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Measuring purchasing performance

A case study at a forest company

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Supply Chain Management

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ABSTRACT

The role of purchasing has changed from an administrative and supporting role to a crucial strategic part of the business that affects the overall performance of the organization, mainly due to globalization and the competitive environment organizations operate in today. To enable purchasing performance and effectively contribute to the company's competitive advantage it is crucial that an alignment between strategies at various levels exists. To be able to measure performance, key performance indicators are commonly used to evaluate a functions contribution to the overall company's performance.

The case study will focus on the alignment of strategies from a holistic corporate perspective down to purchasing strategies, purchasing practices and the measurements needed to evaluate their performance. The study was conducted at the purchasing organization of Södra Skogsägarna in Växjö. A case study approach was used since the report focuses on creating an internal knowledge and awareness in a specific context within a purchasing department. Empirical data were gathered by interviews from purchasing management and top management. An abductive approach was used, mainly because of the way the theoretical and empirical data were gathered. To further increase understanding and trustworthiness, two additional case companies were selected and interviewed. When comparing the theory to the empirical data a misfit was discovered. It revealed a lack of strategic alignment within measurement system.

The study clearly states the importance of strategic alignment between the various levels within an organization. The importance of a well formulated, communicated purchasing strategy directly aligned with corporate and business strategies is crucial for setting key performance indicators. Therefore, without the strategy, the KPIs will lose its role and importance.

Conclusively the analysis of the report clearly states that a lack of strategic alignment directly affects the performance of a purchasing department. As a result, the purchasing KPIs used in the case company, did not fulfill their role as a tool to develop the purchasing performance according to the corporate strategy. Thus, several recommendations are stated mainly regarding their strategic alignment and the need for a clear connection from strategies to KPIs.

Keywords: Purchasing, purchasing performance, purchasing performance measurement system, PPMS, strategic alignment

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1. INTRODUCTION

This chapter provides the reader with a brief background to the problem. The problem and the background are formulated into an aim with a corresponding research question to help achieve the aim of the thesis.

1.1 Background

Ubeda et al. (2015), argue that the role of purchasing has changed from an administrative and supporting tool to a crucial strategic part of the business that affects the overall performance of the organization. While the organization itself only focuses on its core competencies the role of purchasing is now to manage external resources in order to create incentives for innovation and reduce costs. Thus, the specialization and the ongoing globalization have affected the role of purchasing in terms of increased volumes sourced and the overall value that purchasing management adds to the company.

To enable purchasing and supply management to effectively contribute to the company's competitive advantage it is crucial that an alignment between strategies at various levels exists. Thus, the purchasing strategy developed must have a direct connection to the overall corporate strategy. The purchasing strategy then needs to consider the corporate strategy while setting up purchasing practices and KPIs to measure the performance of these practices (Baier et al., 2008).

The overall competence within purchasing, the level of the strategic integration and alignment is key when determining the impact of purchasing on the overall corporate success. Research within this field have established that a mature form of purchasing performance measurements can assist as a mean to establish a prominent level of functional strategic integration. (Pohl & Förstl, 2011). Businesses must operate in a highly dynamic environment, filled with competition and price pressures. As a result, organizations are dealing with several Key Performance Indicators (KPIs) in different areas. This have made the topic of KPIs an interesting field for scholars. Focus has been set to enhance the traditional methods, and the forming of innovative approaches to this method (Shahin & Mahbod, 2007). For productivity improvements, setting targets and feedback are two major factors that have been proven to give result. Theory within this field suggest that challenging and specific goals results in higher performance compared to moderate or easy attainable goals or no goals at all. To reduce risks in goal setting, there should be prioritizing of KPIs based and viewed as a multi-criterion, decision making-problem (Locke & Latham,2002).

This report will focus on the alignment of strategies from a holistic corporate perspective down to purchasing strategies, purchasing practices and the measurements needed to evaluate their performance. However, the exact KPIs needed will not be provided but instead the process of developing the KPIs will be described. The report will exclude the organizational structure and its effect on the performance. The outcome could be considered applicable in the general case.

1.2 Aim

The aim of this study is to define how the performance measurement system should support reaching the functional strategy based on an overall corporate strategy. There will be focus on

the relation between corporate strategy and the breakdown to functional strategies within purchasing and how this aids a good purchasing organization. It will contribute to an understanding of how to evaluate the purchasing performance by using diverse measurement systems directly connected to the diverse purchasing practices of each individual group within the purchasing organization.

The project contributes to a deeper understanding as well as a conclusive analysis of the most important measurements and considerations in the purchasing department in a company operating in the forest industry. The report also aims towards creating an understanding of how an efficient purchasing organization looks like and what targets should be set to improve the performance.

The outcome of the paper includes a clear description of how to align the purchasing strategy to the overall corporate strategy but also tools of how to develop and evaluate key performance indicators. It should also describe how to setup targets that helps the organization to improve its performance as well as a description of how the department should be governed by the purchasing directors.

To enable these contributions the following question will be answered:

- How should the purchasing targets and performance measurements be defined to measure the actual performance?

1.3 Delimitations

This report excludes the actual development of a purchasing strategy and the detailed design of a new purchasing performance measurement system. Thus, only focusing on the processes and necessary components to enable a development of the purchasing performance measurement system.

2. RESEARCH METHODOLOGY

In this chapter the reader will get an insight in what methodology that was selected for this thesis to be able to answer the research question and to be able to fulfill the purpose of this study. Each selected method will be summarized to ensure an understanding what process where used to answer the question. Following this, the method of gathering data and the analyzing method are presented. Finally, this section will include a discussion regarding the validity and reliability of the thesis.

2.1 Research Method

According to Bryman & Bell (2015), a case study is an approach that is commonly used for business research and provides the researcher with great knowledge within a specific field. This approach is suitable when there are several observations, parameters and concepts involved as in this study, whereas the aim is to improve a specific content. Yin (2014), describes a case study as an approach most suitable to answer research questions beginning with "how" or "why". To ensure a good quality of the report Saunders et al. (2016), encourages the authors to use both qualitative and quantitative research as well as multiple methods for collecting data to get the best possible perspective of the area researched. Denscombe (2014), further describes the case study approach as a method used to either empathize the value of a theory by showing how it works in the reality or to try how the particular theory works in the specific conditions defined by the case study.

A case study approach was used since the report focuses on creating an internal knowledge and awareness in a specific context within a part of the organization. The study consists of one main case company and two additional case companies that were partly focused on in the report. Thus, collection of data from multiple sources was performed to improve the reliability of the research.

There are multiple methods and paths to choose when gathering information and analyze the data. To categorize the collected data, two main approaches were used: quantitative and qualitative (Jacobsen & Thorsvik, 2002). The quantitative approach is structured in its way and therefore based on numbers, figures and statistics whereas the qualitative emphasizes observation, words and verbal formulation.

Holme & Solvang (1997), emphasizes that all methods are in fact useful and quantitatively and qualitative can be used together in the same study to ensure a good result, hence their different qualities.

To fulfill the aim of our report a mix of quantitative and qualitative researches were used. The quantitative research method included measurements of the purchasing department as well as collection of documentation related to their financial results and a balanced scorecard explaining their current objectives. The qualitative analysis was used in interviews with Södra and the other companies to establish an understanding of the internal knowledges and the processes performed to reach the objectives.

2.2 Research approach

The process of using theory in a research can be divided in two diverse approaches: inductive and deductive. Researches within this field explains that the difference between these

approaches lies in the degree of knowledge of what theories to be used from the start, or the degree of relationship between theory and research (Bryman & Bell, 2015).

When theory and hypotheses are developed from the start and then are to be tested, this implies that the approach is deductive. On the contrary when the approach has the starting point in gathering empirical data that are to be analyzed and developed in to theory, it is inductive (Bryman & Bell, 2015).

To complement the two main approaches a third approach, that provides a less static way, whereas it can be seen as a combination of deductive and inductive. It goes back and forth between theory and empirical data, and is called abductive approach (Dubois & Gadde, 2002).

The approach that are used in this study is abductive. Mainly because of the way the theoretical and empirical data were gathered. Since the process includes both a deductive approach, where the company’s current state is the initial framework for collecting data from the start of the research. Further the empirical data was gathered and then corresponding theory where used as a basis for comparison. It generated a situation that resulted in an abductive approach.

2.3 Research process

The overall process (visualized in figure 1) of this study has been divided into separate phases, starting with defining the scope. After this empirical data and literature were gathered in parallel to enable a direct comparison. Further, the analysis was conducted and based on that a result was established.

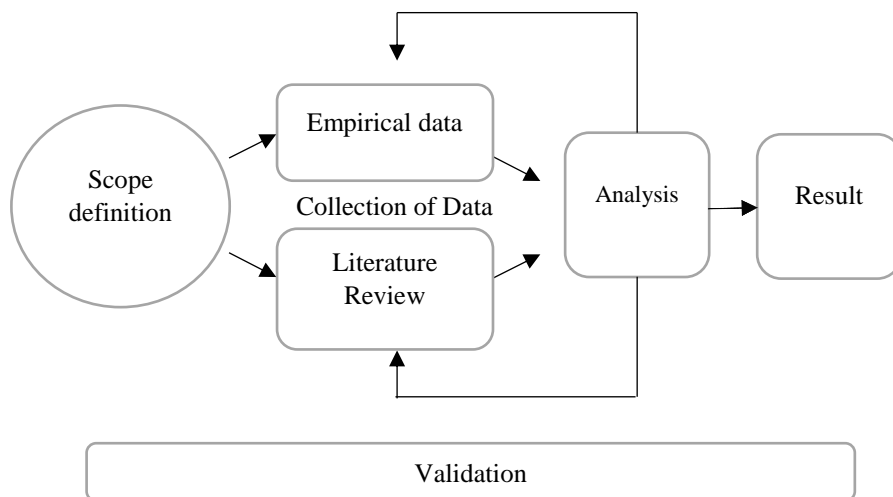


Figure 1. Research process

2.4 Data Collection

The collection of data can be either primary or secondary. Primary data is defined as the data that is collected directly by the authors. Secondary data is the data collected by any person other than the author (Bryman & Bell, 2015). Thus, primary sources have been used in terms of interviews while the secondary data was collected by literature review and internal documents.

To ensure the highest possible quality on the data collected, the collection methods were chosen carefully. There are multiple sources that are stated preferable in different situations.

The method is to some extent determining the trustworthiness of the entire research since it implies that some data is systematically sorted out. The type of data sorted out is determined by the choice of collection method (Bell & Waters, 2016).

2.4.1 Literature Review

A literature review was performed to get an understanding on the specific industry and what implementations that could be made to improve the performance. Literature was acquired through online databases and through reviewing of physical books and articles, mainly from the Chalmers Library, but also google scholar or other relevant providers. To narrow the search down, a few keywords were used during this process, the most commonly used were: Purchasing strategies, Strategic alignment, Purchasing performance, Performance measurements, and Key performance indicators. The theory chapter is based on our interpretations on the literature analyzed. Since the chapter is based only on secondary sources the process of selecting sources has been crucial to ensure trustworthiness of the research. The sources have been compared with other sources within the area to minimize the risk of biased sources.

2.4.2 Interviews

The main source of data was qualitative interviews. The interviews were held with as semi-structured technique. The questions were focused on the area that were to be investigated, but were open, so discussion could occur and both topics and information that in other scenarios could have been neglected were able to prevail. According to Bryman & Bell (2015), the semi structured interview allows the subject to elaborate on questions while the interviewer can ask unprepared question and hence gain more information within the topic.

Qualitative interviews were carried out in order to establish an understanding of how the different departments within the purchasing organization operated and what criteria that was crucial for them to improve their operations. Interviews were carried out with all purchasing managers to understand the processes performed, how their work affected the KPIs, and whether the present KPIs was the most accurate for them. Further interviews were carried out with top management to understand the corporate strategies and its alignment with the business areas strategies. The questions were initially general, but as the researched moved on the researchers were able to narrow the questions down. The interviews conducted are showed in table 1.

To understand how other companies within the forest industry deal with issues regarding KPIs and its alignment with overall strategies, interviews were conducted with direct competitors. These interviews are showed in table 2. These two companies where selected due to their position in the forest industry where they are two of the major players.

Internal Interviews

Company	Position	Date	Duration
Södra	Purchasing manager IMS	05-feb	56min
Södra	Purchasing manager Transports	06-feb	1h 10min
Södra	Purchasing manager Commodity goods	05-feb	57min
Södra	Purchasing manager Operational	06-feb	56min
Södra	Purchasing manager Investments	27-feb	58min
Södra	CPO	28-feb	40min
Södra	CFO	27-feb	53min

Table 1. Internal interviews

External interviews

Company	Position	Date	Duration
Company A	CPO	23-mar	30min
Company B	Development Manager	17-apr	30min

Table 2. External interviews

All questioners for the interviews are to be found in the Appendix.

2.4.3 Internal documents

Historical data and present agreements were collected to create a present state. These were used to understand how the organization was governed and what they placed focus on when negotiating new terms with suppliers. The data collected is categorized as secondary data. This method is efficient since it gave the opportunity to understand the development of the role of purchasing within the organization as well as it is a quick way to get hold on a lot of information that otherwise would have had to be done by interviews or thorough investigations.

2.5 Data Analysis

Data analysis was carried out in two phases. The first one being understanding the current state and issues and divide them in various categories according to the research question. The second phase focused on analyzing the potential implementations and finding out how they would affect the organization.

The current state was analyzed by comparing the collected empirical findings, both qualitative and quantitative data with the literature reviewed during the entire project.

The potential implementations and its effect was analyzed by comparing the empirical data to the implementation possibilities and the theoretical framework to understand what changes the implementation would imply.

The empirical data were collected mainly through interviews with Södra and two external companies, but also by internal documents. The interviews were transcribed, and some statements were confirmed by email afterwards.

2.6 Trustworthiness of the Methodology

To ensure high quality and accuracy the study has, during all of its process been evaluated in its trustworthiness. Throughout the process the reliability and validity has been continuously evaluated which is described further in this chapter.

2.6.1 Validity of the Methodology

Both internal and external validity were considered throughout the entire process. Bryman & Bell (2015), explains internal validity as how well a study does correlate with the already existing theoretical ideas and knowledge within the field. Internal validity was established by continuously discussing the findings with the supervisor and the company to ensure that the findings were comparable and applicable in the focal company.

Further Bryman & Bell (2015), explains external validity as how well the methodology could be considered general, hence be able to use in other context than the case study. But they also emphasize the problems with generalization during a case study, hence the context of the focal company is the main focus. Since the research focuses primarily on the specific organization the validity can only be considered moderate. The findings are not necessarily applicable in other companies or industries. The focal company has been the major influences which implies that the study has been performed to improve a specific situation. Since the research focuses primarily on the specific organization the validity can only be considered moderate. The findings are not necessarily applicable in other companies or industries. The focal company has been the major influences which implies that the study has been performed to improve a specific situation.

2.6.2 Reliability of the Methodology

Reliability of a methodology are the discussion regarding the likelihood of a similar result obtained if the study where to be conducted again (Bryman & Bell, 2015). To ensure the reliability of the study, all the gathered data have been documented. Another method used to ensure reliability is the process and time table that have been followed. The interview subjects were carefully selected within the case company. To further increase the reliability of the study two competitors within the same industry were interviewed.

