

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND
TECHNOLOGY**

**ASSESSING THE EFFECT OF STRATEGIC PURCHASING ON
SUPPLY CHAIN PERFORMANCE - A CASE OF SELECTED FIRMS IN
THE BEVERAHE INDUSTRY IN GHANA**

By

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for award of degree of*

**MASTER OF SCIENCE
(PROCUREMENT AND SUPPLY CHAIN MANAGEMENT)**

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DECLARATION

I hereby declare that this submission is my own work towards the Master of Science (MSc) in Procurement and Supply Chain Management and that, to the best of my knowledge, it contains no material previously published by another person, nor material which has been accepted for the award of any other degree of the University, except where due acknowledgements have been made in the text.

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DEDICATION

I dedicate this thesis to the Almighty God through whose undeserved kindness I have been able to complete this work.

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I am grateful to my supervisor Doctor Rockson for his ongoing mentorship and never-ending supply of fascinating tasks. His humble approach to research and science is an inspiration. This approach is evident in his simple but obvious writing style, which i aspire to emulate throughout my career. I am forever thankful for the unconditional love and support throughout the entire thesis process and every day.

I would also like to thank my friends and family for their love and support during this process. Without them, this journey would not have been possible.

Finally I would like to extend my sincere gratitude to all of the participants in my study. Their willingness to share their experience and insights has been invaluable to my research and has helped to make this thesis a success. Thank you for your time and contribution.

The logo of Kwame Nkrumah University of Science and Technology (KNUST) is centered in the background. It features a yellow eagle with its wings spread, perched on a green shield. Above the eagle is a black mortar and pestle with a red flame. The entire emblem is set against a white background with a faint 'KNUST' watermark.

ABSTRACT

The main purpose of this study is to improve supply chain performance through strategic purchasing function of organisations. The study develops a conceptual model where strategic purchasing practices are considered as the independent variable with supply chain performance as the dependent variable which is measured in three dimensions – resource performance, output performance and flexibility performance. The conceptual model is tested by data collected from firms in the beverage industry in Ghana in an attempt to address the objectives of the study. Out of the one hundred (100) questionnaires administered, 82 were

returned representing 82% response rate. This research provides a clear insight into and a particular finding on the relationship between strategic purchasing practices and specific supply chain performance measures (resource performance, output performance and flexibility performance) among firms in Ghana. The studies that were conducted by previous scholars had found and stated that strategic purchasing has positive effects on overall company performance. In this research, the findings are also in line with that statement, and identifying that among firms in Ghana especially, the strategic purchasing activities have great and positive influence on company supply chain performance. However, the effect on output performance and resource performance were more than that of flexibility performance. Therefore, firms in Ghana should have an emphasis on improving and leveraging the purchasing functions into a more strategic direction so that they achieve their performance targets' and gain significant cost savings on key resources.

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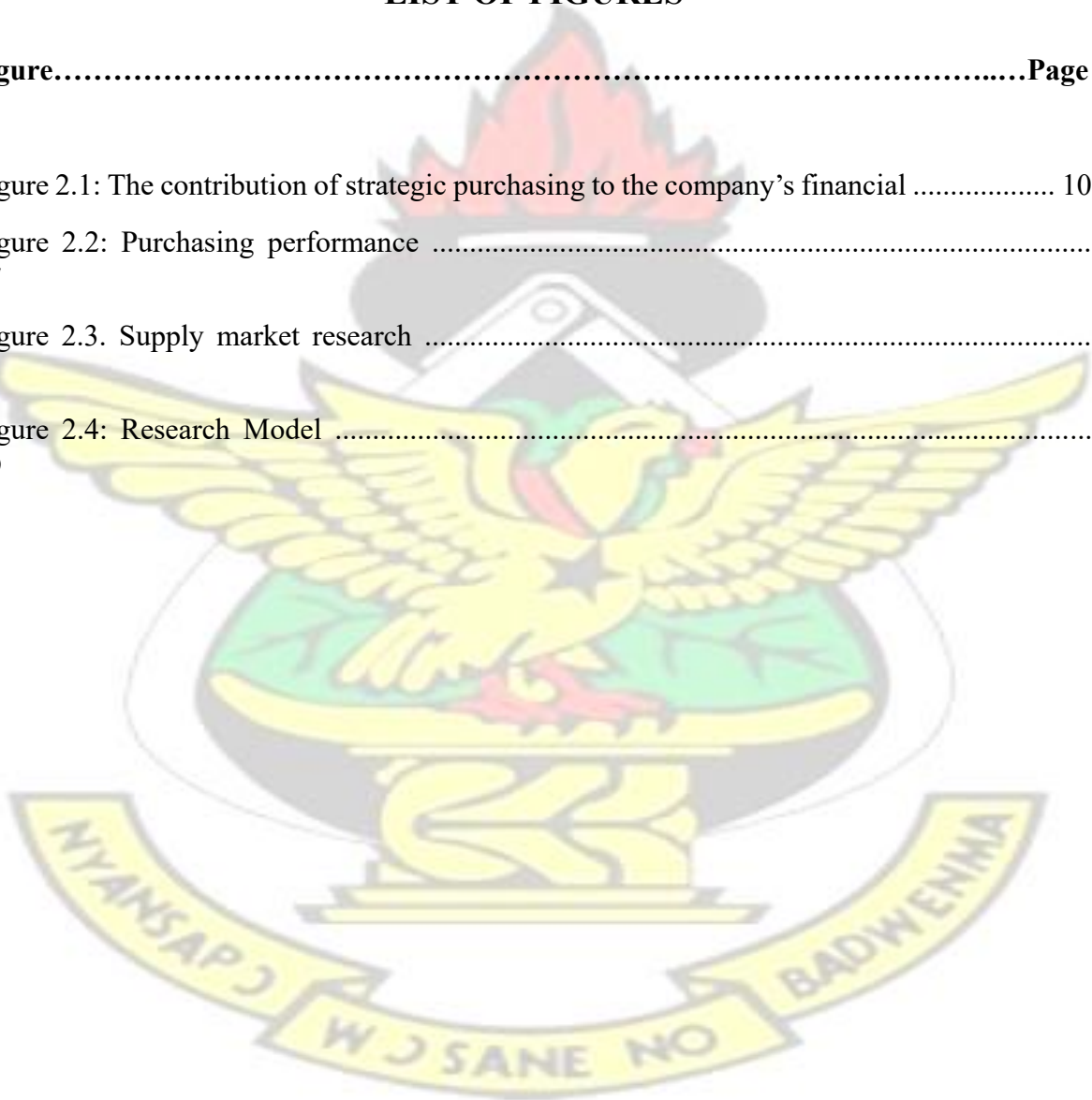
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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The purchasing function, which was considered a mere administrative function for decades, has increased lately and it has become competitive and strategic for both companies and academics. Some authors (Chen et al., 2004; Cousins et al., 2008) have developed different studies in which the increase of the importance of this function has been highlighted.

Purchasing and Supply Management (PSM) is recognized as a very important tool to create value for the company (Gadde and Hakansson, 1994). Its adequate management can create a competitive advantage for the company. One of the specific managerial themes related to the purchasing function that can create a competitive advantage is strategic alignment, a “fit between business strategy and purchasing strategy” (Baier et al., 2008). Some analyses have been developed to measure empirically the contribution of strategic alignment to business performance in recent years (González-Benito, 2007; Baier et al., 2008). Both authors have proved the positive effect of strategic alignment on business performance.

However, none of them has considered that firms organize their supply processes using a variety of sourcing strategies (Gelderman et al., 2003). The choice of these different strategies is contingent upon a variety of factors, such as the importance of a good or service to the firm and the competitiveness of the supply market place (Cousins, 2008). Due to the existence of this variety of sourcing strategies, it seems quite difficult, and even useless, to try to align the strategy of every purchased good to the firm strategy. Therefore, this master thesis is going to consider when strategic alignment is profitable according to the different sourcing strategies followed by purchasing departments.

Once the purchasing function was recognized as a strategic function, it was encouraged to develop an active role in the firm's decision making in order to enhance its strategic role. Several practices have been observed and proposed to do so in different articles. In one of them, Watts et al. (1995) developed a model to link purchasing to the firm strategy providing the purchasing function with a higher status within the company. This master thesis is also going to analyze if the active participation of the purchasing function in the strategy of the company promote strategic alignment.

Therefore, the main purpose of this study is to improve supply chain performance through strategic purchasing function of organisations. The study develops a conceptual model where strategic purchasing practices are considered as the independent variable with supply chain performance as the dependent variable which is measured in three dimensions – resource performance, output performance and flexibility performance. The conceptual model is tested by data collected from firms in the beverage industry in Ghana in an attempt to address the objectives of the study.

1.2 Problem Statement

For time past and even in recent times within some organisations, the purchasing function was isolated from the other functions of companies and was subordinated to other functions, especially production (Ponce and Prida, 2006). Purchasing policy was to ask large quantities of products to suppliers in order to get discounts (Chopra and Meindl, 2001). Besides, large orders reduced the risk of running out of some components because large stocks were available in warehouses. Additionally, more efficient purchasing transactions were obtained. Although other variables were considered, such as quality and delivery, the lack of responsibility and information in the purchasing department made it difficult to consider other aspects but price.

