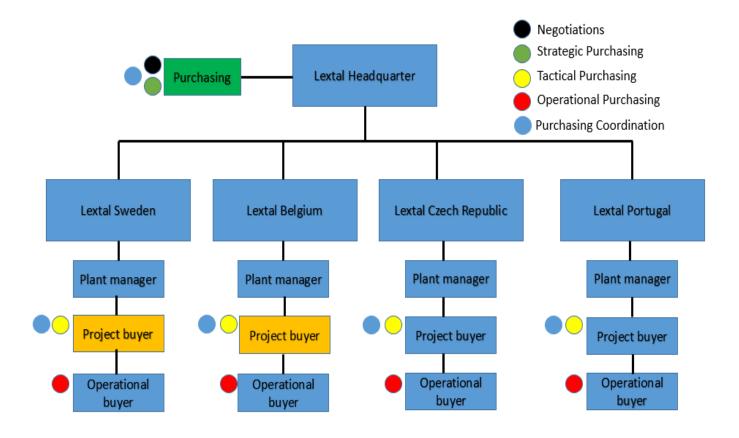


Figure 7.1: Proposed purchasing structure for Lextal

Based on figure 7.1 the roles, resources and responsibilities will be explained. The following section will be supported by theory from structure.

Note: With respect to the organization proposed all boxes in blue represents roles that currently exist in Lextal, while the box in green are roles proposed based on this research. The boxes in orange are roles that Lextal plan to introduce.

Roles and Responsibilities

Centre - Headquarters

Strategic Role

It is recommended that either one or two personnel be added to the purchase function at the headquarters, based on the work load (with reference to green box in figure 7.1). The motivation behind suggesting this is, because there is a lack of both time and personnel at Lextal now. With this addition the senior personnel at Sweden and Belgium would have more time to focus on other activities, while at the same time purchase related activities which were previously performed by them will now be performed by the new additions.

The role would mainly work on strategic aspects in close collaboration with the senior managers both in Sweden and Belgium. The strategic aspects will further be explained in detail later.

Responsibilities

The center will be in charge of establishing procedures and also help out with negotiations, mostly activities that are more strategic in nature. Apart from that they should also facilitate coordination between all the units, especially in the area of supplier selection. The activities proposed below are supported by theory from the section titled structure. The activities listed are all strategic in nature and are long term

Procedures: should be drafted for sourcing process to be followed, supplier relation management process, the application of portfolio models, supplier evaluation. This is motivated by the need for a consistent process throughout Lextal which is not established as yet.

Negotiations: the center should support in negotiations involving large suppliers and customers. These negotiations would also involve contracts with preferred suppliers. Further the center should assume more responsibilities with directed suppliers, to gain more favorable agreements.

Coordination: The center should not be involved in tactical activities, but it should ensure that coordination takes place by facilitating in areas such as supplier selection for standard parts and information sharing. This should be done in order to increase synergy potential between the units. Support: The center should provide support to the local units when required. The support includes, providing necessary advice concerning what should be done when there are new suppliers/products involved.

Decentral - facility/unit level

Tactical roles

With regards to the project leaders, this is a good idea according to Lextal and it is also observed from this thesis that the role of project leaders relieve the plant managers of some responsibilities by carrying out important activities, such as receiving requests from customers to prototyping. The plan of Lextal to add a project leader both in Belgium and Sweden are considered a good move and are supported by this thesis.

With regards to the role of project leader there is no change suggested. However in the case of Belgium and Sweden it is seen that the plant managers still carries out the tasks that a project leader typically carries out in Czech Republic and Portugal. With the introduction of project leaders in these facilities it should allow these plant managers to focus more on their plant related responsibilities.

Responsibilities

The tactical activities are medium terms activities. The activities that should be carried out by the project leaders are the functions that the project leaders are performing currently at Lextal. Some of these activities are supplier selection. Working with suppliers and customers when there is a new project that requires sample collecting, specifications and etc. However it should be ensured that the all actions and decisions such as supplier selection are guided by the procedures set at the center and that they help in achieving the strategic objective. Any deviation, with regards to the procedures concerning supplier selection should be approved by the center. For example if there is a need to select a new supplier instead of an existing group supplier.