Regarding the semi-structured interviews, a template was used, so it can be used again to reach the same conclusion. There could be some biases when interviewing personnel, to minimize that risk, several interviews were conducted with persons of various levels within the organization. There were also follow-up emails and discussions about the results to confirm the gathered data.

2.7 Ethical considerations

Ethical concerns lie in every researcher's responsibility when conducting a study and is seen as a topic that every reliable and good study should contain. Research ethics focus on the sustainability of the actions taken thru the study regarding participants and other factors that could be influenced (Bryman & Bell, 2015).

During the study the authors protected both the case company, the employees, the interviews and all other factors for empirical data. When interviewed, participants could choose to be both anonymous or not to be recorded. Documents that could include sensitive information were also blurred or made anonymous to ensure that no confidential material where leaked.

When contacting companies to gather data, the researchers were clear to present the scope of the research and explain that it was a case study from a given company. In that way no companies were deceived to hand out information they would not have done in other cases. Especially for the companies in direct competition with the focal company.

2.8 Summary of methodology

Figure 2 describes the methodology applied to fulfill the aim of this report. The choices were carefully made to ensure the reliability of the report by using the methods most suited for this case study. The report is divided into four major phases to provide the reader with information necessary to understand the process throughout the report.

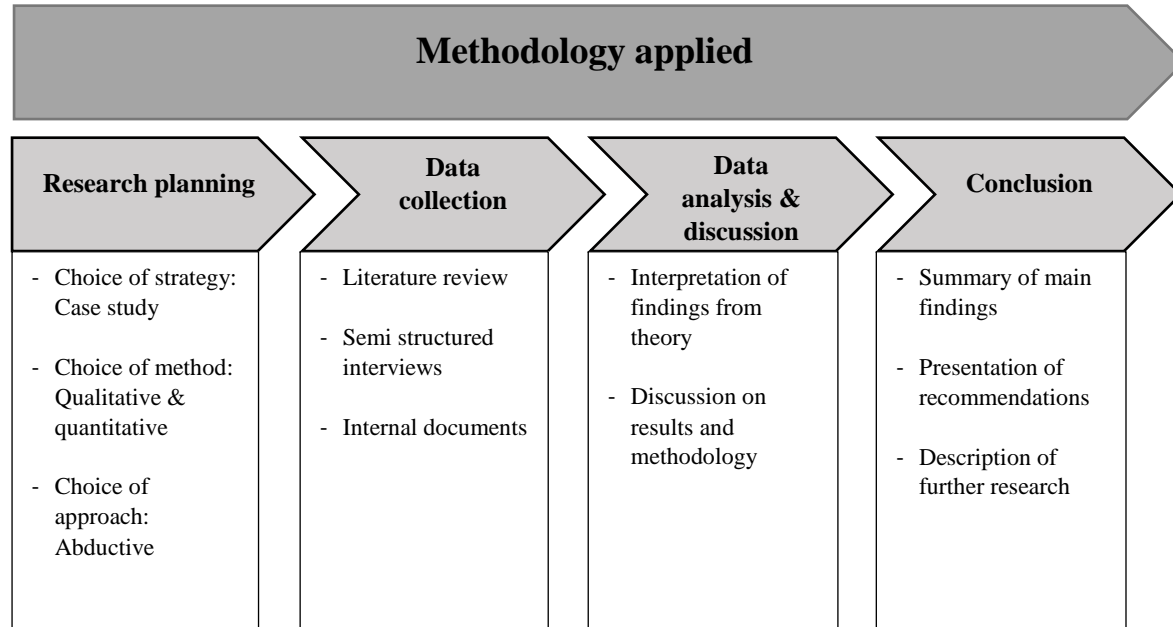


Figure 2. Methodology applied for each phase

3. THEORETICAL FRAMEWORK

This chapter will describe the theory used in this research. The chapter includes three main sections being theory to describe the current state of the purchasing organization, theory on the alignment of strategies and how to design the purchasing strategy, and theory describing the framework of developing a measurement system with corresponding KPIs. The theory chosen has been crucial to enable a thorough analysis of the current state and its improvement areas and have been carefully selected to ensure good quality.

3.1 Current state of a purchasing organization

This section describes how literature classifies the current state of a purchasing organization in terms of maturity, managerial view, and structural characteristics. This literature is used to establish an understanding on the level of progress within Södra’s purchasing organization and its function within the organization.

3.1.1 Development model

According to Van Weele (2014), the professional development of the purchasing organization can be described from multiple aspects or angles. However, the most frequent discussed development models argue that a step-by-step wise perspective of the development is the best way to describe the process. Thus, the purchasing and supply development model was established to explain the progress within purchasing and supply management. The model is supposed to guide purchasing managers to professionalizing their strategies and the organization. The model is divided in the following six steps showed in figure 3 and described further below.

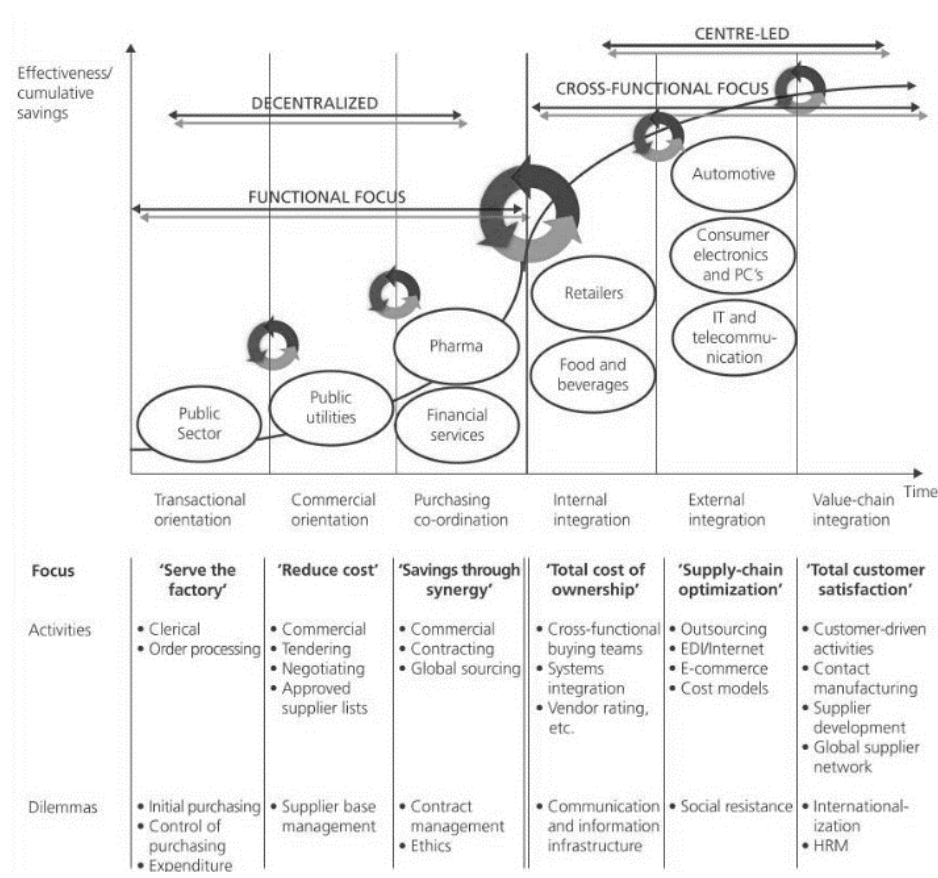


Figure 3. Purchasing & supply development model (Van Weele, 2014)

1. Transaction orientation: serve the factory

The primary task in the first stage is about ensuring that the company processes do not run out of raw material. This is done by finding appropriate suppliers who could supply the company needs. In this initial phase there is no existing explicit purchasing strategy and the targets are very primitive. The function of the purchasing organization is described as finding the right material for production, this is also what is considered as their contribution in terms of value-adding. The organizational structure can often be described as a decentralized sub-department that reports mostly to production or logistics. The purchasing activities are characterized by operational and administrative work. Products not used in production are considered secondary and not important and these purchases are often performed by the user itself. The total purchasing spend is unknown and the culture is based on reactions. Success is based on complaints whereas no complaints implies that the organization is doing a good job. The information system in place, if any, is administrative oriented and developed by purchasing. The staff is strongly supply-task oriented and has little professional knowledge, qualifications and experience within the field (Van Weele, 2014).

2. Commercial orientation: lowest unit price

In this stage a forward-looking purchasing manager is recruited, equipped with negotiation skills to ensure lower prices. The purchasing organization is independent from functions such as product development, engineering, and manufacturing. As a result, the purchasing strategy focuses primarily on reducing cost and achieving low prices. The purchasing function has its own department and are interested in the savings added to the bottom line by the purchasing department. Purchasing function are developing into a specialist function while the buyers organizes themselves around different product groups. The buyers are now focusing on negotiation and contracting. The culture evaluates performance by low prices and saving. Thus, giving incentives to buyers to play hard negotiations with multiple suppliers to maximize the savings. Cost savings is the primary performance measurement and is the primary indicator for the purchaser's effectiveness. Other primary measurements are variances in price, cost savings, and delivery performance from suppliers. Purchasing staff consists of operational and tactical buyers with some experience with the most important criteria of skills in negotiation and the ability to comparisons between supplier prices (Van Weele, 2014).

3. Co-ordinated purchasing

A strong central purchasing department implements buying policies and systems. The focus lies on cross unit collaboration and compliance with national contracts. This stage may lead to purchasing bureaucracy and lack of responsiveness in the decentralized business areas. There is a strategy formulated to emphasize the use of collaboration and synergy effects. The purchasing unit is now also focusing on increasing the quality on the products other than the earlier focus on price and cost. Purchasing are realizing the importance of non-production buying. Top management are starting to give attention to the purchasing department and their work, but the rest of the company are not convinced of the value-adding services provided by the purchasing department. The supplier management is central and often synergies are realized by categorizing the purchasing power of the different suppliers and developing differentiated supply strategies with various portfolio-analysis strategies. The centralized purchasing organization at corporate level is characterizing this stage by handling purchasing polices. Purchasing procedures and processes are developed and formalized and is considered

a primary priority. However, the purchasing is still very focused on products. Focus lies on improving the communication between the corporate leveled centralized purchasing and their decentralized business units, and the ambition is also to improve the collaboration among the different business units. Computerized information systems are developed and in use. However, they are not linked together with other units. There is a large variety of purchasing jobs in place and the staff has specific background and knowledge within the area. Staff training are used to improve analytical skills, TQM (total quality management), and communication skills (Van Weele, 2014).

4. Internal integration: cross-functional purchasing

At this stage the focus lies on solving problems with a cross-functional approach. The objective has shifted from being focused on reducing unit costs to reducing total lifecycle cost. Key suppliers are involved in the cross-functional efforts to deal with problem solving within areas that is of common interest. This implies that the organization is moving from confrontational sourcing towards partnerships. Up till this stage the purchasing organization is orientated around its own function, thus, trying to be the center of the company and make the other parts adjust to them. Now, a process-oriented purchasing is developed, trying to organize the purchasing function around the internal customers or the business units. Emphasis is put on the non-production purchasing. The strategic perspective now involves purchasing and purchasing are part in strategic decisions such as core/non-core discussions and make- or buy decisions (Van Weele, 2014). The structure is now center-led, implying that a group is responsible for supply chain strategies, strategic commodities, best practices, and knowledge sharing while leaving individual buys and tactical execution to the individual business units (Stephens, 2005). Operational buying is integrated with material planning, scheduling, or line planning electronic systems. The culture and the management are now team-based with multiple cross-functional buying teams. Emphasis is put on harmonizing and integrating the processes in the different business units. The focus is process oriented but still only internally. Other departments are integrated in the information system. However, the strategic suppliers are yet not integrated. Customer satisfaction surveys and benchmarking are done and forms the base for the purchasing performance measurements. However, a strong focus is still on realizing cost savings. The staff now has a strong strategic knowledge and a broad business perspective as well as high educational level. Requested skills are team-building abilities and communicational skills (Van Weele, 2014).

5. External integration: supply-chain management

A straightforward outsourcing strategy and an improved collaboration with supply chain partners are what characterizes this stage. The collaboration focuses on production development and preproduction planning. The purchasing function is primarily focused on utilizing the external resources in a way that maximizes leverage towards competitors. Suppliers are actively involved in process improvements and visits the company often. Non-productions buys are either executed by the purchasing function or have their full support. Users order their need from contracted suppliers by them self by a high level computerized system. Purchasing focuses on easing the process for the internal customers by using systems contracting, purchasing cards, electronic business and catalogues or EDI. Supplier management transforms to supply chain management and the company makes investments to involve suppliers in their processes. The responsibility for initial purchases are now moved

from the individual department to cross-functional teams. Engineers from the suppliers are co-located at the organization are working with multiple disciplines and departments to improve the processes. Thus, integration with suppliers is at full speed. Management is performance and business oriented while coaching. The culture can be defined as participation and unity when making decisions. Knowledge of TCO (total cost of ownership), ability to build advanced cost models, strategic supply chain management, and leadership are features preferred among the staff. Information systems are integrated with partners (Van Weele, 2014).

6. Value-chain orientation

The purchasing strategy is now based on the awareness that maximal success comes from delivering value to the end customer. To satisfy their need, sub-contractors uses help from their suppliers. Suppliers are constantly required to support the company's product and market strategy and are actively involved in product development based on this. The target is to design the value chain in a way that serves the end customer to maximal extent. Suppliers also get challenged to the company's top line by i.e. increase sales by new business development. Purchasing strategy is implemented in the overall business strategy. Traditional marketing and purchasing functions are integrated. The functioning of the purchasing organization is a shared vision agreed by all members within the organization. There is an entrepreneurial culture existing in the company. Information systems are integrated to its maximum level (Van Weele, 2014).

3.1.2 Purchasing's role within an organization

According to Van Weele (2014), a factor that influences the measurements used are managements view of the purchasing functions. The following views could be held towards purchasing:

- **Operational, administrative activity-** Management evaluates purchasing practices on parameters such as administrative lead-time, order backlogs, the number of orders issued, number of requests for quotations issued, number of complaints, number of stock outs and other measurements of this character.
- **Commercial activity-** Management have the insight of the potential savings purchasing may represent. Targets are decided together with the purchasing department every year and focus on cost reduction. Competitive bidding is used to ensure that suppliers are performing. Parameters used in this situation is often total savings reported by purchasing, number of quotations, variance reports and similar.
- **Part of integrated Logistics-** Management have come to the insight that too much pressure on the suppliers for low prices has its negative sides and could lead to sub-optimization. Lower price appears to come on the cost of quality and delivery reliability. Management focus on cost reduction, targets for buyers such as quality improvement, inventory reduction, improving payment terms, lead-time reduction and overall supplier delivery reliability.
- **Strategic Business area-** Here purchasing is an active part of the decisions made for the company's future business strategy. Purchasing is an active force in make or buy

decisions, and outsourcing decisions. Suppliers are evaluated against the international competition that exists. Parameters used for evaluation here are supply base reduction, number of new suppliers, and the contribution of savings on the bottom line and the top line in new business revenues generated through suppliers.