Purchasers and suppliers used to have very competitive relationships. There used to be a kind of winner-loser relationship in which both sides considered the other side as a competitor rather than a support. Companies tried to have access to a wide range of suppliers so that they did not depend on a single supplier. Therefore, close and helping relationships did not exist. As it has been previously mentioned, companies purchased those items which belonged to a competitive market so that they could purchase to several suppliers at the same time and change from one to another very quickly and without negative consequences (Cousins, 2008).

Despite that, most studies delve into the relationship between strategic purchasing and supply chain performance in advanced countries, there seems to be a research gap in the context of Sub Saharan Africa and Ghana in particular. The question then is, to what extent does strategic purchasing lead to supply chain performance among Ghanaian firms? It is to fill this gap this study has to be conducted to examine the effect of strategic purchasing on supply chain performance with empirical study among Ghanaian firms in the beverage industry.

1.3 Objectives of the Study

The general objective of the study is to examine the effect of strategic purchasing on supply chain performance: empirical study among Ghanaian firms in the beverage industry. However, the specific objectives are as follows;

1. To investigate the extent of strategic purchasing among selected firms in the beverage industry of Ghana.
2. To examine the extent of supply chain performance among selected firms in the beverage industry of Ghana.
3. To determine the association between strategic purchasing and supply chain performance among selected firms in the beverage industry of Ghana.

1.4 Research Questions

From the specific objectives outlined in the previous section, the study seeks to find answers to the following research questions:

1. What is the extent of strategic purchasing among firms in the beverage industry of Ghana?
2. What is the extent of supply chain performance among firms in the beverage industry of Ghana?
3. What is the association between strategic purchasing and supply chain performance among firms in the beverage industry of Ghana.?

1.5 Significance of the Study

A study on strategic purchasing and its effect on supply chain performance is relevant as it would provide the needed information for policy makers of business organisations in the country about the extent of strategic purchasing and how they influence on their supply chain performance. The findings would contribute immensely for different stakeholders of the business arena in Ghana.

Secondly, the significance of the study is to fill the gap in literature in Ghana and other developing countries by providing an insight to other researchers for extensive investigation of the field to delve in to the adoption of strategic purchasing practices among Ghanaian businesses and how it influences organisational supply chain performance.

This study is also significant because the issues that it could address are expected to bring about massive contribution to efforts directed towards policies on strategic purchasing at both departmental and company-wide levels in organisations.

Finally, the study would bring to light critical information and academic breakthrough that would fill the gap in literature in Sub Saharan Africa as far as the subject matter is concerned.

The study would be of great advantage to different stakeholders along an organisation's supply chain and also to academia as a whole.

1.6 Overview of Methodology

The study would adopt a survey research design and a quantitative research approach in an attempt to measure the extent of strategic purchasing on supply chain performance. Since quantitative research seeks to measure a particular phenomenon, the study thus develops a conceptual framework which depicts the relationships the study seeks to measure and test. Strategic purchasing is the independent variable of the study whereas supply chain performance is the dependent variable which is measured in three dimensions namely – resource performance, output performance and flexibility performance. The conceptual model was tested in quantitative survey using questionnaire to collect data and test the relationships. The questionnaire items were adopted from the studies of Chen et al. (2004) and Beamon (1999) to measure the independent variable and dependent variables respectively. Simple random and convenience sampling techniques were used to select a sample of respondents for the study with the unit of analysis been firm-level. In addition, secondary data were collected in the form of review of key literature on strategic purchasing and supply chain performance publications including journal articles, organisational policies and reports among others. However, primary data was the dominant source of data through the use of questionnaire administered. The data gathered were analysed quantitatively with the aid of relevant statistical tools such as frequency tables, measures of location and dispersion among others. Simple linear regression was adopted to test the relationships among the variables. Finally, the data was

interpreted and summarized in order to draw conclusions and suggest some useful recommendations.

1.7 Scope of the Study

This study is limited to assess the effect strategic purchasing on supply chain performance. The subjects of the study are top level management staff of Ghanaian firms in the beverage industry in Ghana. Some of the organisations selected include educational sector, health sector, financial institutions, legal and revenue and local government in Ghana. However, because of limited resources and time constraints with respect to the researcher, only selected firms in the beverage industry were contacted and selected for this study.

1.8 Limitations of the Study

With every research, there are some limitations that are subjected with the current study being no exception. The main limitation of this study was the extent of coverage. As it has been specified in the scope of the study, the study did not cover the entire country as the researcher was constrained with time and financial ability. As a result, the study was limited to selected organisations in the Sekondi-Takoradi metropolis in Ghana. Since the unit of analysis was top executives of the selected firms, there were instances where some of the respondents showed apathy to filling the questionnaires administered to them. There was also instances of unfilled spaces in the questionnaire returned to the researcher. However, these limitations did not affect the research quality in terms of validity and reliability.

1.9 Organization of the Study

This research work is organized into five (5) chapters. These are briefly described below: Chapter One: This chapter covers the introduction, background of the study, and statement of the problem, objectives of the study, research questions, significance of the study, overview of methodology, scope of the study, limitations of the study and the organization of the study.

Chapter Two: The chapter two also contains the theoretical framework and literature review of the research. Thorough research concerning this study will be made through reading books that relate to this research; extracts from other related long essays, magazines, journals, the internet, and other relevant sources.

Chapter Three: The Methodology used in this research is presented under this chapter. The Methodology will concern the research design, population, sample size, sampling method, research instrument, analysis tools used and the profile of the organization. Questionnaires will be developed and sent to respondents in the organization to seek their view. Chapter Four: This chapter discusses the data analysis and the research findings which will be a conclusive outcome of the findings. The questionnaires administered to the respondents will be critically discussed and analyzed. Chapter Five: Chapter five is the concluding part of the study where the whole findings of the study will be summarized; make recommendations and drawn conclusion.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a scholarly review of past studies related to strategic purchasing and supply chain performance. As such, it reviews concepts such as the role of strategic purchasing, measuring purchasing performance, risks associated with strategic purchasing, ethics in strategic purchasing, supply chain performance and it ends with the conceptual framework.

These have been captured in the next sub-sections in line with the study.

2.2 The Strategic Role of Purchasing

Purchasing has for a long time been considered primarily as an operational function without any strategic importance (Baily et al., 2008). However in recent years the strategic importance of purchasing has been given more attention. One reason for this could be the trend of increase in outsourcing. Companies tend to outsource a large number of activities that were earlier part of their own operations (Van Weele, 2005). This outsourcing means that costs that were once internal costs such as wages and overheads are now external in the form of purchased goods or services. Baily et al. (2008) states that the average manufacturing company disposes of well over half of its income on materials, supplies and services. This means that the strategic significance of purchasing must be realized.

The purchasing function can usually contribute to the competitive position of the company in many other ways than just through cost savings. Van Weele (2005) presents a few of these ways, such as:

- Reduction of quality costs. Purchasing can reduce quality costs by make sure that selected suppliers deliver a product or service that does not need extensive quality control. Purchasing can also reduce quality costs by making sure that the components bought do not lead to complaints on the final product.
- Product standardization. Purchasing can contribute do lower costs by striving for a reduction in product variety. This can be achieved by reducing the number of different components and/or the number of suppliers
- Contribution to product design and innovation. Often innovations in industry come from suppliers or are results from intensive interactions between suppliers and buyers. By actively encourage this kind of interactions purchasing can contribute to the continuous innovation and improvement of products.
- Stock reduction. Through imposing a solid discipline on supplier and enforce it, purchasing can minimize the need for safety stocks of components. This might include such actions as demanding a consignment stock to be held at the facility by the supplier. These types of actions can significantly reduce the amount of stock needed and thereby the capital employed.
- Increasing flexibility. If the company wishes to offer flexibility to its customers it might also have to demand it from its suppliers. The use of EDI and synchronized data systems can make it easier to inform suppliers about change in demand over time.
- Fostering purchasing synergy. Many companies have a business unit structure where the business units are fairly autonomous. In such a structure the business unit manager are responsible for both revenue and costs, hence purchasing is usually done locally. In these cases the purchasing officers at the different units can make significant savings by coordinating their purchasing with other units.

Chen et al. (2004) states that strategic purchasing is a vital link in a working supply chain. They mean that strategic purchasing can give a firm a competitive advantage by enabling the firm to:

- Foster close working relationships with a limited number of suppliers
- Promote open communication among supply-chain partners
- Develop long-term strategic relationship orientation to achieve mutual gains

Chen et al. (2004) states that strategic purchasing will lead to communications with suppliers, a limited number of suppliers and a long-term orientation. They mean that this will lead to a higher customer responsiveness, which means that the buyer gives feedback to the supplier and the supplier makes changes accordingly which leads to mutual gains and ultimately a higher financial performance, see figure 2.1.