Operational roles

With regards to the operational activities as seen in the empirical section, the individuals handling these activities are referred to as customer care at Lextal. They are present in every unit, their main responsibilities include sending out purchase orders. According to theory there are many more activities that are undertaken at the operational level.

Responsibilities

In Lextal the people working at the operational level who work instructions that support with their daily work. The daily work includes dealing with purchase orders. Based on theory the following are the activities that should be performed by the personnel in the operational role are, expedition related to purchase orders, troubleshooting: solving daily problems on quality, supply and payment. Other responsibilities related to operational level are monitoring and evaluation of suppliers. Some of these tasks are currently performed by Lextal and each performed by a different department, this in reference to the empirical data. Where each delivery from the supplier is tracked and a report is sent to the supplier. However it is important that the conditions negotiated with the supplier prior to business are agreed upon. Conditions such as quality claims, damage during transportation. With these condition agreed upon it will be easier for the individuals at the operational level to work with the suppliers in resolving these issues.

Regarding the subject of who should handle these activities the researcher's believe that it works well presently and therefore there is no need to change this.

7.2 Portfolio model

In this section the second research question will be answered RQ2. This section will start by explaining how Lextal's product classification model should look based on the analysis of the Kraljic model and Olsen and Ellram classification model. The second part of this section will describe how Lextal's Supplier classification model should look. This section will also describe how Lextal should handle their suppliers based on how they are classified.

7.2.1 Product classification model

Based on the analysis the dimensions proposed for Lextal will be as follows. The first dimension will be called as "importance of purchase" and the second dimension will be "supply market characteristics". With reference to table 7.1, under the dimension of supply market characteristics the following factors should be considered. Supply power, supplier's technical and commercial competence. Under the dimension of importance of purchase the following factors should be considered. Volume purchased, percentage of total cost, criticality of the purchase to get leverage with the supplier for other buys, and supplier critical image/brand name.

Table 7.1: Proposed factors for Product classification

Lextal's system for product classification	
Dimension 1:supply market characteristics	Dimension 2:Importance of purchase
Factors of the dimensions 1	Factors of the dimensions 2
Supplier's power	Economic factors
Supplier's technical and commercial competence	Volume purchased
	Percentage of total cost
	Criticality of the purchase to get leverage with the supplier for other buys
	Image factors
	Supplier critical image/band name

Based on the above mentioned dimensions the purchased materials should be categorized as having a low/high importance of purchase and high/low supply market characteristics. If a product has a high importance of purchase and high supply market characteristics, then the product should be regarded as strategic as can be viewed in figure 7.2. If the purchase is viewed as high importance of purchase and low supply market characteristics, the product should be viewed as leverage product (which can be viewed in figure 7.2). If a product has high supply market characteristics, but is regarded of low purchasing importance. This product should be viewed as bottleneck

product. If both importance of purchase and supply market characteristics are low then the product should be viewed as non-critical.

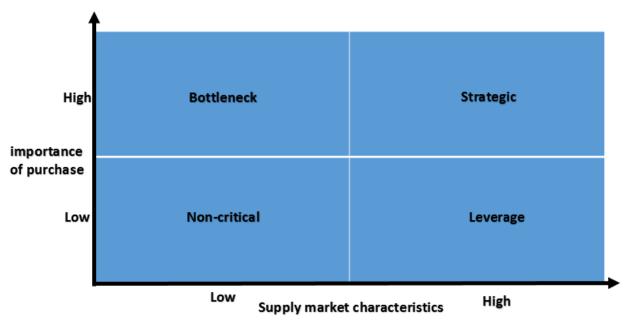


Figure 7.2: Product Classification for Lextal

As for how the products should be handled based on if it is a strategic item, leverage, bottleneck or non-critical, this thesis suggests that these should be handled as Olsen and Ellram (1997) recommends i.e.