Depending on the view that management has on its purchasing organization, the results and what to measure will differ. For an organization that sees purchasing as an operational function, performance measurements will mainly focus on quantitative data and tend to lead to administrative work. In another case whereas purchasing is seen as a strategic business area, performance measurements tend to be both qualitative and strategic (Van Weele, 2014).

3.1.3 Structural characteristics of a purchasing organization

Purchasing organizations and its activities have been a hot topic for several years. Organizations way of combining their purchasing strategy to obtain their strategic long-term goals have developed in to strategic purchasing. This could be defined as the organizations ability to combine the process of implementing, evaluate and controlling strategic and operative purchasing decisions (Glock & Hochrein, 2011). Organizational design is another factor that influences the outcome of the organizational goal. The design itself could be explained as the process of choosing and assessing the structure of the organization. This includes the systems of communication, control, governance, authority and responsibility. The delegation of labor and the allocation of resources are the foundation of an efficient organization and thus decides its task completion. Thru research different structural factors have been established that effect the behavior and outcome of the purchasing organization; Standardization, Specialization, Configuration, Involvement, Formalization and (De)-Centralization (Glock & Hochrein, 2011).

Standardization refers to which degree the activities within the organization are clearly and precisely defined, making the process simplified. Standardization can be found in different layers but are often defined thru standardized materials whereas products can be bought in bulk, or in processes, where standardization makes it a more effective purchasing process. The usage of standards in the purchasing process enables activities to be done by routine and limit the risk of variability hence ensuring a higher certainty in purchasing (Garrido-Samaniego & Gutiérrez-Cillán, 2004).

Specialization refers to how the setup of labor is organized within the organization, by function or by object. With the functional approach labor is segmented down to an easier and repetitive task which could be operated effectively. Whereas in the case of the object-oriented approach where purchases are responsible for different tasks that have a logical connection, making them experts in their field and limits problems regarding interface (Garrido-Samaniego & Gutiérrez-Cillán, 2004).

Glock & Hochrein (2011), describes the variable configuration as the design of the authority structure within the organization. Control, segmentation and numbers of positions within the different sections. A higher level of configuration implicates a high number of levels, segments and communication channels, which enables an efficient purchase organization. The hierarchal position of the purchasing organization is under the variable configuration. Depending on the role of the purchasing department, the higher status the greater are the chances to influence organizational strategic and tactical goals. The authors continue to argue

that chief purchasing officers more and more tend to report to top level management which indicates a well functioned purchase organization.

The involvement parameter could be divided into lateral involvement and vertical involvement. Lateral involvement related to the number of individual departments or functions involved in the decision-making process. Vertical involvement refers to the number of hierarchal levels involved in the decision-making process. A high level of lateral involvement implies that multiple departments are involved in the decision making. This leads to more information available, which contributes to reducing uncertainties. However, it also means that the influence of the purchasing department decreases as more individuals influence the decisions. A high level of vertical involvement implies that decisions are made by persons at a high hierarchal position. Information and resources required for the purchase often become easily available in these cases. Thus, high level of vertical involvement is often the case in organizations with complex and risky purchase decisions (Glock & Hochrein, 2011).

Formalization is used as a measure to prevent uncertainty and to stabilize the characteristics of the purchase situation. It describes the degree in which the organization relies on rules as a way to direct behavior. High formalization is achieved by defining rules and authority, or other rules that regulates the decision making. A high level of formalization contributes to an efficient purchasing process but may reduce creativity and motivation among the employees (Glock & Hochrein, 2011).

The last variable measures the degree of decentralization vs. centralization. There are two frequently used definitions for this variable. The first one refers to the degree of concentration in decision-making authority aggregated to a single unit. In this definition the hierarchal level at which decisions are made are irrelevant since highly centralized units can exist at a low hierarchal level. The second definition argues that a centralized organization could only exist at a high hierarchal level. An organization with a high level of decentralization benefits from greater flexibility and service while a centralized organization benefits from the scale effects (Glock & Hochrein, 2011).

3.2 Strategic alignment and design

This section describes literature describing the strategic hierarchy and its alignment throughout the organization, and how to design a purchasing strategy. The purpose of this section is to understand how to align and design strategies and the value it contributes with.

3.2.1 The strategy hierarchy

Baier et al. (2008), states that it is crucial that there is an alignment between strategies at different levels within the company to enable purchasing and supply management functions to effectively contribute to the company's competitive advantage. To understand this concept the meaning of the word "strategies" needs to be established. Most academics agree on three key areas that needs to be included in a strategy. The first area that influences the profitability is the industry attractiveness, meaning that the company's strategy should include in which environment or industry it competes or should be competing in. Secondly, the competitive position within the industry needs to be established, meaning that the company should decide which position they have or want to have within the industry they are in or want to be in. Finally, the resources and capabilities central for reaching the wanted state needs to be established.

Instead of using the concept of “strategy” as a comprehensive organizational action plan it could be useful to split the overall strategy into three sub strategies with each one having a distinctive and key role in achieving competitive advantage. The overall organizational strategy is therefore suggested to be split down into: corporate strategy, business strategy, and functional strategy (Fine & Hax, 1985). These sub strategies are to be further described in the following paragraphs.

The most global of the strategies are corporate strategy. This strategy should involve the entire firm. Research shows authors defines the corporate strategies in multiple ways. However, Baier et al. (2008) states four different initiatives are usually included: “(1) making the moves to accomplish diversification, (2) initiating actions to boost the combined performance of the businesses the firm has diversified in, (3) finding ways to capture the synergies among related business units and turn it into competitive advantage, and (4) establishing investment priorities and steering corporate resources into the most attractive business units” (Baier et al., 2008, p. 53-54). The major responsibility for developing the corporate strategies lies with the top management at corporate level and especially the corporate CEO (Baier et al., 2008).

Business strategies are less holistic and is supposed to clarify the scope of each business in such way that a clear connection to the corporate strategy is obtained. It usually concerns: “(1) forming responses to changes underway in the industry, the economy at large, the regulatory and political arena, and other relevant areas, (2) crafting competitive moves and market approaches that can lead to sustainable competitive advantage, (3) uniting the strategic initiatives of the various functional departments, and (4) addressing specific strategic issues the business faces” (Baier et al., 2008, p. 54-55). Business strategies and its development is the responsibly of the respective business unit manager (Baier et al., 2008).

Functional strategies often exist within every major function. Examples are marketing strategy, finance strategy, manufacturing strategy, and purchasing strategy. The functional strategies purpose is to add more details to the business strategies. It is supposed to specify how the function area should support the business unit’s strategy for achieving competitive advantage. Thus, establishing the resources and capabilities needed to build the bridge between the current state and the future direction. It is supposed to translate the broader perspective of strategies to concrete and specific action plans. Within purchasing and supply management this implies linking suppliers’ capabilities with internal requirements specified by business and manufacturing strategies. The functional strategies and action plans are to follow a specific pattern throughout the entire organization to add competitive power of the firm. The functional areas head is responsible for developing the functional strategy. Thus, within the purchasing and supply management function the CPO are usually responsible for developing the purchasing strategy (Baier et al., 2008).

Figure 4 visualizes the alignment of strategies and how the strategies should support each other.

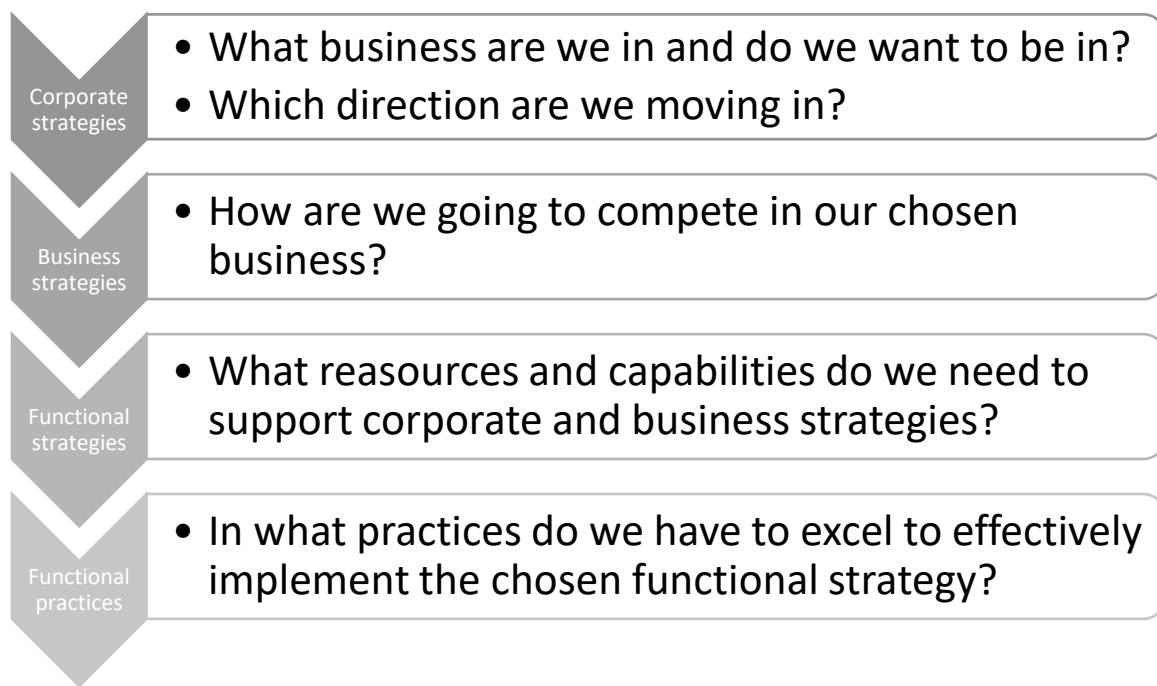


Figure 4: Strategic hierarchy (modified from Baier et al., 2008)

3.2.2 Purchasing strategy design

As an intermediary link between business strategy and purchasing practices it should specify how the purchasing function will support the firm's competitive positioning and governs how purchasing and supply management activities are managed. A purchasing strategy should work as key decision maker in the strategic planning process and a plan of action constructed to achieve goals and objectives. It should focus on contributing to the firm's competitive advantage by focusing on the areas of greatest potential (Baier et al., 2008).

There are no widely-agreed rules for constructing the purchasing strategy, however one of the most cited and used articles where written by Kraljic in 1983. He introduced the portfolio analysis in order to minimize supply vulnerability at the same time as the company utilize its full buying power potential (Baier et al., 2008).

Even though there is no well-established general model on how to construct the purchasing strategy authors agree on that the purchasing strategy needs to be directly aligned with the company's overall strategy (Baier et al., 2008).

3.2.3 The link between strategy and performance measurement

Aligning the behaviors and actions of workers in an organization with overall and specific organizational goals is an important yet challenging task. Creating this alignment is of significant importance for managers and are depending on their ability to translate the mission to measurable priorities and goals. One way to do this is to connect strategic objectives to performance indicators (Pohl & Förstl, 2011).

The relation between strategy and performance measurement is of great importance, it helps align attitudes and behaviors to organizational goals, and help employees to understand the organizational strategy, hence making it concrete and meaningful. Performance measurement systems will help employees to focus on the right tasks, and the information that provides will help managers to gather important data (Pohl & Förstl, 2011)

Research that have been conducted on the disconnection between strategy and PMS ¹have concluded that if performance indicators do not align with strategical objectives it will have a negative effect on the strategy and that financial performance could be affected negatively. There are also findings that PMS can be an effective mechanism to engage managers in strategy formulation, to enable the translation of strategy into operational terms helping organizations align their operations to fit their strategic operations (Franco-Santos, et al 2007).

3.2.4 Balanced scorecard

The Balanced scorecard can be defined as a strategy performance management tool. It can be used by managers to follow up the operations of the staff and monitor the consequences of these operations. The Balanced scorecard was introduced as a strategy implementation tool after the Kaplan and Norton (1992) studies of several organizations but have during the years also been shown to work as a strategy development tool as well (Tapinos et al., 2011). The scorecard translates the vision and strategy of a specific business unit into objectives and measures. The growing importance of managing purchasing strategies has led to a usage of the balanced scorecard within the purchasing function, a Purchasing-BSC (P-BSC) (Wagner et al., 2004).

A Balanced scorecard consists of strategic objectives that are balanced with respect to perspectives that are already defined. The connection between the strategic objectives are formed by cause and effect relationships depending on the strength between these relationships. To ensure the possibility to plan and control the achievement of the strategic objectives, the Balanced scorecard consists of financial and non-financial indicators. And for the decided indicators, targets are set. In a Balanced scorecard matrix strategic goals, indicators and targets are summarized (Wagner et al., 2004)

Kaplan and Norton (1992), suggested that the Balanced scorecard should consist of performance measures focusing on four perspectives: financial, customer, internal business process and learning and growth. These four perspectives ensure that the company have a holistic view of the drivers that impact performance and profitability. The financial perspective is consisting of lagging performance measurements and the other three of leading measures. Learning and growth focuses on skills and capabilities, employees and suppliers. According to Wagner et al., (2004), when suppliers are considered as vital for a business a supplier perspective may be added. This is quite common for Balanced scorecard in purchasing (P-BSC) and are called the fifth perspective. The P-BSC template is showed in figure 5.

¹ Performance Measurement System



Figure 5. Purchasing Balanced Scorecard (modified from Wagner & Kaufmann, 2004)

According to Wagner et al. (2004), there are several reasons why a Balanced scorecard within the purchasing department may or may not work as wished for. There could be barriers both in the initial and usage phase. One of the most common reasons are lack of commitment. Mainly due to miss-communication to employees. Lack of top-management support is also a common barrier. Wagner et al. (2004) states that the lack of purchasing vision and strategy have a direct negative impact on a P-BSC. A clearly formulated and approved strategy is key for the scorecard process. The purchasing strategy should undermine an accepted purchasing vision. The strategy needs to be developed beforehand and needs to have be communicated and understood by both managers and employees (Wagner et al., 2004).

3.3 Purchasing performance measurement system (PPMS²)

This section describes literature explaining the linkage between purchasing strategies and purchasing KPIs, key considerations when designing a performance measurement system, and the potential benefits of a good system. The purpose of this section is to understand the current system at Södra and its effect on the performance.

3.3.1 History of performance measurement systems.

Performance measurement system have evolved over time, from quality being the largest concern in the Japanese industries during the 70s, while western companies were more concerned over service and return on investment. During the 80s a new era for measurements had its beginning and companies started to focus more on quality, time, cost and flexibility. The focus then shifted during the 90's when scholars started to criticize traditional financial measurements and started to focus more on effectiveness and efficiency of actions (Kaplan & Norton, 1992). From there on several different non-financial factors such as quality, customer satisfaction, cycle time and innovations became leading indicators to measure financial performance. And in recent years, environmental impact and social sustainability have gained

² Purchasing performance measurement system

importance, this has led to the evolvement of performance measurement systems. Because of this, several different models have developed (Caniato et al., 2014).