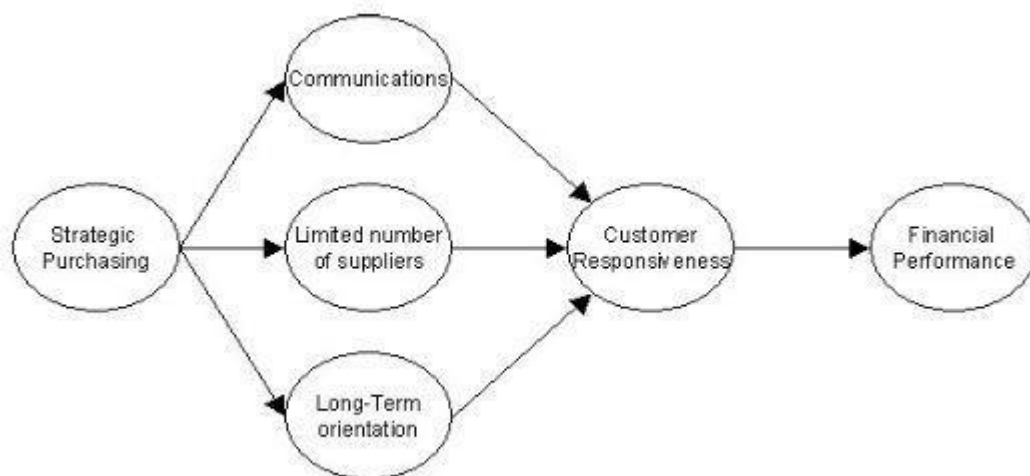


Figure 2.1: The contribution of strategic purchasing to the company's financial performance Source: (Chen et al, 2004)

Chen et al. (2004) proves all of these connections to be significant except for the statement that Long-term orientation leads to higher customer responsiveness, there is such a relation but the effects are not large enough to be significant. However Chen et al. (2004) has a rather special

view on the number of suppliers to be used and marginalize the risks involved in having very few suppliers. They state that the fewer suppliers the better under all circumstances and that the risks of a supplier to act opportunistic is counterweighted by the increase in trust which sounds a bit naive.

The conclusion to be drawn from their research however is that strategic purchasing can be an important link in the supply chain and contribute to the overall financial results of a company.

2.3 Purchasing Organization

Axelsson and Laage-Hellman (1991) states that the shape of the organization is essential for procurement performance. They imply that how the organization is to be governed is depending heavily on the type of organizational structure adopted. Axelsson and Laage-Hellman (1991) identifies three ways to organize purchasing according to specialization:

- Specialization based on commodity
- Specialization based on facility
- Specialization based on supplier

In the first case a specific buyer deals with specific products or services, in the second case a buyer deals with all purchasing for a specific facility, and in the last case a specific buyer deals with all purchasing from a specific supplier (Axelsson and Laage-Hellman, 1991)

2.4 Levels of Tasks, Responsibility and Authority

In purchasing organization three levels of responsibility can be identified, strategic level, tactical level and operational level. Each level are concerned with different types of issues. The strategic level is the highest level and are concerned with more overall issues, while the level of detail are higher at the tactical level, and the operational level are concerned almost entirely with everyday details (van Weele, 2005).

2.4.1 Strategic level

On the strategic level are decisions made influencing the long-term market position of the company. These types of decisions are usually positioned rather high up in the organization preferably at top management level (Van Weele, 2005).

Examples of purchasing decisions on the strategic level according to van Weele (2005) are:

- The development and issuing of operational guidelines, procedures, and task descriptions, which provide authority to the purchasing department.
- The development and implementation of auditing and review programs in order to monitor and improve purchasing operations and performance.
- Decisions to outsource activities, which currently have been executed by the company to outside suppliers.
- Establish long-term contracts and contacts with certified and/or preferred suppliers.
- Decisions related to adopting a supplier strategy based on multi- versus single sourcing.
- Major investments decisions.
- Decisions with regard to backward integration.
- Decisions related to policies concerning transfer-pricing and intercompany supplies.
- Decisions related to policies on reciprocal arrangements, counter trade and barter-deals.

2.4.2 Tactical level

The tactical level constitutes of decisions such as supplier selection and supplier evaluation and development. Decisions about purchasing actions that affect products and processes are also usually placed on the tactical level (Van Weele, 2005).

Examples of purchasing decisions on the tactical level according to van Weele (2005) are:

- Agreement on corporate and/or annual supplier agreements.
- Preparing and developing value analysis programs, programs aimed at design review and product standardization.
- Adopting and conducting certification programs for suppliers in order to improve the quality of incoming goods and materials.
- Selecting and contracting of suppliers in general, and programs aimed at supply-base reduction, in particular.

2.4.3 Operational level

The operational level contains the daily activities of ordering and expediting. This level is also concerned with delivery surveillance and follow up on orders.

Examples of purchasing decisions and activities on the operational level according to van Weele (2005) are:

- The ordering process
- All expediting activities related to released orders.
- Troubleshooting: solving daily problems on supply and payment in relationship with the supplier.
- The monitoring and evaluation of supplier performance.

2.5 Centralized versus Decentralized purchasing organization

One major decision that has to be made when building the purchasing organization is the degree of centralization (van Weele, 2005). The two extremes in this are centralized organization and decentralized organization.

2.5.1 Decentralized Purchasing Structure

The decentralized structure is common in companies with a business unit structure. With this type of structure the business unit manager is usually responsible for the financial result of the business unit, and are therefore often responsible for all purchasing within the business unit.

One major disadvantage with this type of organization is that the company cannot use its full bargaining power since each negotiator can negotiate only for the spending of his/her business unit. This means that the same company can have different agreements with the same supplier, so that one business unit gets one price and another unit another price. This type of organization is usually favoured when a company has business units with different needs and the products purchased at the different units are unique for each unit. (Van Weele, 2005).

2.5.2 Centralized Purchasing Organization

In a centralized purchasing organization a corporate level purchasing department are responsible for all purchasing. With this type of organization decisions about product specifications are made centrally, and the same goes for supplier selection. Contracts with suppliers are usually negotiated centrally and the same terms and conditions are valid for all business units. With this type of organization contracts tend to be long- term agreements that states from which suppliers purchases can be made and to what prices and delivery arrangements, but the actual purchasing within the agreements are usually carried out by the business units. The main advantage of this organization is that the negotiators are negotiating for the entire spend of the company and hence have a much larger leverage on the supplier and a stronger negotiation position. This usually leads to better prices and other arrangements. Another advantage of this organization is that this tends to lead to a higher level of standardization of products purchased. The disadvantage is that it creates problems in responsibility when a business unit manager are responsible for his result but cannot affect his

cost for purchased goods. This organizational structure is usually appropriate when multiple business units purchase similar products or services (van Weele, 2005).

2.6 The Procurement Process

Van Weele (2005) presents a basic model of the procurement process. This process has six steps:

1. Define specifications
2. Select supplier
3. Contract agreement
4. Ordering
5. Expediting
6. Evaluation

This process gives a rather good overall picture of the operative handling of procurement, but it lacks descriptions of other parts of procurement such as measuring performance and advanced supplier management. So, to get a broader view of the subject research on other parts of the procurement process has also been investigated.

2.6.1 The Governance Process

The governance process is a process that has as a main purpose to measure the performance of the procurement and logistics department, but also to supply guidelines in the form of instructions and policies.

2.6.2 The Strategic Sourcing Process

Developing a sourcing strategy is a complex process and there are a lot of factors that has to be taken into account, which factors vary between companies, commodities situation and environment.

One of the most common strategic decisions is the one of single versus multiple sourcing. This decision is discussed by Saunders (1994), Dobler and Burt (1996) Heniritz et al (1991) as well as others.

Dobler and Burt (1996) present a number of issues to be taken into consideration when dealing with strategic and tactical issues regarding purchasing.

2.7 Measuring Purchasing Performance

Axelsson and Laage-Hellman (1991) states that a suitable way to govern purchasing is through target setting and measuring. They state that this could be done through Key Performance Indicators. The authors divide the KPI: s into seven categories:

- Price related KPIs
- Quality related KPIs
- Delivery related KPIs
- Inventory related KPIs
- Savings related KPIs
- Activity Related KPIs
- Other

Axelsson and Laage-Hellman (1991) presents a large number of KPIs within these categories

Van Weele (2005) presents two areas in which purchasing performance can be measured, purchasing effectiveness and purchasing efficiency. He states that purchasing effectiveness is a measure of what has been accomplished and purchasing efficiency is a measure of what resources has been used to accomplish it. He divides these two measures further, see Figure 2.2.