Strategic category: the company should view the suppliers in this category as close collaborators and having a close relationship with them should be the most important factor. Other aspects that are important are early joint product and service development, keeping a long-term value approach of the suppliers and also lowering poor performance costs.

Leverage category: in these cases the buying company should identify value added from these products and leverage volumes across units and suppliers. This in order to achieve low prices. For this category of products lowered costs is the most important factor.

Bottleneck category: for these type of products the company should try to standardize the products and/or substitute them for other products.

Non-critical category: This category is best managed through standardization and consolidation, the company should reduce the number of suppliers and duplicate products and services.

7.2.2 Supplier classification model

The previous model explains how Lextal should classify their products, based on how they should manage each product. The next section will propose a model which Lextal can use to evaluate their suppliers and help them decide a course of action based on their evaluation.

Figure 7.3 is an adaptation of the Olsen and Ellram model, however not all the factors of the Olsen and Ellram model are considered for this thesis. In the analysis the dimensions of relative supplier attractiveness in the model have been contextualized to what Lextal consider attractive in a supplier. Also what factors Lextal consider important, when judging the strength of the relationship between themselves and a supplier. Based on these two dimensions it is proposed that Lextal use the following three by three matrix as suggested by Olsen and Ellram (1997).

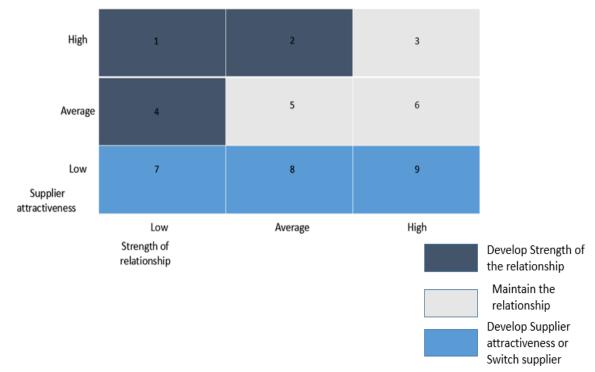


Figure 7.3: Proposed Supplier Classification for Lextal, with action plans

Action plans

Based on which cell in the model the supplier is, this thesis suggests three main action plans as can be viewed in figure 7.3. To summarize the objectives of these three action plans are *develop* the strength of the relationship, maintain the relationship and develop supplier attractiveness or switch supplier.

Develop the strength of the relationship

If a certain supplier ends up in cells 1, 2 and 4 in figure 7.3 the plan of action for Lextal should be to develop the relationship, this can be done in several way e.g. to increase purchasing volume or value of purchase. Other examples of how this can be done is by increasing the level and number of contacts between the buying company and the supplier.

Maintain the relationship

For the suppliers which end up in cell 3, 5 and 6 in figure 7.3, Lextal's plan of action should be to maintain the relationship. This should be done by continuing to do what is currently working for these types of relationships.

Develop supplier attractiveness or switch suppliers

If the supplier ends up in cells 7, 8 and 9 in the figure 7.3, the plan of action which is proposed for Lextal is either to try to develop the supplier attractiveness (if the supplier is critical for Lextal's business) or to switch to a more attractive supplier. The attractiveness could be increased by negotiating for better prices, help the supplier to achieve the required quality levels and negotiate better service delivery terms. Also by being more open to supplier and bond with the supplier to establish a higher level of trust.

8.0 Disclaims.

When doing this case study it has been realized that the case study has been isolated to Lextal and not enough information has been gained with regards to Lextal's suppliers and customers. This has given the thesis a one sided view of Lextal, which in turn has led to a one dimensional view of the buyer-supplier relationships. Further, this has affected the section regarding supplier classification model. To be specific, it has affected the dimension "strength of the relationship". Where the factors for establishing a strong relationship have been viewed from one side. Lextal will probably have to add more factors in the future, once the portfolio model is established and more experience has been gained.

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