The focus on the models were regarding what to measure and how to structure the performance measurement but according to litterateur acknowledges three main stages, design, implementation and use/update. The design refers to set performance measurements that are aligned with corporate strategy (Bourne, 2001). Implementation is depending on several factors such as poorly defined measures, time and effort needed and resistance to change. All these factors could affect the implementation, to enable a smooth implementation top management commitment is crucial. The use of the PMS system refers to the concern of people's behavior with the information, or the use of the system. This put demands on a well function performance measurement system, it should be able to work in an ever-changing business environment. Leading to that a well functioned PMS system need to be proactive and measures or indicators need to be changeable when circumstances change. (Caniato et al., 2014).

This leads to that purchasing's contribution to the overall corporate performance mainly depend on to what extent purchasing is aligned to business strategy. Most commonly the construction of strategic alignment is measured by comparison between declared purchasing strategy and corporate strategy. It would be more relevant to measure the actual purchasing performance, and then see if it is fostering and caring company competitive priorities hence if it has a direct impact on company results they need to be measured and monitored (Monczka et al., 2004).

Given the important strategic role of purchasing strategy within a company, performance measurement becomes very important to manage, in consistence with the overall business strategy. The evaluation of this is important of several reasons, it supports better decision making based on defined strategies and results. It enables communication of goals and objectives across the purchasing organization. It drives behaviors and motivates thru feedback and goal orientation, but it also enables a possible benchmarking with other companies (Caniato et al., 2014).

3.3.2 Crucial components within a PPMS

Purchasing activities have been shown to major influence and contribute to a company's overall financial performance according to Pohl & Förstl (2011). The authors further state that company success therefore to a large extend depend on the level of strategic purchasing and is created through strategic integration of the purchasing function. To ensure this, it is important for companies to implement a mature purchasing performance measurement system (PPMS). Ellram et al. (2002), argues that a system like this is a requirement to ensure that purchasing is perceived as a strategic contributor to business performance.

Pohl & Förstl (2011) suggest that a purchasing performance measurement system should include these five components:

- Strategy Management
- Measure performance
- Influence behavior
- Learning and improvement

- Communication

Strategy Management

Depending on what environment the business acts in leads to different strategic choices, this in turn leads to a diverse set of measures used. On the functional level, the measures are used to create congruence of strategy and practices for purchasing (Nollet et al., 2008). Since the purchasing performance measurement system are intended to focus on strategic result, it should measure the performance that are related to the strategic objectives of the purchasing functions. Resulting in measurements that reflect purchasing strategy and enables measurement of the contribution to the set objectives (Nollet et al., 2008).

Measure performance

Purchasing performance should measure performance that are closely aligned to the activities that lead to performance, the purchasing practices. Purchasing practice describes all the activities that purchasing is involved in. Since optimal purchasing practices are formed by the market characteristics of the goods and service procured, the measures must reflect these when developed. Purchasing performance measurements systems must focus and measure at the category level to be able to give reliable information on performance generated (Pohl & Förstl, 2011).

Influence Behavior

Ansari (1977), states that performance measurement systems need to have both a structural and a behavioral view to be effective. It needs to be structural since it is a precondition for all measurement systems. The behavioral component is needed to motivate employees to act accordingly to the structural conditions. According to Hall (2008), this does not only motivate employees, but a well-designed measurement system also helps improving managerial performance through two clear dimensions, role clarity and psychological empowerment. The behavioral component motivates personnel to choose appropriate purchasing activities to achieve their targets and to execute strategically aligned practices.

Learning and improvement

Adapting to changing environment and shifting business factors forces a good performance measurement system to focus on internal learning to be successful. The evolutionary aspect is crucial since performance measurement systems must adapt. The challenge for the system is the possibility to conduct a longitudinal comparison hence the need to change and adapt (Pohl and Förstl, 2011). Changes are sometimes needed due to organizational factors, but every change makes it more complex and difficult. Purchasing performance measurement systems should incessantly question the strategies from purchasing or the organization, through feedback circles. This will lead to a process of continuously learning and an improvement process which will have a positive impact on the performance. To ensure this process, goal-oriented measures is a requirement and should be compared with target values to ensure a learning process (Pohl & Förstl, 2011).

Communication

Purchasing's success needs to be communicated in order to be seen as a strategic contributor for the firm. In order to be accepted and seen as a strategic function, visibility and communication is key for purchasing. The performance of the purchasing department needs to be integrated to the corporate reporting system, to ensure purchasing's contribution to the overall performance of the firm. The results of purchasing activities can be linked to key

objectives, the result of this must be reported and linked to competence. This makes communication a strategic important measure, hence internal and external visibility is key to link the reported objectives to the desired dimensions of purchasing performance (Pohl & Förstl, 2011).

To measure purchasing performance is not always an easy task, hence there is often a lack of definition, widely used terms as purchasing performance, purchasing effectiveness and purchasing efficiency are not precisely defined in theory. This leads to that these terms are being used interchangeably. Another problematic scenario for measuring is the lack of standards and objectives, the strategies and objectives for purchasing is often not defined in companies. When clear strategies or objectives are missing, it will be difficult to evaluate purchasing performance. A third factor that also complicates the measuring of purchasing is that purchasing is not an isolated function. It is a result of several activities often of intangible character, and the lack of direct input-output which makes it very difficult to evaluate accurate (Van Weele, 2014).

3.3.3 Key areas when measuring performance

According to Van Weele (2014), the performance measurement and evaluation should be based on four dimensions to ensure a comprehensive, and holistic view of the purchasing performance as shown in figure 6.

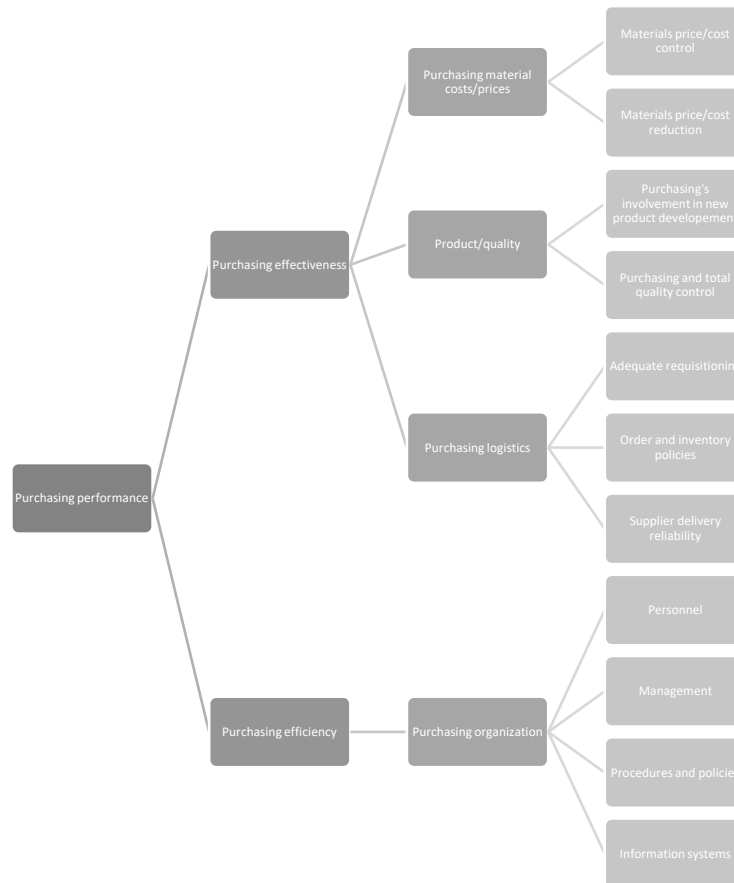


Figure 6. Key dimensions in performance measurement

Price/cost dimension

Refers to the relationship between the standard/ baseline and the actual price paid. A distinction is made between the following:

- *Price/cost control*
Describes the monitoring and evaluation of prices as they are charged by the suppliers. Materials budgets, price inflation reports, variance reports are examples of measures used. The main objective is to monitor prices to be able to control them and prevent major cost increases.
- *Price/cost reduction*
Refers to the monitoring of activities used in order to reduce costs in a structured way. Cost reduction might be a result of involving new suppliers or substitute in the purchasing process to increase competition, value analysis, or co-ordination of purchasing requirements between the business units.

Budgets are an important source of performance planning and monitoring the price/cost dimension.

Product/quality dimension

Purchasing's responsibility regarding the quality of purchased material could be distinguished between:

- *Purchasing's involvement in new product development*
Measures to be used here are personnel hours spent on innovation projects, number of engineering hours spent by suppliers, and the projects overall lead-time. Detailed measurements could be amount of technical change orders related to the number of engineering changes communicated to the suppliers and reject rate of the initial samples related to the number of times a prototype needs to be presented by the suppliers to get it approved by the engineers.
- *Purchasing's contribution to total quality control*
When specifications have been settled by engineers its purchasing's responsibility to ensure products are delivered with the agreed specifications. Reject rates on incoming goods, line reject rates, number of approved suppliers, number of certified suppliers, number of reject reports, number of supplier quality agreements are parameters frequently used. The measures should indicate to what extent the company ensures correct incoming material from suppliers.

Purchasing logistics dimension

This key area focuses on purchasing's responsibility in contributing to the efficiency of incoming flow of purchased material and services.

- *Control of the timely and accurate handling of purchasing orders*
Measures used are: average purchasing administrative lead-time, number of orders issued, and order backlogs. Key features to improve these are electronic order systems, introduction of e-commerce solutions to internal customers and suppliers, and EDI.
- *Control of timely delivery of suppliers*
Measures used are: supplier delivery reliability, materials shortage, over/under delivery, number of JIT deliveries. These indicates the level of control of incoming goods flow.
- *Control of quantities delivered*
In cases where purchasing is responsible for inventory levels these measurements can be used: Inventory turnover ratio, number of over/under deliveries, average order size, and pipeline inventory.

Techniques used to monitor and improve supplier performance are supplier evaluations and vendor rating.

Purchasing's organizational dimension

This refers to the major resources used to achieve objectives of the purchasing function.

- *Purchasing staff*
Refers to the background, level, training and development and competencies of the purchasing staff and its cost.
- *Purchasing management*
Relates to how the purchasing department are managed. Concerns the quality and availability of strategies, action plans, and reporting procedures as well as the management style and communicative structure.

- *Purchasing procedures and guidelines*
Refers to the working instructions and availability of procedures for staff and suppliers to ensure efficient work is done.
- *Purchasing information systems*
Refers to the activities made to improve the information system required to support purchasing staff and other employees in their daily work and to produce important management information on purchasing performance.

4. EMPIRICAL DATA

This chapter provides the reader with data collected. It starts with describing the case company and its purchasing department. Further it describes the five groups/ categories, their characteristics, and their tasks. Lastly a table of reflections from each category on the current KPIs are presented.

4.1 Södra Skogsägarna

Södra is the largest forest-owner association in Sweden with 51000 forest owners. The association, with over 3.600 employees and a turnover of 18.5 b SEK has its headquarters in Växjö, Småland in the southern part of Sweden. Södra has three primary business areas, as to be seen in figure 7. Södra Forest who purchases forest products from the members and delivers them to Södra's mills. They also provide forestry services on behalf of the members whereas they manage the entire ecosystem of their forest. This includes everything from plantation to harvest as well as preparation and replanting of the land. These activities are locally based to serve the interest of the owners. Södra Wood is split into two segments: sawn timber and interior wood products. Construction materials are produced at Södra's mills. Södra Cell with its three pulp mills is one of Europe's leading pulp manufacturer. This segment is entering a phase of expansion due to major investments.



Figure 7. Södra's organizational hierarchy

Södra is mainly operating in the southern parts of Sweden except for one facility in the north of Sweden, one in Lithuania, one in Finland, and two in Norway.

The overall strategy at Södra is to function as "one", meaning more unity and a more effective company over all. This is a vision that have its roots in the several re-organizational activities that have taken place over the past couple of years. The mission from the owners is to foster the forests profitability and secure the revenue of the forests raw material. The stated vision for the organization is that "Södra visar vägen" (Södra shows the way). And means accordingly that Södra should be cutting edge and be the next generations forest company though value adding relationships and a long-term acting.

The corporate group has set a general goal to 2020, where the company should be a more profitable, more competitive, more innovative and a more sustainable company with a stronger global market position. The central financial goals are shown through return on capital employed, solidness and profit sharing.

Financial goals:

- Generate value for the members, the return on capital employed should be in long term at least 10%.
- The financial status should be strong to enable operational freedom for long-term business decisions.
- The solidity should in long-term be at least 55 percent.
- Decisions regarding the profit-sharing should be founded on contexture of the corporate groups profitability situation, investment plans and financial status.
- In long-term the gathered profit should equal at least 50 percent of the result before taxes.

Sustainability goals:

- Södra's production is fossil free by 2020 and Södra's transports are fossil free by 2030.
- The yearly forest growth on Södra's members property is year 2050, 20 percent higher than 2015.
- Södra has a zero-vision regarding work related injuries and the frequency is to be minimized by 15 percent till the year 2020.

Corporate strategy:

Södra's corporate strategy is to be a value creating and coherent corporation with a lucrative growth. Focus should not only be on developing the current products, but also increase the focus on new products, innovations and a strong sustainability work. This have led to the strategy to focus on 6 different areas:

- Growth
- Profitability and cash flow
- Focus on core competence
- Grow on "right" markets
- New products and innovation
- Sustainability

These six focus areas are then handed over to the business units who writes down their focus areas/ strategies to directly contribute to the corporate strategies. The business areas strategies are in direct alignment with the corporate strategies and at Södra Cell they have realized five focus areas to contribute to the corporate strategies. These areas are: organic growth, product development, continuous improvements, quality, and learning and responsibility. At Södra Wood they have realized three key areas being; produced volumes, processed products, and three main markets to focus on. These have been developed by the top management at Södra Wood and are based on their contribution to the overall corporate strategy.

4.2 Södra's purchasing organization

The growing realization and understanding on the role of purchasing on the overall performance of a company, have set the trend for the industries, a well functioned purchasing department is key to success. This is something that Södra have adopted, and in their vision, they have stated that they should have the best purchase department in the industry.

Södra has a mix of a centralized and decentralized purchasing organization whereas the facility specific items are purchased by decentralized purchasers located in every factory. Items and services that can be considered common for multiple facilities are purchased or contracted by the centralized purchasing department located in the headquarter. The centralized purchasing organization is divided in five purchasing segments: operative purchases, transports, commodity goods, investments, and indirect materials and services. Transport, indirect materials and services, and commodity goods are considered as strategic purchasing. These are mainly responsible for contracting suppliers needed in the daily operations. Their purchases/contracts are triggered by outdated contracts but also more complex situations whereas they see a lot of purchases are made without contract where they see a potential in forming a contract with a supplier in order to lower prices. However, it can also be a demand from the business units that a contract should be formed that triggers the process. Therefore, in contrast to many other purchasing organizations the strategic purchasers at Södra does not have the major responsibility for procurement. That responsibility lies among the purchasers situated at the plants. Thus, strategic purchasing at Södra is mainly responsible for setting up a system with suppliers and terms.