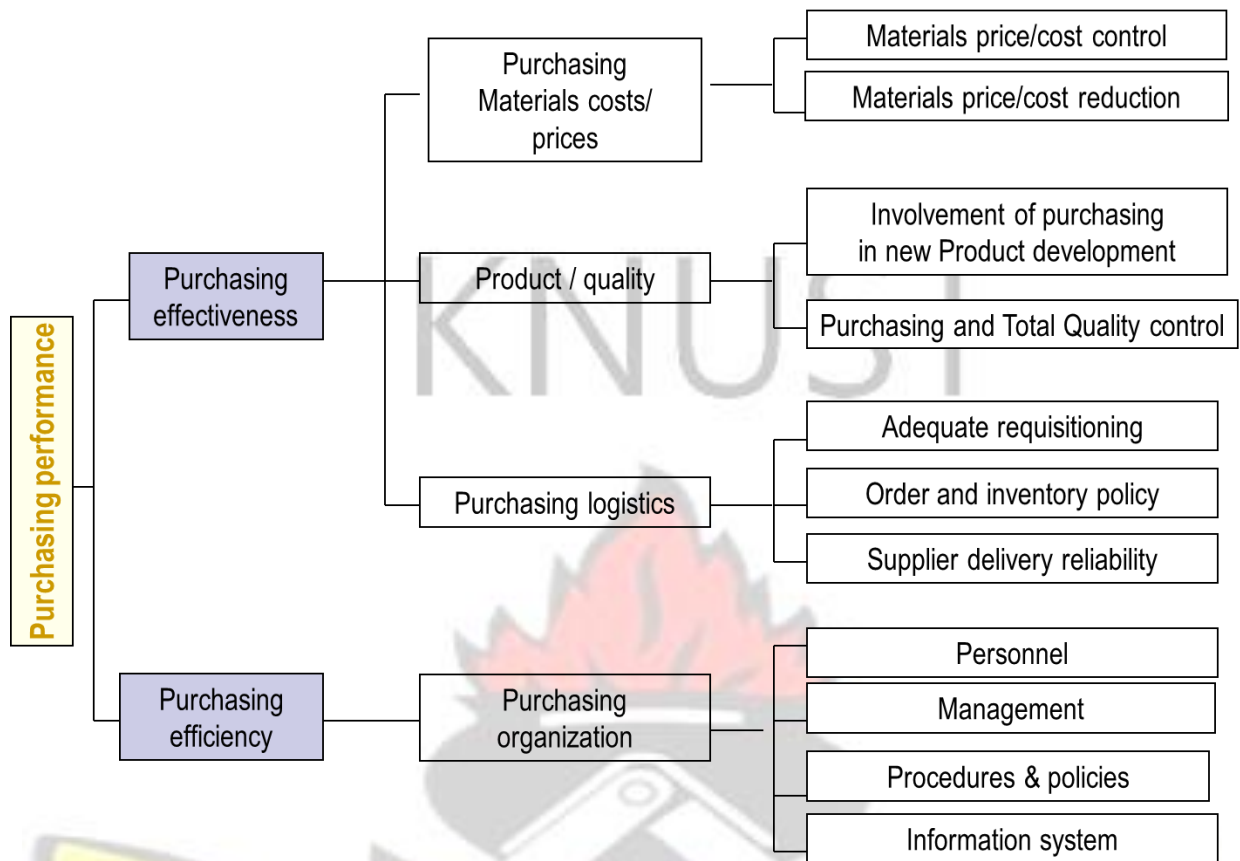


Figure 2.2: Purchasing performance

Source: van Weele (2005)

Based on van Weele's (2005) four dimensions; Cost/price, Product/Quality, Logistics and organization, presents Lööw (2006) a large amount of KPIs that can be applied in the construction industry but some of these are rather general and can be applied in other industries. These KPIs were organized into a dashboard to make them more accessible and easier to understand.

2.8 Early Supplier Involvement

Dobler and Burt (1996) states that if suppliers are involved early in the buyers' design process, they can contribute with their expertise in the following nine areas.

- Material specifications
- Tolerances
- Standardization
- Order sizes
- Process changes in supplier's manufacturing
- Packaging
- Inventory
- Transportation
- Assembly changes in buyers' plant

The authors present four reasons for utilizing early supplier involvement:

- Get suppliers input before the design is frozen
- Capitalize on the latest technology
- Save time since design cycles are getting shorter
- Let the supplier know that they are part of the team

2.8.1 Number of Suppliers

Dobler and Burt (1996) states that another aspect to consider when developing a strategy is how many parallel sources of supply should be used. A company can chose to take all supply from a single supplier, which is usually called single sourcing, or they can take their supplies from two or more suppliers, called dual or multiple sourcing. The different strategies are appropriate in different situations. According to Dobler and Burt (1996) single sourcing is appropriate when:

- Better prices can be achieved through larger volumes (economies of scale)
- Quality is important.
- A strong influence over a supplier is advantageous.
- Lower costs are incurred to source, process, expedite, and inspect.

The quality, control, and coordination required with just-in-time manufacturing require a single source.

- Significantly lower freight costs may result
- Special tooling or machinery is required, and the use of more than one supplier is impractical or excessively costly.
- Total system inventory will be reduced
- An improved commitment on the supplier's part results
- Improved interdependency and risk sharing result
- Time to market is critical

On the other hand Dobler and Burt (1996) states that dual or multiple sourcing may be appropriate:

- To protect the buyer in times of shortages, strikes or other emergencies.
- To maintain competition and provide a back-up source. Having a main supplier who is awarded about 70 % of the volume and a second who has the other 30 % of the volume usually does this. Then economies of scale can be maintained and a back up ensures supply.
- To meet local content requirements for international manufacturing locations.
- To meet customer's volume requirements.
- To avoid lethargy or complacency on the part of the single source supplier.
- When the customer is a small player in the market for a specific item.
- When the technology path is uncertain.

- In areas where suppliers tend to leapfrog each other technologically.

2.8.2 Share of Supplier Business

Dobler and Burt (1996) states that when a company decides its purchasing strategy they have to decide how large share of the suppliers turnover they want to constitute. The larger share they constitute the more influence they will get but if they withdraw their business they might put the supplier in a difficult situation, which in turn might reflect badly on themselves.

2.9 Buying Locally, Nationally or Internationally

One thing that has to be considered when developing a sourcing strategy according to Dobler and Burt (1996) is whether to source locally, nationally or internationally. Local sourcing has the following benefits according to Dobler and Burt (1996):

- Closer cooperation between buyer and supplier is possible due to the close geographical proximity.
- Delivery dates are often more certain since transportations are only a minor factor in delivery.
- Lower prices can result from consolidated transportation and insurance charges. A local supplier, in fact, brings in many local buyers' orders in the same shipment.
- Shorter lead times frequently can permit reductions or elimination of inventory.
- Rush orders are likely to be filled faster.
- Disputes are usually more easily resolved.
- Implied social responsibility to the community are fulfilled

National sourcing has the following advantages according to Dobler and Burt (1996):

- Larger economies of scale in comparison with local suppliers
- National companies can usually provide superior technical assistance.

- Larger national companies have greater production capacity and therefore greater production flexibility to handle fluctuating demands.
- Shortages are less likely with because of their broader market.

International sourcing is a lot more complex than the first two alternatives. When sourcing from abroad many issues has to be taken into account, and it is hard to pinpoint the exact benefits of international sourcing, they depend on what product is sourced from what country, and the benefits could be anything from finding the lowest price to finding the highest quality (Dobler and Burt, 1996).

2.10 Purchasing from a Manufacturer or a distributor

When purchasing goods, it is important to make a decision whether to buy from a distributor or directly from the manufacturer. In general, it is more expensive to buy from a distributor than from the manufacturer, but instead the distributor can add other values to the product. The distributor can for instance stock products from many different manufacturers and thereby make it possible to order many different products with only one order this saves money in ordering, receiving, control and invoice handling. It is also often possible to buy smaller quantities from a distributor than from a manufacturer. The conclusion is that the smaller and less significant the purchase the more likely it is that a distributor is the way to go, for instance MRO- articles are often purchased from a distributor (Dobler and Burt, 1996).

2.10.1 Environmental considerations

In some cases, environmental considerations have to be taken into account when purchasing. It is imperative that the buying firm makes sure that their suppliers does not handle environmentally problematic substances in such a manner that it could hurt the buying company. This could be through bad publicity or in some cases the buying firm might even be financially liable for problems created by a supplier (Dobler and Burt, 1996).

2.10.2 Ethical considerations

A Buyer must always be aware of potential conflicts of interest when developing a sourcing strategy and in particular when choosing suppliers (Dobler and Burt, 1996).

2.10.3 Supply Market Research

To be able to decide upon a sourcing strategy it is imperative to have all relevant information about the supply market. To get this information supply market research can be conducted. Van Weele (2005) presents the following systematic approach to conducting supply market research:

1. Determine objectives. What exactly is the problem to be solved? What information is desired? How accurate does the information have to be? These questions are to be answered in this stage. If you do not know what you are looking for it's not likely that you are going to find it.
2. Cost-benefit analysis. What will be the cost of the research? How many man-hours are required for the research? Will the value of the obtained information outweigh the expense?
3. Feasibility study. What information is already available within the company, in statistics and publications? A good documentation service can be invaluable. A lot of powerful databases can be found publicly or at universities.
4. Design of research plan. The creation of a research plan is an important step to make sure that you are well prepared. It should contain all relevant steps of the intended research.
5. Execution of research activities. In this stage the actual research is conducted according to the plan.
6. Preparing research report and evaluation. When the research is conducted a report containing the assignment as well as the obtained results should be prepared.