Operational purchasing, and investments are to be considered as project purchases. Thus, these are triggered by project such as new plants, maintenance, and new machinery purchases for example. Investments are mainly responsible for project with a higher value whereas the operational purchasers are assisting with the services and products with a lower value. Operational purchases are situated both at the headquarter and at each major plant. They carry out purchases affecting only one or a few plants. They use an order system for all their purchases exceeding 50000 SEK. Orders inferior 50000 SEK are not registered, and these purchases passes through something called “the green road” which means they are not considered in the evaluation of the department. In total the purchasing department are 30 persons when all positions are filled.

4.3 Purchasing objectives and performance

Södra’s purchasing organization have as their vision to be the best purchasing organization within the industry. The division have set as their mission to be a value adding function trough:

- Working focused, use data and facts and situation specific according to Södra’s purchasing process.
- Utilize Södra’s gathered purchase volume
- Deepen the knowledge of goods and services being purchased, but also in the market where they are produced and sold.
- Continuous improvement of business competence.
- Integrate users and suppliers in the purchasing process
- Continuously follow up of the purchasing organisation to always improve.

A Balanced scorecard is currently used as a strategy performance management tool at Södra. The scorecard consists of 5 different perspectives. These have been decided trough discussion with the purchasing managers, the CPO and finance department. The different perspectives are: economy, responsible business, responsible employer and dedicated employees, governance and working process and finally a market perspective. Together they have put down different key areas and functions to focus on. It has the classical design of a Balanced

scorecard with goals, key factors and an action plan for each perspective. The Balanced scorecard has the vision to have the markets best purchase at the top of the scorecard. It consists of both financial and non-financial goals and have both lagging and leading measures Through this Balanced scorecard the way of working through the purchasing organisation is set. It is from here the KPIs that Södra are using have its origins from.

The Key Performance indicators that are being used are:

- Savings
- DPO³
- Competitive purchase
- Sustainability
- Individual

These measurements are the same in every purchase department, regardless of what specific task they are entailed to do. And the direct connection to the overall strategy is the main focus on the economic factors. The targets that the measurements should reach are set annually, during yearly meetings, and are sent to the finance officer for acceptance. All the KPIs are uploaded in a result file, whereas the purchasing managers can follow the progress of the personnel, and the purchasers are responsible for uploading this data. The result file is distributed out to every purchase manager each month, but also to the CPO. The CPO sometimes report it further to the CFO, but at the moment there are no clear guidelines regarding this step of the process.

The measurement savings functions as a comparison between the baseline of a previous contracted price and the new existing price. This is transformed to a percentage and are uploaded to the result file. DPO is a KPI that have been forwarded from top management, the terms of payment days are decided on a corporate level and is to be followed throughout the whole organization. Competitive purchasing is measured as if the purchase is involving more than one party. There need to be a concrete offer from a second supplier to be counted as a competitive purchase. When measuring sustainability there is mainly in the form of revisions and audits made at the suppliers. Södra has a supplier code where several sustainable best practices praxes are to be followed. And the audits ensure that these are being followed. The individual KPIs are different in each category of the purchasing department. It is the purchasing manager that decides, in discussion with the purchaser what these parameters should be. For the Individual KPIs to be accounted, the overall targets of the Södra corporation needs to be acquired.

4.4 Purchasing function and performance measurements

Södra's purchasing department is divided in 5 groups. Each responsible for a diverse set of purchases. Further description of these below.

4.4.1 Indirect materials and services (IMS)

Södra's purchasing department are working with category management in all of its groups. Within IMS they have construction, vehicles, electronics, IT, and administrative as their five

³ DPO (Days Payable Outstanding) is the time it takes for a company to pay its invoices. In this report it focuses on the terms agreed in the contract between the two parties. Thus, the amount of days Södra can wait before they pay their suppliers after the product are ordered or delivered.

categories. There are five persons working with IMS, meaning they are responsible for one of these categories each. The operative purchasers situated at the plants are responsible for a couple of these to increase the local knowledge on what contracts are present and what to buy within these categories. The person in IMS responsible for a certain category has meetings in cross-functional groups with operative purchasers from each plant responsible for the focal category.

The work at IMS includes mostly the sourcing perspective. Thus, sending RFQs and RFIs, performing the negotiation process, and together with the business units make decisions on which suppliers to form contracts with. In some cases, they are also involved in the implementation of the contracts.

IMS does not work with strategic suppliers in a way where they are forming partnerships, but it is a vision stated that they want to implement this more in their work. Usually contracts are formed with a length of 2-3 years.

IMS is not directly involved in the planning process since their products are not considered as critical for the production. Purchases are mainly executed on their own initiative when they see that a contract is soon to be expired or when a savings potential is spotted in evaluating potential suppliers.

IMS sees savings as the most important KPI while competition is more of a guidance to reach the saving. Last year they had internal customer satisfaction as a KPI, but this year they choose to exclude it. But this KPI is used now and then to check the conditions. In the future they see orders connected to the contracts as an important measure. Some measure on quality, delivery, complaints would also be good. Another difficulty they see is how to value and evaluate services, this is something they see needs development.

4.4.2 Commodity goods

Commodity goods are responsible for purchases regarding for example chemicals, fuels, and materials for packaging. Their annual spend is about 1,5 BSEK. All purchases within this category, both products for production and products delivered straight to the customer are carried out centrally. Since many of the items purchased are considered dangerous materials it can only be purchased by this specific department and therefore they are responsible for the entire process. Commodity goods mostly work with vendor management inventory solutions. Thus, there are no operational purchases carried out in this group. The replenishment is done automatically when the volumes are getting low in a certain product. Based on information from the business units regarding volumes consumed on a yearly basis contracts are formed with suppliers. However, chemicals and other commodity goods can also be purchased in bulks transported by boat or train. These purchases are somehow more complex and require a distinguished process.

Purchases are triggered by a discovered potential of saving money. In cases like this, suppliers are contacted and informed about the quantities needed which is somehow evened out over the year. The suppliers within this type of purchases are often very big and thus Södra does not have the same bargaining power as in other purchasing groups. Therefore, they often have to agree to the supplier's terms without much potential of negotiating the terms. However, this is not seen as a major problem since this aspect is on the contrary when negotiating with smaller suppliers.

The competition measure target is often difficult to reach since some products only have one or very few suppliers. However, competition is very important to monitor for them since it greatly affects their performance even though it is not an option for them. Savings on diesel and other index-based chemicals are measured from the corresponding weeks index to be comparable to baseline. However, savings are a bit misleading since the prices are fluctuating over time. Savings are still considered the most crucial KPI within commodity goods. Competition is not really affecting them, but more seen as an administrative effort. The payment days are depending on the competition to some extent. However, commodity goods have the highest number on payment days which could be explained by their large suppliers who can afford it.

4.4.3 Transportation

This category is responsible for all the transports in to the different facilities, and the finished goods that are to be delivered from the facilities. There are four people working within this category and they are all responsible for different tasks. The main responsibility for this category is to ensure that there are contracts with the different transport services. There is more focus on the commercial aspects as the length of the contracts reach from 1-2 years. The contracts are made after discussion with the facilities, when forecasts have been made regarding the diverse needs. Cross-functional collaboration with the logistic department are used to enable best possible result of the purchases. The overall goal is that all the transports that are booked are under a contract, but maverick buying do occur. Even though, the transportation department should be responsible for the maverick purchases it happens that the business units order these on their own. The purchasing process do differ depending on the situation. The main process is the same but depending on the strategic role of the service there could differ from case to case. There are some cases where competition is not used, whereas a strategic partnership is the best solution. A Kraljic matrix is used to value these services. In these situations, there could be a conflict of interest regarding the KPIs, mainly the target competitiveness. Whereas the overall contract could be better than the previous one but since it has not been formed using competitiveness, the KPI will be affected negatively. All the KPIs that are being used are in their belief useful to ensure a good result, directives that have come from higher up in the organization. One example of this is the payment terms. One important factor for the transportation category is their goal to ensure sustainability. This is measured in the total amount of revisions made per year. There is currently no supplier monitoring. The most important KPIs for the transport division is savings and cost. A missing part in the measurement system is the delivery quality which is a KPI expressed as very important. The lack of acknowledgement regarding partnerships often forces them to choose between keeping a valuable supplier and showing bad results or selecting a new and showing good results. This implies that the cost of the process of finding new suppliers is not considered.

4.4.4 Operational purchases

At operational purchases there are 6 purchasers in addition to the manager. The spend per year are typically between 200-300 MSEK. The purchasers are split up with two purchasers at each plant. These purchasers are responsible for the daily purchases at the corresponding plant including some wood units. They are handling requests and purchasing orders through the present ERP system. Thus, they are also responsible for controlling the customer orders are delivered. If possible competition of the purchase will be applied. Purchases below

50000-100000 SEK depending on category will not go through the ERP system and are not handled by the purchasing organization. The process for these purchases are called “the green way”.

Purchases in this department are triggered by a need or a forecast. The operational purchasers are not involved in VMI or setting up ordering schedules. Therefore, they are often triggered by things breaking down. In the Wood units they are often involved in investments or complementary investments for larger investments. Thus, operational purchasers are working in cross-functional groups with the strategic purchasers. They are most frequently collaborating with the IMS department where they are responsible for ordering from the supplier based on a contract formed by IMS. Operational purchasers are only responsible for contracting during investments based on a one-time purchase and projects.

Operational purchasing is experiencing an inconsistency in terms of when they are involved in the purchasing process. They would like to get involved as soon as possible but since routines varies between the business areas it happens that a contract is formed before they enter the process and there only task is to sign the contract.

Many suppliers are contacted frequently but there is no strategy from Södra that relationships are to be maintained.

The KPIs are the same as for the other groups except from saving where they are only measuring the savings of the negotiation since they do not have a baseline to compare with. Operational purchases have the lowest rate on competition of them all. This since they are often forced to purchase from a specific supplier, i.e. when spare parts are bought there are no other option in many cases. The late involvement in the purchasing process also affect this KPI since the contract already is formed. Thus, they have only 68% competition compared to the target on 86%. Since the competition is difficult to reach the individual targets are set to be competition on all the purchasers. Some purchasers do not feel that they can affect some of the KPIs, thus, purchasers sometimes choose to not register purchases since it badly affects the results. An improvement in the KPIs are therefore necessary here and currently they are discussing however amount of purchases could be relevant. Last year 200 purchases were registered in contrast to 300 which is the historical value. This depends on a high extent what that is registered. Even though, saving is mainly important for the strategic groups the credit terms, competition, and sustainability measures are good measures for operational purchases.

4.4.5 Investments

Within investments there are 6 purchasers in addition to the manager. They are executing purchases for all the business units but primarily within Södra Cell. Usually they spend about 200 MSEK per year at each plant in exception from years while the maintenance stops occur. These years the spend is approximately 300 MSEK per year. Purchases are only in terms of non-repeatedly purchases. Purchases are always triggered by the client at the business unit. This could be that an investment shows great ROI ⁴potential, that they need to prevent breakdown of machinery, or out of an environmental perspective. Purchases are classified in A, B, D, and E purchases whereas A are purchases exceeding 8MSEK and B are purchases below 8MSEK. D and E classifications is on an operative level. Investments is a bit different

⁴ Return On Investment

from the other groups and they are not really collaborating with other groups except from the operational purchasers who often are responsible for large parts in the investments.

This group is often involved early in the process where they together with the business units plan the project based on a framework delivered by the project manager. The business units often have an idea of what they want where they will do a pilot study to get the approximate costs and profitability. The single most crucial factor and the one determining which supplier to contract is the total cost. However, the total cost is often very difficult to anticipate. Another important factor to consider is the aggregated inventory where the goal is to use the same components at the plants. However, it is very difficult to fulfill since the plants today are using different components and machines. Thus, this is a process that will require time.

Investment are using the same KPIs as the rest of the purchasing department except from saving due they do not have any baseline to compare with. The most crucial KPI for Investments and the one they are experiencing giving them the best result is competition. However, in many cases the competition is non-existing since there are very few suppliers available. Sustainability is also an important measure for them but from a perspective of attractiveness more than profitability. Payment terms is sort of misleading since they do not measure saving. They could for example increase the cost to enable longer payment terms which would show impressive results in the measurement report but be very bad for their economy.

4.4.6 Summary of KPIs used

Table 3 summarizes the key opinions regarding the KPIs used by all categories.

KPI	IMS	Intermediate	Transport	Operational	Investments
Savings	"Important to show the value we provide and a necessary KPI for every purchasing department. However, the evaluation of the savings are complex since it only considers previous contracted price. Thus, good purchases could appear only as a cost increase even though the purchaser did a great job."	"Important but a bit problematic since it is relative the economic situation. Very much a guess when setting the target."	"Important to measure but difficult to evaluate since it does not consider price fluctuations in the market"	"Often used in terms of savings by negotiation since historical cost usually does not exist."	"Not applicable since there are no baseline to compare with. However, savings in terms of negotiation result are measured but not presented since it could be very miss directing for the purchasers".
Competition	"A tool to reach the savings, not interesting to measure individually. Important to measure since it has a major impact on savings."	"Does not really affect our behaviour. This is always done when possible."	"Not really important to measure, undermines the importance of strategic partnerships"	"Very difficult since bound to certain suppliers and late involvement in the process. However, a good KPI for us since it affects the performance in terms of cost."	"The most important for us and the one that historically relates best to our results"
DPO	"Important to find a balance between DPO and price since they often affect each other. Important when Södra needs to improve its cash situation. The KPI itself does not reflect the performance."	"Often an effect of good competition. Relevant for us"	"Important to measure since it would probably be set aside if not. The corporate has set this KPI as a way to underline the value of capital. Does not affect us very much"	"Good, but a bit "fuzzy" since we currently value capital very low. Thus, the goal is to increase DPO without it affecting the price."	"Often an effect of good competition. Misleading since savings are not measured, thus, complex calculation needs to be done to ensure best outcome. Also there are no physical product delivered as in the other categories which complicates the control of this agreement".
Sustainability	"Really important since Södra has great ambitions regarding this."	"Relevant for us"	"Important for us, we can and should affect this since our purchases has a major impact on the environment"	"The terms and conditions apply to all groups but, the major responsibility for this KPI lies on the strategic groups."	"Very important"

Table 3. Comments on KPIs from each category manager

4.5 Performance measurement in two benchmarking companies

This section describes the processes used at two competitive companies to design and align strategies into purchasing performance measurements.

4.5.1 Company A

Company A has as their overall goal to be the global company of choice when it comes to renewable energy, the first choice as an A-supplier and market leading within their sector. They are continuously monitoring their strategic orientation and result. Each plan or arrangement needs to be in the line of the overall strategy and support the financial and sustainable goals.

The strategy process at Company A (as seen in figure 8) are entailing important questions for the organization and has a clear connection to the different divisions. There are clear guidelines of what to achieve and also what is expected to reach the next level. These strategic goals and questions are formed annually and are reviewed quarterly and ensures an opportunity to measure the process each year. The different divisions are working with strategies of both short and long term to be able to reach the overall goals.

Purchasing's role at Company A have a direct link to the overall strategy whereas they are direct responsible for developing and maintaining core values of the company. The purchasing director have a seat of the board and have the same status as any other division. The purchasing organization within company A is striving to build strong and measurable relations with their top suppliers. Thus, they will help them to increase their ability to create

innovations and a supreme customer value. Their top suppliers will ensure them to reach their strategic goals in sustainability, financial goals and by continuous improvements.

To ensure that the purchasing organization is working in alignment with the purchasing strategies, performance measurements have been set to evaluate the purchasing performance of the division. The KPIs have a direct alignment to the purchasing strategy, which have a direct connection to the overall strategy of the company. The KPIs do differ between the different categories and there are also individual KPIs.

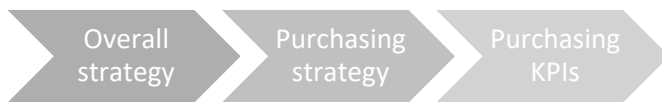


Figure 8. Company As strategic alignment process

4.5.2 Company B

Company B is a large company within the forest industry, thus, a direct competitor to Södra. Company B recently made a major organization change which forced them to renew their strategies and their process of developing these strategies. Thus, they are currently in the process of developing a new corporate strategy.

The strategy process starts with the top management developing a document where the major focus areas are expressed. These areas are handed over to every business area who then are responsible for identifying areas where they can contribute and thus finding their own focus areas, directly aligned with the corporate focus areas. A qualitative discussion about the alignment between the strategy and the corporate focus areas are used to ensure the quality of the strategy and its affect. When this step is completed and the documents from the business areas are delivered to the director of business development and this person are responsible for merge these strategies into a corporate strategy, figure 9 is visualizing this process.



Figure 9. Company Bs strategic development process

When the corporate strategy and the purchasing strategy is approved the next step is to develop purchasing KPIs in direct alignment with the purchasing strategy. Here soft objectives are developed into activity goals while hard objective such as savings are diversified for each category manager. The category managers then diversify these objectives to every individual. Thus, every individual gets personal objectives to strive towards. This process is shown in figure 10.



Figure 10. Company Bs KPI development

5. ANALYSIS

In this chapter, the theoretical framework is compared with the empirical findings as a tool to answer the research questions of this study. The chapter is divided into four sections describing the current state of Södra's purchasing organization in terms of maturity and their function, Södra's strategic alignment, their alignment to the KPIs and crucial components when designing a performance measurement system, and a comparison on the strategic alignment process between Södra and two of their competitors. The theoretical framework is mainly compared with empirical data gathered from interviews and internal documentation.

5.1 Current state of Södra

The following section will analyze the current state of the purchasing department at Södra. The empirical findings are compared with the development model and management view of the organization described by Van Weele (2014) to establish an understanding of where they are and what they need to improve. After that the structural characteristics of Södra's purchasing organization is compared to Glock & Hochrein (2011) approach.

5.1.1 Current state in the development model

According to Van Weele (2014), the development process within a purchasing organization can be described by a development model. The six steps are detailed; thus, all factors might not be fulfilled in every stage. However, the holistic perspective could provide valuable knowledge on how to further improve the organization. This model is evaluated one step at the time to find the current state of Södra's purchasing organization.

Step one (transaction oriented) describes the function to ensure company processes by not running out of raw material. There is no established purchasing strategy and their contribution is finding the right material for production. In-direct material are considered less important and are usually purchased by the user. They report to production or logistics and are view as a sub-department (Van Weele, 2014).

Even though, Södra does not have a well-established strategy the criteria from this stage could be considered fulfilled. Södra's purchasing department are viewed as a strategic part of the company, since, they report to the CFO of the organization. Their responsibility exceeds just finding the right material and a lot of effort is put into finding the best in-direct material.

Step two (Commercial orientation) explains the focus of purchasing to be on negotiation and achieving low prices. The purchasing organization is independent from product development, engineering and manufacturing. The primary performance measurement is cost savings. Incentives to use multiple suppliers in negotiations to lower prices are present. The most important criteria for the staff is the ability to negotiate and compare supplier prices (Van Weele, 2014).

Södra's purchasing organization is primarily focusing on the savings as their primary measurement. They further describe their strength in negotiation as one of their major advantage and strengths. However, Södra's purchasing department could not be seen as independent from product development, engineering and manufacturing. Thus, Södra's purchasing organization are to be describes as more strategic than this stage describes. Södra's involvement in these department are present, and their responsibility exceeds lowest possible prices and negotiation. In the aspects of cost savings as their primary focus this stage

represents how Södra operates. However, it is clear that Södra in the other aspects has developed beyond this stage.

Step three (coordinated purchasing) is represented by a strong central department with implemented buying policies and systems. Focus lies on cross unit collaboration and the strategy is formulated to emphasize use of collaboration and synergies by category management. In-direct material are prioritized. Focus also lies on improving the communication between the centralized purchasing department and the decentralized business units. Computerized information systems are developed and used but not linked between units (Van Weele, 2014).

Södra's centralized purchasing department are implementing purchasing policies. They put a lot of focus on improving the cross-unit collaboration and category management is used to emphasize the potential of synergy effects. In-direct material could be considered as important as every other purchase category. A computerized system is used to a small extent and the system could be considered linked between the business units and the purchasing department. However, the system is only used on articles below a certain amount. Many of the criterions could be considered to be under progress at Södra's purchasing department. However, the lack of a distinctive purchasing strategy implies that they might not be completely past this stage.

Step four (internal integration) refers to a phase whereas the focus has shifted from reducing unit costs to a total lifecycle cost approach. Key suppliers are involved in cross-functional teams to deal with problem solving and development. Up to this stage the focus is orientation around its own function. Now, focus is shifting to orientation around its internal customers or the business units. Groups are responsible for supply chain strategies, strategic commodities, best practices, and knowledge sharing. Other departments are integrated in the information system (Van Weele, 2014).

Södra could not be considered to reach this stage since the main focus still lies on reducing unit cost. There is no present strategy for involving suppliers in problem solving to improve the processes. The purchasing department is also very self-centered, meaning, that the knowledge among the business units and internal customers are not used in a wide perspective. There are no widely used information system in place integrated with other departments.

Step five (external integration) is characterized by a straight forward outsourcing strategy and improved collaboration with supply chain partners (Van Weele, 2014).

Since none of these characteristics are applicable on Södra's purchasing organization they have not yet reached this stage. However, the ongoing outsourcing project in China and the expressed need and will to improve collaboration with suppliers at least shows they are in progress.

Step six (value-chain orientation) implies that suppliers are constantly involved in processes to support the company's product and market strategy. The target is to design the value chain in such way that maximizes the satisfaction among the end customers. Information systems are integrated to a maximum level (Van Weele, 2014).

Södra cannot be considered to have reached this step in the maturity model since their collaboration with suppliers are very limited. Also, there are no strategy on how to design the value chain.

Concluding from the analysis above Södra's current level in the maturity model is not as clear as expected. However, Södra does fulfill all the requirements in stage one and the majority of the requirements on stage two and three. After stage three the requirements cannot be considered fulfilled. Thus, Södra's current maturity level could be described as somewhere between stage two and stage three.

5.1.2 Purchasing's role at Södra

Södra's purchasing organization is primarily evaluated on their ability to achieve saving through usage of the combined purchasing power of Södra's business areas. The targets are set by the purchasing department itself and approved by the CFO. Competitive bidding is a crucial method for the purchasing department to achieve their financial goals in terms of savings. The competitiveness is emphasized by a KPI measuring the amount of negotiations entered with multiple potential suppliers. Södra's purchasing department matches almost perfectly with the view called "commercial activity". Thus, the purchasing department are focusing on saving while putting supplier partnerships, inventory reduction and overall supplier delivery reliability aside.

5.1.3 Structural characteristics of the purchasing organization

According to Glock & Hochrein (2011), the behavior and the outcome of the purchasing organization are an effect of six different factors; Standardization, Specialization, Configuration, Involvement, Formalization and (De)-Centralization.

Standardization refers to the degree of standardization in material to enable purchases in bulk, and in processes to achieve effectiveness in the purchasing processes (Glock & Hochrein, 2011). Södra has multiple documents regarding the standardization of purchasing processes to ensure an effective process. However, the standardized processes documented are not always used and there is no requirement on following any specific process while buying material or services. The lack and non-usage of standardized processes and evaluation are especially affecting the purchases with negative results according to the KPIs which are not registered. Also, purchases of services are affected since these are more difficult to evaluate and measure. Since the standardization is not always used it is also difficult to evaluate the performance of the processes and its areas of improvement.

Specialization refers to how the labor are organized to ensure effective operations (Glock & Hochrein, 2011). Södra applies this approach by categorizing the purchases within a logical connection to ensure superior knowledge within the specific category. While the purchasing managers are responsible for one main category each their purchasers are responsible for a few subcategories. Thus, increasing the competencies in a certain market.

The configuration factor refers to the authority structure. The control, segmentation and number of positions within each section. A high level of configuration implies a high number of levels, segments and communication channels (Glock & Hochrein, 2011). Södra's level of configuration could be described as on a medium level. The buyers/purchasers report to their purchasing manager/ category manager who then reports to the CPO. The CPO reports to the CFO who could be referred to as a top-level manager. However, the view of the purchasing

organization is not united. Some business areas involve them early and want their insight and knowledge to optimize their purchases some business areas view them more as a policy maker while they want to make the decisions on their own.

Involvement refers to lateral involvement and vertical involvement. Lateral involvement is defined by the number of separate departments or functions involved in the decisions. Vertical involvement refers the number of hierarchical levels involved in the decisions (Glock & Hochrein, 2011). At Södra, both variables are on a low level. The lateral involvement often includes the business areas in the decision process but sometimes the decisions are made solely by the purchasing department itself. The vertical involvement only often considers the purchaser responsible for the category, however, in cases considered more crucial the category manager is involved in the decisions. In rare occasions the CPO could be involved in the purchase decisions. This implies less purchasing processes but also a greater risk and uncertainty for the purchasing organization.

Formalization refers to the degree in which the organization relies on rules and policies to control the behavior of its staff. In a high level formalized purchasing organization there are little variance in how purchasing processes and decisions could be done. This could be achieved by regulating decision making processes, or the processing of information. Formalizing behavior is done to achieve reduced variability, and to predict and control uncertainties. Too high level of formalization on the other hand could imply decreased motivation (Glock & Hochrein, 2011). Södra has a low level of formalization. They operate freely and are trusted on doing what is best for the specific case. This implies a highly motivational workplace with a lot of creative work. However, this might imply ineffectiveness in the processes and major variability in the decision making.

The (de-) centralization refers to the degree of the purchasing organization that is centralized or decentralized. The definition of this varies between literature, but two of them are frequently used. The first one being the level of concentration of decision-making authority and the extent of authority concentrated to a single organizational unit. The second one refers to the position in the hierarchy whereas the decision making are done. According to the latter a purchasing organization can only be considered centralized if decisions are made at a high hierarchical level (Glock & Hochrein, 2011). Södra could be considered centralized by the first definition since the decision making are conclusively authorized to the purchasing department of all purchases exceeding 50 000 SEK. However, considering the second definition it is difficult to define Södra's level of centralization/ decentralization since decision can be executed by everyone within the purchasing organization.

The summary of the current state at Södra is shown below in table 4.

CURRENT STATE AT SÖDRA

PURCHASING DEVELOPMENT MODEL	Commercial oriented – Coordinated purchasing
PURCHASING'S ROLE AT SÖDRA	Commercial activity
STRUCTURAL CHARACTERISTICS	Standardization - Low Specialization - High Configuration - Medium Involvement - Low Formalization - Low (De-)centralized - Centralized

Table 4. Summary of current state at Södra

5.1.4 Observations of the current state

As described in the analysis, Södra's current level in Van Weele's purchasing and supply development model lies between level 2 and 3. Thus, Södra's purchasing could be considered oriented between commercial and coordinated purchasing. This placement has a lot to do with their lack of a strong united purchasing strategy and its alignment to the business and corporate strategies. Due to this Södra only fulfill the requirements of step 1 to a full extent. From interviews conducted it was found that their major focus lies on negotiation and low price, and their primary indicator of performance is cost savings. Currently a new ERP system is in the phase of development which will enable a larger degree of communication between the purchasing department and its internal customers. Thus, they have realized the potential of more collaboration and transparency among the departments. Their need to prove themselves important by emphasizing their cost savings while not visualizing their actual cost per year could be a result of Södra's view of the purchasing function. The view is clear when compared to theory that the purchasing function is viewed as a "commercial activity" meaning they are evaluated by the corporation on their ability to achieve cost saving. This implies that Södra uses competitive bidding to a large extent while putting aside supplier relationships, inventory reduction and overall supplier delivery reliability. This is an effect of the evaluation being based on only contracted price which does not consider the long-term potential of for an example a supplier relationship. Another important factor that could be contributing to the emphasizes on saving is the lack of trust showed by the internal customers/ business areas a while back. This could have forced the purchasing department to instantly start showing good numbers by achieving cost savings.

The structural characteristics further emphasizes the current state of Södra's purchasing department. The involvement measure within Södra could be considered to have a low lateral and vertical involvement. This implies that buyers at Södra's purchasing department to a large extent are working solely on making decisions. However, in purchases considered more crucial guidance from category managers and the CPO could occur. Due to this, Södra's purchasing process could be considered very efficient, however, it could also imply greater risks and uncertainties for the company.

5.2 Strategic alignment and design

The following section analyses the strategic alignment, its process, and the design of a purchasing strategy. The purpose of this section is to create an understanding of the internal integration within Södra and what the consequences are if when alignment does not exist.

According to Baier et al. (2008), it is crucial that there is an alignment between strategies at different levels within the company to enable that purchasing function effectively contributes to the overall performance of the company.

At Södra there are no clearly defined or spoken purchase strategy. This would imply according to Baier et al. (2008), that this would have a negative effect on the overall performance at the company.

To define what a strategy is Baier et al. (2008), refers to the general view of scholars, that a strategy should include three different key areas. These are profitability, competitive position, and resources and capability. He further states that the overall organizational strategy should be split down to corporate strategy, business strategy and functional strategy.

The corporate strategy at Södra is clearly defined and has its core in functions and parameters that are important for the industry and the current economic situation and sustainability. The corporate strategy is divided into financial goals, sustainability goals and an overall strategy for the group. The functions and key areas that Södra's overall strategy entails, and how it is build up do align with the way Bailer et al. (2008) describes. It entails the profitability perspective, the competitive position and resources. The corporate strategy is the most global of the strategy at a firm, and it should involve the entire firm and the responsibility for developing these lies within the top management (Bailer et al., 2008). This aligns with the corporate strategy done at Södra, whereas the overall strategy and goals are clearly defined by top management.

Business strategies are according to Baier et al. (2008), more holistic and is supposed to clarify the scope of each business with a clear connection to the corporate strategy. It usually concerns four different areas; (1), forming response to change underway the industry, economy at large and regulations and political arena. (2), crafting competitive motives and market approaches. (3) uniting strategic initiatives of the functional departments. (4) addressing specific issues in the business face.

Södra has diversified their different sections in to business sectors whereas all are focusing on the overall strategy for the corporation. The strategy is developed by top management within the focal business area based on their contribution to the overall corporate strategy. The corporate strategies and the business strategies can therefore be seen as in a direct alignment.