Van Weele's approach to supply market research is also presented in Figure 2.3

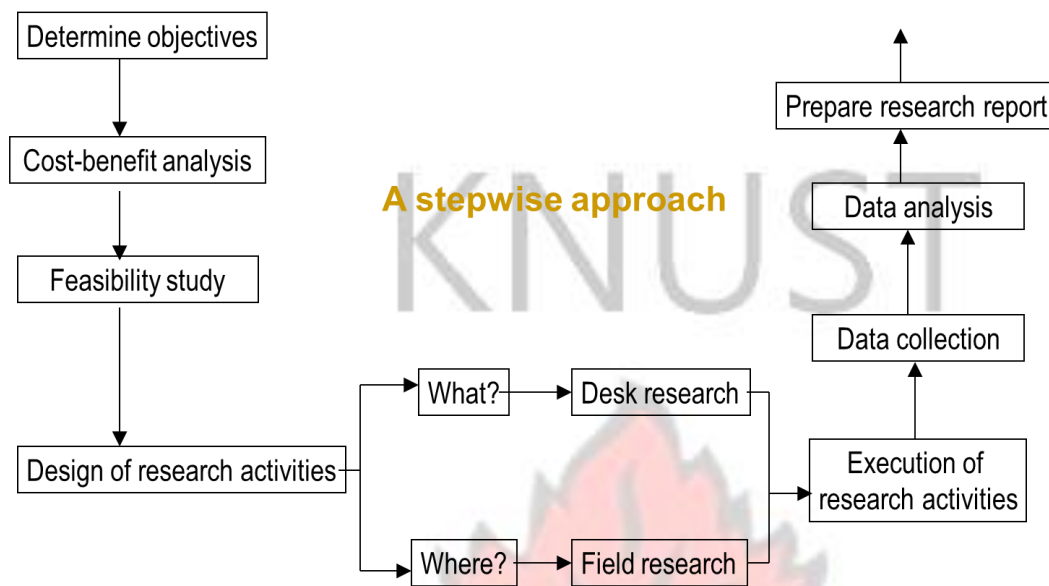


Figure 2.3. Supply market research

Source: van Weele (2005)

Supply market research can be conducted on three separate levels according to Van Weele (2005):

- **Macroeconomic research.** In macroeconomic research general factors for an entire country is investigated such as unemployment, labor cost, inflation or consumer prize index.
- **Mesoeconomic research.** At this level an industry is analyzed rather than an entire country, and more specific variables are investigated such as capacity, supply and demand.
- **Microeconomic research.** In microeconomic research specific suppliers are analyzed.

2.10 Risks Associated with Strategic Purchasing

Persson (2006) defines risk as the probability that something unwanted should happen multiplied with the severity of the consequences of such an event. Persson (2006) divide risks in purchasing into two categories, internal and external risks.

Internal risks are risks that has its origin within the own company such as Inadequate knowledge of actual need

- Imprecise RFQs
- Losing key personnel
- And many other

External risks, or commercial risks are risks that has its origin within the suppliers such as:

- Rising prices or other costs
- Shortages
- Cancellation of production of desired products
- Exchange rates

Van Weele (2005) divides risks in purchasing into four categories:

- Technical risk
- Commercial risk
- Contractual risk
- Performance risk

Technical risk is related to whether the supplier can deliver the functionality and performance agreed upon. Technical risk is also concerned with whether the supplier has the required skills to provide what was ordered (van Weele, 2005).

Commercial risks are related to the costs a company has due to a purchase. This might be prices as well as other costs that result from the purchase such as shipping, production cost, customs or other (Van Weele, 2005).

Contractual risks are concerned with whether the contract is precise enough so that no mistakes are made and that the consequences of mistakes are clearly stated. Attaching penalties for inadequate performance can minimize contractual risks (Van Weele, 2005).

Performance risks are simply the risk that the supplier is incapable of doing what the contract requires from them (Van Weele, 2005).

2.11 Ethics Associated with Strategic Purchasing

Dobler and Burt (1996) state that a company has two main windows to the outside world, the sales department and the purchasing department. Because of this they mean that the actions of these two departments are extremely visible and therefore important for the perception of the firm externally.

According to Dobler and Burt (1996), studies have shown that the behavior of the purchasing department in ethical issues has a major effect on the behavior of the rest of the company in similar situations. It is therefore essential to ensure ethical behavior from the purchasing department. The authors state that the best way to insure this is through the development and enforcement of a relevant ethics policy and through continuous training and education.

Dobler and Burt (1996) present a standard of conduct created by The National Association of Purchasing Management.

1. Ethical Perceptions. Avoid the intent and appearance of unethical or compromising practice in relationships, actions and communications.
2. Responsibilities to the employer. Demonstrate loyalty to the employer by diligently following the lawful instructions of the employer, using reasonable care and only the authority granted.

3. Conflict of interest. Refrain from any private business or professional activity that would create a conflict between personal interests and the interest of the employer.
4. Gratuities. Refrain from soliciting or accepting money loans, credits, or prejudicial discounts, and the acceptance of gifts, entertainment, favours or services from present or potential suppliers that influence, or appear to influence, purchasing decision.
5. Confidential information. Handle confidential or proprietary information belonging to employers or suppliers with due care and proper consideration of ethical and legal ramifications and governmental regulations.
6. Treatment of suppliers. Promote positive supplier relationships through courtesy and impartiality in all phases of the purchasing cycle.
7. Reciprocity. Refrain from reciprocal agreements that restrain competition.
8. Law. Know and obey the letter and spirit of laws governing the purchasing function, and remain to legal ramifications of purchasing decisions.
9. Small, disadvantaged and minority owned business. Encourage all segments of society to participate by demonstrating support for small, disadvantaged, and minority owned business.
10. Personal purchase for employees. Discourage purchasing's involvement in employeesponsored programs of personal purchases that are not business related.
11. Responsibility to the profession. Enhance the proficiency and stature of the purchasing profession by acquiring and maintaining current technical knowledge and the highest standards of ethical behaviour.
12. International Business. Conduct international business in accordance with the laws, customs, and practices of foreign countries consistent with homeland laws, your organizations policies, and these ethical standards and guidelines.

2.12 Authority Associated with Strategic Purchasing

According to Heinritz et al. (1991), a purchaser is an agent for his/her company who has been given the authority by owner or management to commit company funds. There are often monetary limits to the amount that may be spent by any single buyer without securing specific approval of the expenditure by general management. The authors' states further that the authority should be comparable with responsibility and the ability to meet that responsibility.

Heinritz et al. (1991) state that managers give purchasers authority, they usually control costs by restricting the amounts that a purchaser has the authority to sign for. There might be several steps of authority, for instance a single buyer has the authority to sign deals up to a certain amount, over that amount the deal has to be signed by a senior purchaser up to a certain amount and over that by the chief procurement officer and above that by the CEO.

2.13 Supply Chain Performance

Supply Chain Performance on the other hand can be described as the extent to which supply chain activities that facilitate meeting end-customer requirements; such as product availability, on-time delivery and the necessary inventory qualify the efficiency and effectiveness of action (Beamon, 1999). In other words, it can be described as attaching a performance measure to supply chain. Neely et al. (2000) pointed out that a performance measure can be defined as a metric used to quantify the efficiency and/or effectiveness of an action.

Supply Chain Performance measures should be linked with the strategies so that it can contribute much more to the management of business as well as the improvement of performance in the industry. This is because performance measurement provides the necessary information for management feedback for decision makers in an organization (Chan et al., 2016). Additionally, performance measurement provides an approach to identifying the success and potential of management strategies while at the same time facilitating the understanding of

the situation. Moreover, it assists in directing management attention, revising company goals, and re-engineering business processes as time goes by (Kennerley and Neely, 2002).

Many modern organizations are adopting supply chain measurement as a source of information that allows them to identify the strategies offering the highest potential for achieving the objectives and goals of the organization. Management processes such as target setting, performance evaluation and decision making are easily aligned, making it easy for the organization to achieve its objectives (Shepherd, & Günter, 2010).

Hervani et al. (2015) pointed out that corporate performance measurement continues to grow and encompass both quantitative and qualitative measurements and approaches. Most performance measurement approaches depend almost entirely on the nature of goals and objectives of individual organizations. Additionally, organizations must consider existing financial measures such as return on investment, profitability, market share and revenue growth at a more competitive and strategic level when measuring performance (Hervani et al., 2015).

2.14 Conceptual Framework

From the literature on supply chain management, the researcher found that the goal of supply chain management is to create value for the whole supply chain, from the origin to the end consumer. According to Carr and Smeltzer (1997), strategic purchasing involves the process of planning, implementing, evaluating, and controlling strategic and operating purchasing decisions for managing all activities of the purchasing function toward opportunities consistent with the firm's capabilities to meet its long-term objectives.

From the findings above the researcher's approach to this study aims at developing a theoretical framework for enhancing supply chain performance through strategic purchasing.