The functional strategy exists within every major function for example marketing strategy, finance strategy, manufacturing strategy and purchasing strategy. The functional strategy aims to give more details to the business strategy. It should specify how the function should support the business unit's strategy to achieve overall performance (Baier et al., 2008).

At Södra there are no clearly outspoken purchasing strategy. They are working from a vision to be the best purchasing organization in the industry. There is a clear mission regarding how the purchasing function should be value adding to the organization. However, they have a Balance Score Card where the objectives do have a direct link to several of the overall strategies which aligns with Baier et al. (2008), view over the clear connection between function and business strategies. The link between business strategy and purchasing strategy should specify how the purchasing function will support the firms competitive advantage. A purchasing strategy should work as a key decision maker in the strategic planning process. At Södra there are no clear purchasing strategy, based on the interviews of the purchasing

managers and CPO. There is a vision and a mission for the function. But no clear guidelines in how to achieve them.

5.2.1 Linking strategy and purchasing KPIs

Creating an alignment between actions of employees and overall organizational goals is key for a well functional organization. But creating this alignment is not always an easy task, managers are depending on their ability to translate the mission to measurable priorities and goals. According to Pohl & Förstl (2011), one way to this is to connect strategic objectives to performance indicators. At Södra there is a clear view of the direct importance to measure performance and the key performance indicators are some extent align with the corporate strategies. At the purchasing organization at Södra there are several key performance indicators that have been set to guide and help the purchasers to work towards a common goal. The Performance measurements have been set in collaboration between purchasing managers, and the Chief Purchasing Officer and the Chief Finance Officer.

The relation between strategy and performance measurements are of significant importance due to its direct impact on understanding the organizational goals and making it concrete. Disconnection between strategy and performance measurement has a negative effect on the overall strategy and may affect the financial performance negatively (Franco-Santos et al., 2007). Figure 11 shows Södra's strategic alignment process.



Figure 11. Södra's alignment process compared to Baier et al. (2008)

5.2.2 Strategy performance management tool at Södra Purchasing

This section will analyze the current strategic performance management tools that are being used within the Södra purchasing department. The key areas within this section is to understand what makes a performance measurement system to work efficiently, but also understand what factors that could have a negative impact on the development and usage of such a tool.

The Balanced scorecard at the purchasing department at Södra does align with the how the theory suggest that the design should be. They have both financial and non-financial indicators. Since the Balanced scorecard looks different in different environments it is difficult to evaluate the different perspective that Södra have chosen in their Scorecard. According to theory, there should be four different perspectives: financial, customer, internal process and learning and growth. Södra have all four, either in a direct connection or with similar content. The framework of the scorecard does in detail align with the framework suggested by theory. The scorecard entails both objectives and measures, making it relatively easy to understand, and gives management a holistic view. However, the most essential part of the Balance score card according to theory is that it should entail the business areas strategy. In Södra's version of the Balanced scorecard the strategy is missing, only the vision could be found. A clearly formulated approved strategy is key when developing a Balanced

scorecard. According to theory the strategy needs to be developed beforehand and needs to be clearly formulated and approved.

5.2.3 Observations of the strategic alignment

Södra's strategic alignment is a concept aligning strategies on corporate and business level. The business strategy is thus directly contributing to the overall corporate strategy which is an important factor for a successful business according to literature. However, this process excludes the functional strategies including the purchasing strategy. The purchasing department therefore are not systematically working toward supporting their internal customers (the business areas). In the current situation Södra's does not have a clearly defined purchasing strategy, thus, its nor aligned with the business strategies. The lack of a purchasing strategy systematically aligned with the business strategies could have a negative impact on the performance. This could be an effect of purchasing and business unit's intention in the direction they want to move their business towards or a direct effect of a lack of communication between the units. To enable a united direction within the company they have to systematically align the strategies on functional levels with the business levels.

As described previously Södra does not have a clear and communicated purchasing strategy. Nor are there any process with the purpose to align strategies internally except between corporate and business level. The purchasing departments lack of a strategy makes it difficult to analyze its current performance measurements. Since according to theory there needs to be a clear and direct connection between the strategy and its performance measures. Even though, some of the KPIs could be considered to support the corporate strategy the lack of a systematic process to align them makes it difficult to evaluate if this is done on purpose or just by luck.

Since there are no direct linkage between the scorecard developed by the purchasing department and the strategy set for the purchasing organization. The Balanced scorecard has lost its power as a performance management tool and could therefore only be used as framework of objectives and measures.

5.3 Purchasing Performance Measurements at Södra

This section analyses Södra's alignment between purchasing strategy and KPIs, key areas to consider while creating a performance measurement system, and potential gain from a well-functioning system. The purpose of this section is to understand how a good purchasing performance measurement system are designed and based on and what it can contribute with. At the end of this section a summary of the analysis will be shown (table 5).

5.3.1 Crucial components within a PPMS at Södra

A mature purchasing performance measurement system is a requirement to ensure that purchasing is perceived as a strategic contributor to business performance. Pohl & Förstl (2011), further suggest that purchasing performance system should include Strategy Management, Measure Performance, Influence Behavior, Learning and improvement and Communication.

Strategy Management

The Strategy Management is depending on the environment that the business acts in and leads to different strategic choices but have its core in that measures should have its focus on the strategic objectives of the purchasing function (Pohl & Förstl, 2011). At Södra there is a

misfit between the strategy objectives and the measurement chosen. This also influences the second factor that is measuring performance.

Measuring performance

Pohl & Förstl (2011), emphasizes that purchasing performance should measure performance that are closely aligned to activities that will lead to performance. Since purchasing practices should be formed by market characteristics the measures needs to reflect these when developed. The measures should be diversified at category level to be able to give reliable information. At Södra the measurement used are to some extent formed by the market characteristics but there is no diversification regarding the different categories.

Influence Behavior

The behavioral aspect is important according to Ansari (1977), who states that performance measurement systems needs to be structural and have a behavioral view to be effective mainly to motivate employees. The performance measurements at the purchasing organization at Södra clearly states what is expected by the purchasers. And the individual measures can be seen as a clear motivational factor.

Learning and improvement

Pohl & Förstl (2011), states that adapting to changing environment and shifting business factors is key for a good purchasing system, to enable this internal learning and changes is of great importance. This is something that Södra to some extent is working actively with. The performance measurements are discussed and to some extent evaluated each year and depending on the market situation new performance measurements and targets to focus on can be decided.

Communication

To enable purchasing's role of the overall success of the firm, the result of the purchasing organization needs to be communicated to be a strategic contributor of the firm. Visibility and communication is key for purchasing, and it needs to be integrated in to the corporate reporting system (Pohl & Förstl, 2011). At Södra the results of the measurement are reported out to the purchasing group every month and to the CPO and CFO. Only when there are some big variations the CFO acts on the information. There is no direct linkage between the corporate system and the results of the purchasing department at this moment. Only the performance measurements are communicated which implies that factors like cost of the department are neglected.

5.3.2 Key Areas when measuring performance.

According to the Van Weele (2014), the performance measurement and evaluation should be based on four different dimensions to enable a comprehensive and holistic view of purchasing performance.

Price/Cost

This dimension is divided between control and reduction. Control is focusing on monitoring and evaluation of the prices that are charged by the suppliers. Here budgets, price inflation are examples of measures that are being used, and the core focus is to monitor prices to prevent major cost increases. Since the financial perspective is the core at Södra's purchasing

organization this dimension is currently being measured and monitored. Some purchases like for example diesel are monitored and evaluated based on its current index. Savings are measured against a baseline consisting of the former contract used within the same product. Thus, Södra are monitoring and evaluating the price inflation to prevent major cost increases. Reduction is referred to the activities used to reduce costs in a structured way. This can come in forms of involving new suppliers to increase competition, co-ordination of purchasing requirements or value analysis (Van Weele, 2014). This aligns with Södra's activities today, whereas competitiveness is measured in terms of using more than one potential supplier when entering negotiation.

Product/quality

According to Van Weele (2014), this dimension is divided into two sub-dimensions; Purchasing's involvement in new product development and contribution to total quality control. The core focus in purchasing's involvement in new product development lies within hours spent on innovative projects, hours spent by suppliers and the projects overall lead-time. There is no clear distinction to be drawn between this dimension and the measurements used at Södra's purchasing organization.

Purchasing's contribution to total quality control focuses on that delivered products are coherent with the specifications. Reject rates on incoming goods, number of approved suppliers and number of supplier quality agreements are parameters that are frequently being measured. The measures should indicate to what extent the company ensures correct material from suppliers. At Södra there are some performance measurements that could be aligned to this dimension. However, the lack of a standardized way of ensuring information regarding delivery reliability to the purchasing organization makes the alignment weak. The supplier code of conduct that Södra is currently working with ensures them that their suppliers are following the rules and guidelines of the organization, this is in fact a way to ensure the number of qualified suppliers.

Logistics dimension

Purchasing logistics dimension is focusing on purchasing responsibility in contributing to the efficiency of purchased material. It is according to theory measured on three different factors. Control of the timely and accurate handling of purchasing orders, control of timely delivery of suppliers and control of quantities delivered (Van Weele, 2014). There are no clear performance measurements at the centralized purchasing organization at Södra that have any clear connection to this dimension. However, the information may be available at the business units.

Organizational dimension

Purchasing's organizational dimension refers to the resources that are being used to achieve the objectives of the purchasing function. It is divided into purchasing staff, purchasing management, purchasing procedures and guidelines and purchasing information systems (Van Weele, 2014). Regarding the organizational dimension at Södra, there are clear distinctions and alignment to the different topics that are being covered by theory. The way the purchasing is managed is clear, the working instructions and availability is also clear. There are clear guidelines of how information should be managed, communicated and presented. The information-system is the part whereas Södra needs to improve in this

dimension, this is something that they have already realized and are currently working on a solution.

A summary of Södra's PPMS compared to theory are visualized in table 6.

SUMMARY OF THE PPMS AT SÖDRA	
COMPONENTS OF A MATURE PPMS	Strategy management - Low Measuring performance - Low Influence behavior - High Learning and improvement - High Communication - Low
KEY AREAS IN PPMS	Price/cost - Yes Product/quality - Yes Logistics - No Organizational - Yes

Table 5. Summary of the PPMS at Södra

5.3.3 Observations of the PPMS at Södra

Literature suggests that a purchasing performance measurement should include strategy management, measure performance, influence behavior, learning and improvement, and communication.

Since no strategy exists the strategy management cannot be supported by the empirical data collected. Thus, the KPIs used are not aligned with a purchasing strategy.

Measuring performance implies that KPIs need to be adapted to its environment. Since no diversification on KPIs exist at different categories this component could not be considered fulfilled. However, Södra uses KPIs adapted for market fluctuations on some specific products.

Influence behavior implies that purchasers should get motivated by the KPIs. Since, individual KPIs are used on every purchaser this could be considered fulfilled while not considering the common KPIs. However, the common KPIs are according to our interviews (shown in table. 5) are not adapted to each category, meaning, that some KPIs are simply not motivational for some purchasers. This could relate to different things, for example, some purchasers feel like they cannot affect certain KPIs which makes them not reporting their results while others feel like their contribution to the overall result is too small to have any affect.

Learning and improvement is something that Södra frequently employs since they yearly evaluate their KPIs to look for improvement in their measurement system. Thus, Södra could be considered good at this aspect. However, data collected in this aspect might not be sufficient to conclusively evaluate this dimension.

Communication which refers to the visibility and transparency of the purchasing department can be considered being on a medium level. Monthly report is communicated to the CPO and CFO and if big variations are shown actions are made to prevent this. However, the communication with the business units is lagging in both directions. For example, no logistical reports are communicated. The numbers reported in the monthly report excludes the actual cost of the purchasing department which could be seen as an effect of them not considering the total cost of ownership. Thus, the report would show that the purchasing

department costs more than it saves. This is a clear sign of a lack of communication and a need for extensive KPIs since the purchasing department cannot communicate their full result.

Even though the strategy doesn't exist the measurements used are to a great extent in line with how literature advises. Van Weele's (2014) description of the key components of a purchasing performance measurement system could be considered to a large extent adopted by Södra. This since three out of four components are used as a performance indicator. However, the linkage to the key components could be clearer and the logistic dimension should be considered when developing this system. The logistical dimension is something that the purchasing department has emphasized as a weakness in their current system and something that they would like to develop. However, the logistical dimension requires a greater transparency and communication with its internal customer (the business units) since they are the only ones actually experiencing the effect of the logistics

5.4 Benchmarking

This section describes the differences within the industry on how to align strategies and performance measurement.

5.4.1 Strategic alignment processes at competitors' vs Södra

This section describes the strategic alignment process at two of Södra competitors and at Södra itself. The data were gathered by interviews and describes the connection between strategies at different levels within the organizations and its connection to the purchasing KPIs. The purpose of this section is to create an understanding of Södra's purchasing progress in comparison with its competitors. The findings will be summarized in the end of this chapter and presented in table 7.

According to Company A and Company B they have a clear strategic alignment process. These two processes differ; however, both includes the entire process from corporate strategy down to diversified KPIs adapted for each category.

Company A uses a step-by-step process whereas the purchasing department are to investigate their potential contribution to the overall corporate strategy. When the purchasing strategy is approved by the top management the strategy is elaborated into purchasing KPIs. This is done in collaboration with each category manager who provide information regarding their potential contribution to the purchasing strategy and develops KPIs to match these contributions. Thus, the KPIs are diversified between the diverse categories.

Company B uses a circular process whereas top management develops documentation of their major focus areas. The focus areas are handed over to the purchasing department which task is to develop purchasing focus areas to support the corporate focus areas. In other words, they document their contribution to the corporate focus areas. Then the purchasing department put together a purchasing strategy based on their focus areas. The purchasing strategy is delivered to the top management. Their task is now to develop a corporate strategy based on the strategy's collected from all the business areas. When the corporate strategy is set, the purchasing department set up purchasing objectives in direct alignment with the strategy. The objectives are then developed into KPIs to be handed over to the corresponding category manager. The category manager then sets individual targets for each purchaser depending on the category they are responsible for.

Södra has a clear connection and a developed process to develop strategies for the business areas. This process is similar to Company A's whereas the corporate strategy is set and then the business areas have to find their contribution to these strategies. These contributions then form the basis to develop the business areas strategies. However, the connection and communication between the business areas and the purchasing strategy is not clear. The purchasing department does not consider the business area strategies while developing their strategy. Thus, the purchasing department are not systematically connected to their internal customers and the functions they are supporting. Instead the purchasing department are developing their own objectives based on their own vision without a systematic connection to the corporate strategy. The purchasing department then sets the KPIs based on their objectives. These objectives are the same for every category except from a small individual part (20%) set by the category manager.

Strategies	Company A	Company B	Södra
Corporate – Business	✓	✓	✓
Business – Purchasing	✓	✓	✗
Purchasing – KPIs	✓	✓	✗
Diversified KPIs	✓	✓	✗

Table 6. Benchmarking strategy alignment and KPI diversification

5.4.2 Observations of the benchmarking on alignment processes

To give the thesis a stronger validation and also to ensure that theory that have been selected where actually proven to be used in practice, two competitors to the focal company were selected to be interviewed. Not only to benchmark the focal company, but also to get a greater understanding what factors that the specific industry considered important.

Our first impression during the empirical data gathering from the focal company where that perhaps that theory regarding strategic alignment were not suited for all industries. The data gathered from the competitors proved this wrong. Both competitor A and B have a clear strategic alignment process, and both companies emphasized the importance of aligning strategies within the different business areas. From there both company A and B have linked their key performance indicators to the said purchasing strategy. It is clear to see that company A and B's is process almost identical to what theory suggests.

However, there have not been any deeper analysis regarding the competitor's key performance indicators or a comparison to Södra's. Another clear distinction can be drawn between the competitors and Södra, whereas both competitors have realized that the key performance indicators are not to be the same in all the different categories. This is also something that have been pointed out by theory, whereas Södra have the same indicators in all of their categories.

6. CONCLUSION

This chapter gives the reader a summary of the most crucial findings of the thesis and provides the reader with the answer to the research question. Further it provides the case company with recommendations identified from the analysis.

The aim of this study was to define how the performance measurement system should support reaching the functional strategy based on an overall corporate strategy. The outcome of the paper includes a clear description of how to align the purchasing strategy to the overall corporate strategy but also tools of how to develop and evaluate key performance indicators. To enable these contributions the following question was answered:

➤ **How should the purchasing targets and performance measurements be defined to measure the actual performance?**

The purchasing targets needs to be a result of a systematic strategy alignment process. The overall corporate strategy should be supported by the business strategy while the purchasing strategy should support the business strategy. This needs to be developed in a systematic process to ensure the direct alignment to enable all departments to steer in a joint direction. Further, the purchasing strategy are developed into purchasing objectives directly aligned with the purchasing strategy. When objectives are set each category should state their most crucial contribution to the purchasing objectives. These contributions form the basis for the KPIs, thus, the KPIs should be measures describing the performance contributed to reach the objectives. To ensure a comprehensive measurement system the purchasing department needs to ensure that the four key dimensions (described in 3.3.3) are included. Since diverse categories contributes in diverse ways this will ensure a PPMS with motivational KPIs with a larger feeling of responsibility by each category manager and his/her buyers.

The purchasing profession has made a major transformation over the last years. This has led to an increasing importance of purchasing's role since companies are emphasizing the value of their core competence. Therefore, problems emerge when the strategic alignment is not done properly. Thus, in addition to providing answers to the research questions the study revealed some interesting insights in the field of strategic development. Firstly, the characteristics of the organization, the level of development, and the managerial view of the purchasing organization has a major impact on measures used to evaluate performance. Secondly, tools to design strategies and PPMS are many in numbers. However, the misunderstanding in how to use these tools could create misalignment within the strategic hierarchal alignment. Finally, this thesis emphasizes the importance of the alignment throughout the entire corporation. The findings revealed that a systematic process of aligning strategies and objectives on all levels are key for a corporation. This could be considered extra important in a corporation like Södra whereas the company are divided in multiple business areas working with different type of products. In a situation like this alignment and transparency is key for success.

6.1 Recommendations to Södra

The recommendations are based on the analysis conducted at Södra's purchasing department. They are ranked based on importance and relevance for the purchasing department. However, the third recommendation could be considered as important as the others, but since this will require much more time it is not the primary recommendation.

1. Design a purchasing strategy to steer the purchasing department in a joint direction

A clear defined purchasing strategy will help govern the performance in a joint direction. The strategy should work as a key decision maker in the strategic planning and action plans to achieve objectives.

- **Make sure the purchasing strategy supports and are derived from the overall corporate strategy**

This is one of the major differences between a world-class purchasing organization and a mediocre one. By aligning strategies throughout the corporate it ensures all departments within the organization are working for a common future state. Thus, a wider internal collaboration needs to be established whereas different levels in the strategic hierarchy are discussing their contribution to the overall corporate strategy. In this specific case the Purchasing department are primarily supporting Södra Cell and Södra Wood which should imply that their strategies are directly aligned with the purchasing strategy. Therefore, a systematic strategy development process needs to be in place to ensure this alignment.

- **Use systematic tool to define the measures**

Currently the purchasing department are using the BSC tool to document their objectives. However, the BSC is not currently applied to its full potential. The BSC should be adopted as a tool to translate purchasing strategies to purchasing objectives and KPIs. Since the strategy is missing in the BSC the objectives lack a background. The BSC is not the only tool to develop strategies and objectives but if this should be used it needs to be used correctly to benefit from it.

2. Diversify the KPIs on a category level

Currently the same KPIs are used for every category. Based on interviews conducted some of the KPIs are not adapted for the individual category, meaning, the incentives are not present. To diversify the KPIs the recommendation is to first formulate the purchasing strategy and the activities and objectives necessary to reach the wanted state. After this the category managers will find their contribution to the objectives and KPIs should be developed based on the contributions detected. This process will contribute to an improved motivation based primarily on two factors. Firstly, the category manager will get KPIs directly connected to his/her potential contribution, meaning, that this person has the major responsibility for the result. Secondly, the involvement in the KPIs development ensures a greater understanding of what the primary focus should be to reach their vision to be the best purchasing department within the industry.

3. Improve transparency within the corporation

By looking at Van Weele's purchasing and supply development model besides the strategy work the most crucial focus to improve the purchasing organization should be transparency and collaboration. To achieve this a shift of focus from a savings to a TCO is a key factor. To enable this stage a wider internal transparency and

collaboration needs to be established. As there is an ongoing process on implementing a new ERP-system it is strongly recommended to use this system as a tool to increase transparency in terms of costs. By enabling a TCO perspective the purchasing department could focus on a long-term perspective. This would imply that the purchasing department will not be evaluated only on the contracted price but also on factors like consumption and other types of economically beneficial factors. If the system is not implemented with this feature the purchasing department will probably be forced to continue its focus on the contracted price as this is the only way visualize their economic value within the organization. A shift from savings to TCO would also enable wider collaboration with suppliers and a potential to integrate suppliers in the problem solving. Since Södra has a relatively major bargaining power this should be a realistic approach to ensure a cross-functional effort with key suppliers to solve problems of common interest.

6.2 Further research

This chapter describes potential further research from the focal company's perspective and from a pure research perspective.

6.2.1 For the company

Firstly, a thorough study of the current KPIs based on its actual effect of the overall performance could be performed. For example, how the savings parameter actually affects the performance in the long-term perspective. However, before this study could take place, a clearly defined and communicated purchasing strategy needs to be developed. By doing this Södra could most definitely find KPIs that better relates to their performance and therefore improve their performance and their internal reputation.

Secondly, the current usage of the BSC could be evaluated and modified to suit Södra's needs. As for today this model is used to some extent, however, the potential of the BSC is not achieved since it is not used correctly. By adapting the model to Södra's needs it could provide them with a useful tool to develop objectives and KPIs based on a strategy.

Finally, a mapping of the information flow would be beneficial since the processes used for this seems somewhat unstandardized. There might be a potential benefit in mapping this since it could reveal flaws and inefficiency in the purchasing process which could be eliminated.

6.2.2 For research purpose

An interesting addition to this report would be a thorough description of how to apply the BSC tool in a case company. Also, how to implement this tool and the potential effects it would have.

Further, case studies about how the actual purchasing performance measurement system is defined would be another research to focus on to increase the scope of this study. Also, how these systems are supposed to be implemented and how performance is to be measured. This could be done by a case study performed at a specific company whereas the current system is to be studied in detail.

REFERENCES

- Ansari, S.L. (1977) An integrated approach to control system design, *Accounting, Organizations and Society*, vol. 2, no. 2, pp. 101-112.
- Arjan J, Van Weele. (2014) *Purchasing and Supply Chain Management*. Sixth edn. Cengage Learning - M.U.A. GB.
- Baier, C. (2008) *The alignment performance link in purchasing and supply management: performance implications of fit between business strategy, purchasing strategy, and purchasing practices*. Betriebswirtschaftlicher Verlag Dr. Th. Gabler / GWV Fachverlage GmbH, Wiesbaden, Wiesbaden.
- Bell, J. & Waters, S. (2016) *Introduktion till forskningsmetodik*. 5th edn red. Lund: Studentlitteratur AB.
- Bryman, A. and Bell, E. (2015) *Business Research Methods*, 4th ed. Oxford: OUP Oxford.
- Caniato, F., Luzzini, D. & Ronchi, S. (2014) Purchasing performance management systems: an empirical investigation. *Production Planning & Control*, vol. 25, no. 7, pp. 616-635.
- Denscombe, M. (2014) *The Good Research Guide: For Small-Scale Social Research Projects*, 5th ed. Maidenhead, Berkshire, England: McGraw-Hill.
- Dubois, A., & Gadde, L. E. (2002) Systematic combining: an abductive approach to case research. *Journal of Business Research*, 55(7), 553-560
- Fine, C.H. & Hax, A.C. (1985) Manufacturing Strategy: A Methodology and an Illustration. *Interfaces*, vol. 15, no. 6, pp. 28-46.
- Franco-Santos, M., Kennerley, M., Micheli, P., Martinez, V., Mason, S., Marr, B., Gray, D. & Neely, A. (2007) Towards a definition of a business performance measurement system. *International Journal of Operations & Production Management*, vol. 27, no. 8, pp. 784-801.
- Glock, C.H. & Hochrein, S. (2011) Purchasing Organization and Design: A Literature Review. *BuR - Business Research*, vol. 4, no. 2, pp. 149-191.
- José Garrido-Samaniego, M. & Gutiérrez-Cillán, J. (2004) Determinants of influence and participation in the buying center. An analysis of Spanish industrial companies. *Journal of Business & Industrial Marketing*, vol. 19, no. 5, pp. 320-336.
- Kaplan, R.S. & Norton, D.P. (1992) The balanced scorecard--measures that drive performance, *Harvard Business Review*, Boulder, Vol. 70, Issue 1, pp.71-79.
- Locke, E.A. and Latham, G.P. (2002) Building a practically useful theory of goal setting and task motivation. *American Psychologist*, Vol. 57 No. 9, pp. 705-15.
- Pohl, M. & Förstl, K. (2011) Achieving purchasing competence through purchasing performance measurement system design-A multiple-case study analysis. *Journal of Purchasing and Supply Management*, vol. 17, no. 4, pp. 231-245.
- Purchasing leaders rank globalization a top issue (2005). *Reed Business Information*, Inc. (US), Boston.

Saunders, M., Lewis, P. & Thornhill, A. (2016) *Research methods for business students*, 7.th edn. Pearson Education, Harlow.

Shahin, A. & Mahbod, M.A. (2007) Prioritization of key performance indicators. *International Journal of Productivity and Performance Management*, vol. 56, no. 3, pp. 226-240.

Stephens, D. (2005). Why center-led procurement is gaining in purchasing popularity. *Purchasing*, 134(2), 26-27.

Tapinos, E., Dyson, R. & Meadows, M. (2011) Does the Balanced Scorecard make a difference to the strategy development process?. *The Journal of the Operational Research Society*, vol. 62, no. 5, pp. 888-899.

Ubeda, R., Alsua, C. & Carrasco, N. (2015) Purchasing models and organizational performance: a study of key strategic tools. *Journal of Business Research*, vol. 68, no. 2, pp. 177-188.

Wagner, S.M. & Kaufmann, L. (2004) Overcoming the main barriers in initiating and using purchasing-BSCs, *Journal of Purchasing and Supply Management*, vol. 10, no. 6, pp. 269-281.

Yin, R.K. (2014) *Case study research: design and methods*, 5.th edn. SAGE, London.

Appendix A

Interview questions for the category managers.

A. Purchasing Department

- What is purchasing's role and what function does the purchasing department have at Södra?
- Please describe your purchasing strategy and your strategic goals. How are they connected?
- How is purchasing viewed in comparison to other divisions and functions?
- Does the CPO have a seat at the board of directors? Are there any clear hierarchal levels?
- Is purchasing involved in the internal planning processes and strategic development?
- Is education or other supporting tools used to improve and ease for the purchasers?
- Are cross-functional-teams used, and to what extent?
- When is competitive bidding used and when are negotiations used?
- To what extend are you collaborating with suppliers, how do you decide to partner up with a supplier?
- What triggers the purchasing process?

B. Purchasing Performance Measurements

- Describe the role and function of the measurement system?
- What KPIs are used and why? Describe the measurement process.
- Describe the alignment between the KPIs and the purchasing strategy.
- How are the results of the KPIs communicated?
- Who are acting on the results, and what actions are taken upon these results?
- How is the measurement system used to evaluate performance of the purchasers?
- Is there any bonus system related to the measurement system?
- What KPIs do you consider most important for your category?

Appendix B

Interview questions for the CPO.

A. Purchasing department

- What is purchasing's role and what function does the purchasing department have at Södra?
- What is the corporate strategy at Södra, and what is the purchasing strategy? How are they aligned?
- How is purchasing viewed in comparison to other divisions and functions?
- Is purchasing involved in the internal planning processes and strategic development?
- Is education or other supporting tools used to improve and ease for the purchasers?
- How is purchasing governed, by budget, activity or process, how is this connected to your strategy?
- To what extent are you collaborating with suppliers, how do you decide to partner up with a supplier?
- What is included in the purchasing budget? Is the capacity enough to build relationships?
- What decisions are you involved in? What decisions do you have mandate to decide on yourself and when do you have to ask for approval?

B. Purchasing performance measurements

- Describe the alignment between the KPIs and the purchasing strategy.
- How is the measurement system used to evaluate performance of the purchasers?
- What measurements do you consider most crucial for the purchasing department?
- Describe the role and function of the measurement system?
- What do you do when you get the monthly report?

Appendix C

Interview question for the CFO.

A. Purchasing department

- What is purchasing's role and what function does the purchasing department have at Södra?
- What is the corporate strategy at Södra, and what is the purchasing strategy? How are they aligned?
- How is purchasing viewed in comparison to other divisions and functions?
- Is purchasing involved in the internal planning processes and strategic development?
- Is education or other supporting tools used to improve and ease for the purchasers?
- How is purchasing governed, by budget, activity or process, how is this connected to your strategy?
- To what extent are you collaborating with suppliers, how do you decide to partner up with a supplier?
- What is included in the purchasing budget? Is the capacity enough to build relationships?
- What decisions are you involved in within purchasing?
- How do you evaluate purchasing performance? Only by KPIs?

B. Purchasing performance measurements

- Describe the alignment between the KPIs and the purchasing strategy.
- How is the measurement system used to evaluate performance of the purchasers?
- What measurements do you consider most crucial for the purchasing department?
- Describe the role and function of the measurement system?
- What do you do when you get the monthly report?
- What characterizes purchasing performance?
- Why is it important to measure performance?
- How does the measurement contribute to reaching the objectives?

Appendix D

Interview questions for the competitors.

A. Strategic alignment

- What is the overall corporate strategy?
- What is the purchasing strategy?
 - How are these connected?
 - How does the derivation process look like?
- How is purchasing involved in strategic development and setting objectives?
- What role does the purchasing department have?
- What areas are they responsible for?