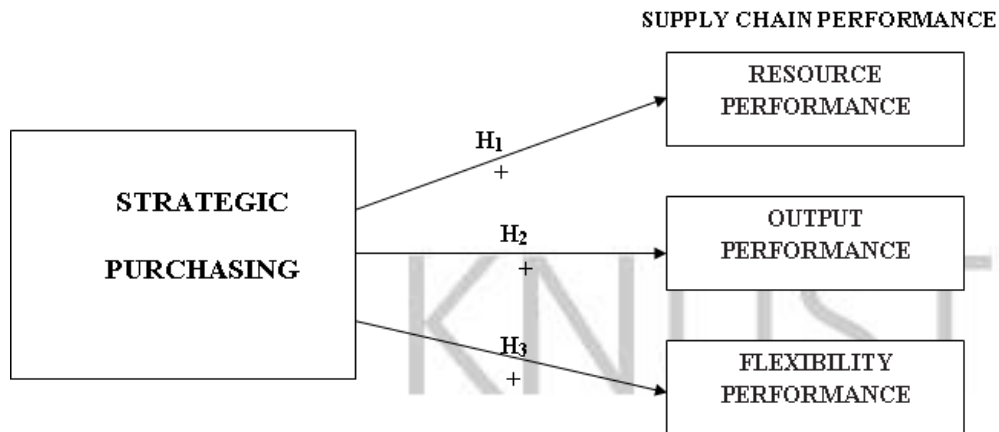


Figure 2.4: Research Model

Source: (Researcher's Construct, 2022)

The key strategic matters and options that deal with the purchasing function are the make or buy decision, supplier technology, the type of supplier relationship desired, external market factors, and how purchasing function is able to support the company's competitive strategy. The literature clearly states that purchasing strategy should be part of the overall corporate strategy (Porter, 1985; Ellram and Carr, 1994). Purchasing plays a strategic role when comprised in strategic planning and implementation at the same level as other functional areas. This appears when the significance of purchasing is acknowledged, generally approved, and implemented by top management (Ellram and Carr, 1994).

When purchasing is recognized as a strategic function, it is accepted as a key decision maker and participant in the company's strategic planning processes. The purchasing function's activities and strategies are then especially fitted to support the corporation's overall strategies. Furthermore, purchasing will join into the strategy formulation and offer different ways that the purchasing function is able to provide support and develop the firm's strategic success (Ellram and Carr, 1994).

Empirical research shows that companies with strategic purchasing can have long-term, cooperative business relationships and effective communication, and gain much more

responsiveness to the needs of their suppliers (Carr and Smeltzer, 1999; Carr and Pearson, 1999). When purchasing people actively make strategic supplier decisions, they are worried that the determined suppliers not fall into contentment. Generally, measuring supplier performance has been a really difficult task. Supplier performance measurement is the process of measuring, analyzing, managing, and monitoring vendor performance for the targets of decreasing costs, reducing risk, and providing continuous improvements in value and operations. Solid and dependable measurements can support companies focus on resources, determine performance problems, establish strategies for supply chain improvements, and identify the total cost of ownership (TCO) of supply relationships, products, and entire supply chains.

Nevertheless, empirical research shows that, from the customer's point of view, supplier performance measurement obviously works. The Supplier Performance Measurement Benchmarking Report, which is published by Aberdeen Group in 2002, identified that supplier performance improves 26.6% when measured. Significant dollar savings take place in the areas of quality, price, on-time delivery, lower lead times, contract compliance, and responsiveness (Minahan and Vigoroso, 2002; Carr and Pearson, 2002). Strategic purchasing is regarded as a crucial activity for to provide and obtain close relationships with a limited number of suppliers, and therefore render effective use of the firm's supply base (Cousins, 1999). Firms that implement intimate, cooperative relationships with their suppliers have declared significant revenue accretion and cost savings (Landeros and Monczka, 1989; Cooper and Ellram, 1993). Thus,

H1: Strategic purchasing activities have a significant and positive effect on resource performance.

There is a significant number of purchasing strategies that could be used by a company. These strategies can consist of but are not limited to sourcing, negotiation and decision, developing

and also maintaining effective and efficient relationships with suppliers, improving vendors, guarding the cost structure of the firm and reducing costs (Tan et al., 1998a). If very well established, these strategies can have significant positive effects on the performance of supply chain by decreasing costs, increasing quality, minimizing average inventory levels, ensuring on-time deliveries, and improving customer responsiveness (Swinder and Seshadri, 2001; Ellram and Liu, 2002; Chen et al., 2004; Carr and Pearson, 2002). Thus,

H2: Strategic purchasing activities have a significant and positive effect on output performance.

H3: Strategic purchasing activities have a significant and positive effect on flexibility performance.



CHAPTER THREE

METHODOLOGY OF THE STUDY

3.1 Introduction

This chapter describes the methodology that was used to generate the findings of the study. A detailed information on how the study was carried out and how the objectives were achieved are presented in this chapter. Precisely, the Chapter provides details on the research design, sources of data, methods of data collection, population and sampling technique, data analysis techniques adopted as well as ethical considerations.

3.2 Research Design

Research design refers to the general framework adopted to carry out a study. According to Saunders et al. (2009), it places emphasis on the purpose of the study, the strategy and the approach.

The purpose of a study influences the strategy and approach of the study (Saunders et al., 2009). The purpose of a study in research can take the form of descriptive, exploratory or explanatory. According to Saunders et al. (2009) mentions that descriptive research simply asks questions about what is going on. Moreover, Yin (2003) states that, when research questions are based on “what”, either exploratory or descriptive research technique could be adopted. Some of the research questions in this research were related to “what” questions (e.g. what is the effect of strategic purchasing on supply chain performance. According to Saunders et al. (2009), seven strategies are noted for carrying out studies. This comprises case study, survey, experiment, action research, grounded theory, ethnography, and archival studies. An explanatory survey research design was used with the aid of administering questionnaires to various respondents in the Sekondi-Takoradi Metropolis. According to Yin (2003), if research questions are centred mainly on “what”, either exploratory research or descriptive (survey) can be adopted. Moreover, existing literature was reviewed, this was to help the researcher concentrate on issues under

review and have in-depth knowledge and understanding Saunders et al. (2009). Saunders et al. (2009) states that a research could either be deductive or inductive in nature. As such, in relation to the objectives of the study and the relevant hypotheses, a deductive approach was adopted as deductive approach often leads to testing of hypotheses, whereas inductive approach aims at gathering data and developing theory based on the results.

3.2.1 Research Approach

The research approach used for this study was the quantitative method approach. That is to say both quantitative research methods were used to collect and analyse the data. The quantitative method allowed the use of questionnaires to collect and analyse data to meet the objectives of the study.

3.3 Population of the Study

Broadly, the study's population is made up firms in the beverage industry been represented by their procurement officers and professionals who are at least having some minimal educational level and work experience in the Sekondi-Takoradi Metropolis. Given this criterion, and within the context of Sekondi-Takoradi Metropolis, the researcher considered firms (key individuals) who were available and willing to participate in the study. Though the study was firm level, the researcher used the procurement officer or personnel in charge of procurement activities per firm to be the key respondent for data collection.

3.4 Sample Size and Sampling Techniques

According to Singh (2006), there is no single rule in reaching a suitable sample size for any study. The study adopts pragmatic view in deciding the sample size rather than following 'textbook formulas'. In this view, the suitability of 100 sample size was determined based on the needs and requirements of the study. For example, number of concepts and their indicators in the study, the complexity of the relationships to be examined/tested, and the type of statistical tools to be applied to data or method of estimation technique, statistical power and effect size

should largely inform the researcher's decision of sample size (Hair et al., 2014; Khine, 2013). The sampling technique adopted for the study was thus the purposive and convenience sampling techniques as the research needed to sample respondents using non-probability techniques. The purposive sampling technique was used to select respondents who were in charge of procurement activities in their respective organisations and have some relevant experience and understanding of the subject matter of the study. The convenience sampling technique was used to select respondents who were willing and available at the time of data collection.

3.5 Sources of Data

Data for a study could either be acquired from primary or secondary sources. While primary data relates to first-hand data gathered purposely for a particular study, secondary data refers to already existing material which were gathered for different purposes but could become relevant to a particular study Saunders et al (2009). Primary could be gathered using questionnaires, interviews, observation, or through experiments. On the other hand, secondary data may comprise data from books, journals and other academic questions. In achieving the objectives of the study, only primary data were used. This was done through administering questionnaires.

3.5.1 Data collection Instruments

The study depended on only primary data. These data were collected with the aid of both physical and online questionnaires and administered to individual procurement professionals in the Sekondi-Takoradi Metropolis. The key variables the questionnaire captured are: (1) strategic purchasing practices, (2) resource performance, (3) output performance and (4) flexibility performance. The questionnaire items were adapted from the studies of Chen et al. (2004) and Beamon (1999) to measure the independent variable and dependent variables respectively. The measures and the scales for these are shown in the Appendix.

3.6 Data Analysis

The research adopted statistical tools to determine the effect of strategic purchasing on supply chain performance: empirical study among Ghanaian firms in the beverage industry. Using the ordinary least square (OLS) regression, tables were generated to analyse respondents' perception from the questionnaire administration. The nature of the study required employing quantitative techniques in analyzing data gathered. Descriptive statistical tools such as means, frequency, and percentages were employed. The analyses were conducted using Statistical Product and Service Solutions (SPSS version 20).

3.6.1 Model Estimation

In order to meet the second objectives of the study, it was necessary to run the research model using regression analysis. The model assumption held was that the strategic purchasing has a direct and significant effect on each of the three dimensions of supply chain performance. Ordinary Least Square (OLS) regression method was adopted and a regression model was estimated.

3.6.2 Model Estimation Technique

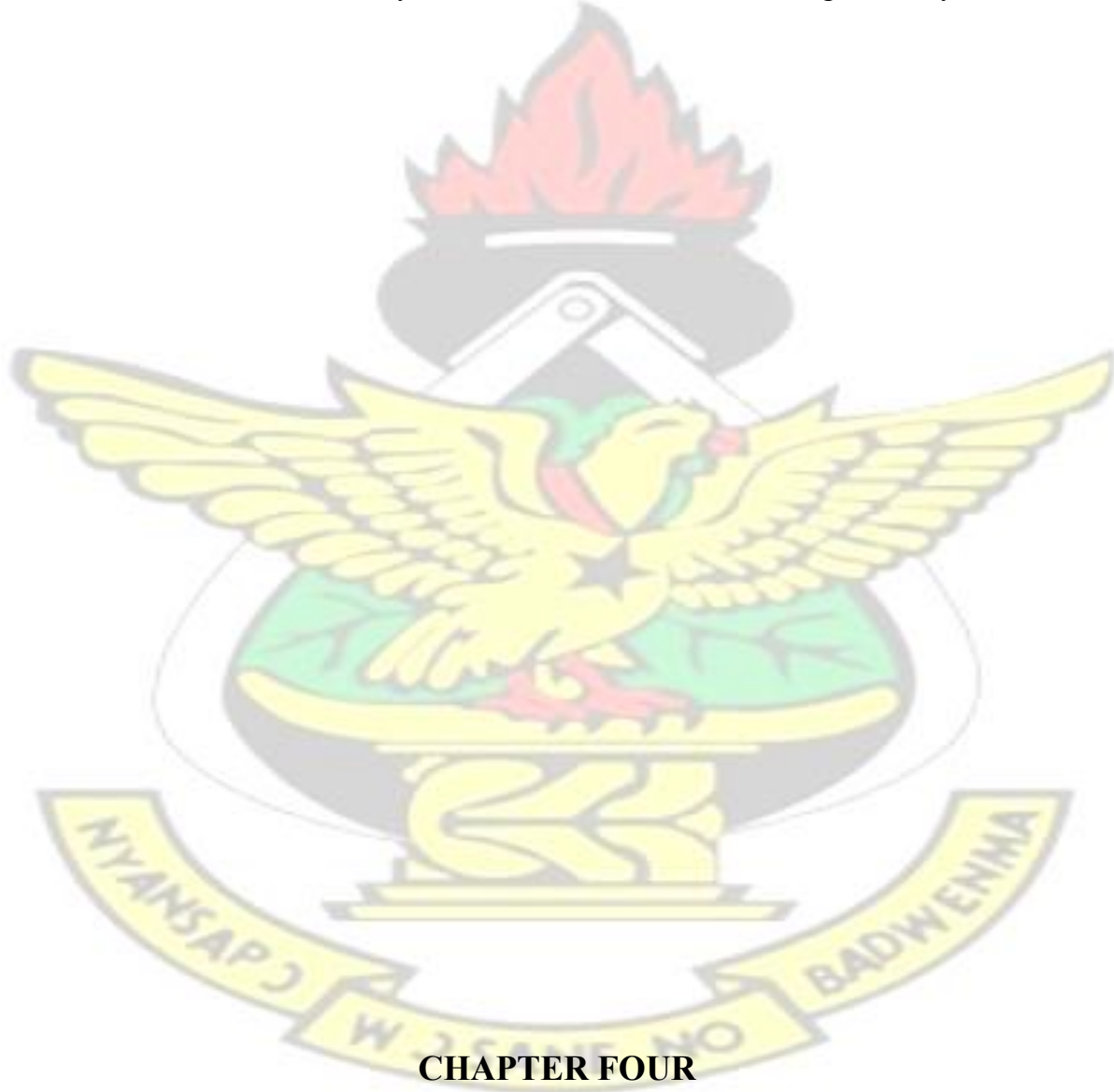
In this study, ordinary least square (OLS) regression analysis is the main estimating tool employed. Hair et al. (2014) suggest that while maintaining statistical power of 80% and significance level of 5%, 100 observations is suitable. Along this line of reasoning, a sample size of at least 100 was appropriate.

Yet, there is great consensus that the larger the sample size, the better (Pallant, 2007) and that the more the number of independent variables included in a regression model would require that more observations are captured (Hair et al., 2014).

For the questionnaire administration, simple random sampling technique was used to select a cross section of respondents with the aid of both physical and online questionnaires.

3.7 Ethical Consideration

For a study of this nature there was the need to place much emphasis on ethical issues related to the study. In this regard, an introduction letter was issued by the University to the researcher seeking the approval of the respondents for the research to be conducted at their respective firms. The introductory letter assured the individuals that the research was for academic purpose only and the confidentiality of the respondents. This was enough for authorization for the researcher to conduct the study at the selected firms in the beverage industry.



CHAPTER FOUR

PRESENTATION OF FINDINGS, ANALYSIS AND DISCUSSIONS

4.1 Introduction

This chapter presents the analysis of the field data collected and interpreted to answer the research questions for this study. The findings were discussed under the following headings in line with the objectives of the study: Demographics, strategic purchasing activities that ensures supply chain performance among firms in the beverage industry. The results were presented in the form of descriptive tables and charts, using Statistical Package for Social Sciences (SPSS) version 20 and Microsoft Excel 2013 software.

4.2 Response Rate

Out of the one hundred (100) questionnaires administered, 82 were returned representing 82% response rate as shown in Table 4.1. The response rate can be described as good as it about three-thirds of the questionnaires administered and implies that the respondents found the questions quiet convenient and easy to interpret. However, few sub-questions were not answered and this may have been due to the respondent not being sure of the answer to give or having no idea on the question asked. In all, eighteen (18) questionnaires, representing 18% were returned unanswered. The non-response was due to the following problems: time limit, ineligibility to respond and inability to locate respondents.

4.3 Demographic Information of Respondents

With reference to Table 4.1, the study revealed that 74.4% (n=61) of the participants of the study who are employees of the selected firms were males with the remaining 25.6% (n=21) were females. Majority (92.7%) of the respondents were less than 30 years. This was followed by the next group who were 31 – 40 years which was about 7.3%.

On the educational ladder, majority (45%) were First Degree graduates whereas about 26.83% had Masters qualification with about 28.04% having HND or equivalents. With the work experience of the respondents at the companies, it was realized that most of them (29%) have

been with their respective companies between 1 – 3 years or 4 – 6 years respectively. This was followed by those who had been working for more than 10 years (18%) and then 16% who had less than a year experience. This is as shown in Table 4.1 below;

Table 4.1: Demographic breakdown of respondents

Variable	Categories	Freq.	%
Gender of Respondents	Male	61	74.4%
	Female	21	25.6%
	Total	82	100%
Age of Respondents	Less than 30 years	30	92.7%
	- 40 years		7.3%
	Total	82	100%
Respondents' Number of Years Worked	Less than 1 year	13	15.9%
	1 - 3 years	29	35.37%
	4 - 6 years	20	24.39%
	7 - 9 years	6	8%
	10 years and above	14	18%
	Total	82	100%
Educational Level of Respondents	HND/Equivalents Degree Holder	23	28.04%
		37	45.12%
	Masters Holder		26.83%
	Total	82	100%

Source: Field Work, 2023

It could be seen from Table 4.1 that the demographic information of the respondents have a direct linkage with employee knowledge and perception of strategic purchasing activities at respective companies. Given the adequately long years of service of the employees and their educational level, it is believed that the responses provided in relation to the subject of the study is a true representation of the issues being looked into.

The relationship between the demographic information and the objectives of the study are duly discussed below in the following subsections.

4.4 Strategic Purchasing Activities that Ensures Supply Chain Performance

The first of objective of the study was to investigate the extent of strategic purchasing among selected firms in the beverage industry of Ghana. It adapted seven items from the study of developed by Chen et al. (2004). A seven (7) point scale was employed, measuring “1=strongly disagree” through to “4=neither agree nor disagree” to “7=strongly agree” each of these items.

Table 4.2: Strategic Purchasing Activities

Measurement Items	Min	Max	Mean	SD
1. Purchasing is included in the firm’s strategic planning process	3	7	5.48	.964
2. The purchasing function has a good knowledge of the firm’s strategic goals	2	7	5.56	1.056
3. Purchasing performance is measured in terms of its contributions to the firm’s success	2	7	5.51	1.223
4. Purchasing professionals’ development focuses on elements of the competitive strategy	1	7	5.33	1.223
5. Purchasing department plays an integrative role in the purchasing function	3	7	5.53	.949
6. Purchasing’s focus is on longer term issues that involve risk and uncertainty	1	7	5.23	1.146
7. The purchasing function has a formally written long-range plan	2	7	5.31	1.052

Source: Field Work, 2023

From Table 4.1, seven (7) items were used to measure strategic purchasing (SP) using a 7-point Likert Scale with 1=Strongly Disagree, 4=Indifferent, and 7=Strongly Agree. Among the 7 items, the highest mean was obtained from the second item: “*The purchasing function has a good knowledge of the firm’s strategic goals.*” with mean values of 5.56 and standard deviation of 1.056 which showed absolute agreement. All other items also measured more than 5.0 implying agreement and these include: “*Purchasing is included in the firm’s strategic planning process*”, “*Purchasing performance is measured in terms of its contributions to the firm’s*

success”, “Purchasing professionals’ development focuses on elements of the competitive strategy”, “Purchasing department plays an integrative role in the purchasing function”, “Purchasing’s focus is on longer term issues that involve risk and uncertainty”, and “The purchasing function has a formally written long-range plan”.

This shows that respondents indicated that strategic purchasing is highly practised vehemently among selected firms in the beverage industry.

4.5 supply Chain Performance of Firms

The second objective of the study was to examine the extent of supply chain performance among selected firms in the beverage industry of Ghana. Based on the study of Beamon (1999), three dimensions of supply chain performance were adopted namely resource performance, output performance and flexibility performance. This was done by using a 7 point scale was employed, measuring “1=strongly disagree” through to “4=neither agree nor disagree” to “7=strongly agree” each of these items. The results obtained from this evaluation are shown in the next sub-sections.

4.5.1 Resource Performance as Supply Chain Performance Outcome

Based on the study Beamon (1999), five (5) adapted items were employed in measuring resource performance as a supply chain performance outcome. This was done using a 7 point scale was employed, measuring “1=strongly disagree” through to “4=neither agree nor disagree” to “7=strongly agree” each of these items. The results obtained from this evaluation are shown in Tables 4.3 below;

Table 4.3: Resource Performance

Measuring Items	Min	Max	Mean	SD

1. I think our company's performance in "total cost of resources used" is good.	3	7	5.47	.963
2. I think our company's performance in "total cost of distribution" is good.	3	7	5.36	.925
3. I think our company's performance in "total manufacturing cost" is good.	4	7	5.61	.899
4. I think our company's performance in "cost associated with held inventory" is good.	4	7	5.47	.859
5. Overall, I think our company's "return on investment (ROI)" is high.	3	7	5.41	.856

Source: Field Work, 2023

From Table 4.5, five (5) items were used to measure Resource Performance using a 7-point Likert Scale with 1=Strongly Disagree, 4=Indifferent, and 7=Strongly Agree. Among the 5 items, the highest mean was obtained from the third item: *"I think our company's performance in "total manufacturing cost" is good"* with mean values of 5.61 and standard deviation of .899 which showed absolute agreement. All other items also measured more than 5.0 implying agreement and these include: *"I think our company's performance in "total cost of resources used" is good"*, *"I think our company's performance in "total cost of distribution" is good"*, *"I think our company's performance in "cost associated with held inventory" is good"* and *"Overall, I think our company's "return on investment (ROI)" is high"*.

This shows that respondents indicated that resource performance is recognised as supply chain performance vehemently among selected firms in the beverage industry.

4.5.2 Output Performance as Supply Chain Performance Outcome

Based on the study Beamon (1999), eight (8) adapted items were employed in measuring resource performance as a supply chain performance outcome. This was done using a 7 point

scale was employed, measuring “1=strongly disagree” through to “4=neither agree nor disagree” to “7=strongly agree” each of these items. The results obtained from this evaluation are shown in Tables 4.4 below;

Table 4.4: Output Performance

Measuring Items	Min	Max	Mean	SD
1. I think our company’s performance in “growth in sales” is good.	2	7	5.51	1.032
2. I think our company’s performance in “growth in profit” is good.	2	7	4.84	1.507
3. I think our company’s performance in “on-time deliveries” is good.	3	7	5.27	.963
4. I think our company’s incidences of “backorder/stockout” are fewer.	3	7	5.19	1.171
5. I think our company’s performance in “customer response time” is better.	3	7	5.40	.959
6. I think our company’s “manufacturing lead-time” is shorter.	3	7	5.59	1.041
7. I think our company’s “shipping errors” are fewer.	3	7	5.56	.948
8. I think our company’s “customer complaints” are fewer	3	7	5.94	1.035

Source: Field Work, 2023

From Table 4.4, Eight (8) items were used to measure output performance using a 7-point Likert Scale with 1=Strongly Disagree, 4=Indifferent, and 7=Strongly Agree. Among the 8 items, the highest mean was obtained from the sixth item: “6. *I think our company’s “manufacturing lead-time” is shorter*” with mean values of 5.59 and standard deviation of 1.041 which showed absolute agreement. Almost all other items measured more than 5.0 implying agreement and these include “*I think our company’s performance in “growth in sales” is good*”, “*I think our company’s performance in “on-time deliveries” is good*”, “*I think our company’s incidences of “backorder/stockout” are fewer*”, “*I think our company’s performance in “customer response time” is better*”, “*I think our company’s “manufacturing lead-time” is shorter*”, “*I think our company’s “shipping errors” are fewer*” and “*I think our company’s “customer complaints” are fewer*”.

However, one item measured less than 5.0 but more than 4.0 which also indicated slight agreement to that measure among the selected firms. This was Item 2: “*I think our company’s performance in “growth in profit” is good*” which measured mean values of 4.84 and standard deviation of 1.507.

This shows that respondents indicated that output performance is recognised as supply chain performance vehemently among selected firms in the beverage industry.

4.5.3 Flexibility Performance as Supply Chain Performance Outcome

Based on the study Beamon (1999), eight (8) adapted items were employed in measuring resource performance as a supply chain performance outcome. This was done using a 7 point scale was employed, measuring “1=strongly disagree” through to “4=neither agree nor disagree” to “7=strongly agree” each of these items. The results obtained from this evaluation are shown in Tables 4.6 below;

Table 4.6: Flexibility Performance

Measuring Items	Min	Max	Mean	SD
1. I think our company can quickly accommodate and respond to demand variations, such as seasonality.	2	7	5.44	1.017
2. I think our company can quickly accommodate and respond to periods of poor manufacturing performance.	1	7	5.27	.949
3. I think our company can quickly accommodate and respond to periods of poor supplier performance.	3	7	5.33	1.044
4. I think our company can quickly accommodate and respond to periods of poor delivery performance.	3	7	5.53	.940
5. I think our company can quickly introduce new products into the market.	3	7	5.49	.906
6. I think our company can quickly accommodate and respond to new competitors.	3	7	5.25	.931
7. I think our company provides a high level of customer service to our major customers	3	7	5.40	.944

Source: Field Work, 2023

From Table 4.6, seven (7) items were used to measure Flexibility performance using a 7-point Likert Scale with 1=Strongly Disagree, 4=Indifferent, and 7=Strongly Agree. Among the 7 items, the highest mean was obtained from the fourth item: *“I think our company can quickly accommodate and respond to periods of poor delivery performance”* with mean values of 5.53 and standard deviation of 1.044 which showed absolute agreement. All other items measured more than 5.0 implying agreement and these include *“I think our company can quickly accommodate and respond to demand variations, such as seasonality”*, *“I think our company can quickly accommodate and respond to periods of poor manufacturing performance”*, *“I think our company can quickly accommodate and respond to periods of poor supplier performance”*, *“I think our company can quickly introduce new products into the market”*, *“I think our company can quickly accommodate and respond to new competitors”*, *“I think our company provides a high level of customer service to our major customers”*.

This shows that respondents indicated that flexibility performance is recognised as supply chain performance vehemently among selected firms in the beverage industry.

4.6 The Effect of Strategic Purchasing to Ensure Supply Chain Performance.

To determine the association between strategic purchasing and supply chain performance among selected firms in the beverage industry of Ghana. Prior to estimating the theoretical framework developed for the study, it became necessary to assess the suitability of the items used in measuring the constructs. In doing this, two procedures were followed. These included (1) reliability test and (2) performing exploratory factor analysis (EFA). In all, eight constructs were assessed.

4.6.1 Reliability of the Measures

In checking for reliability of the measures, Cronbach alpha was used to verify the internal consistency among the measures (Pallant, 2007). This was performed in SPSS version IBM 20.

The results shown in table 4.7 indicate alpha values ranging from .872 to .922. This implies that the items used in measuring all constructs passed the initial test of reliability as they were far above the recommended threshold of .70 (Nunnally, 1978). The summary of results could be seen from Table 4.7.

Table 4.7: Reliability Test Results

Construct	Number of items	Alpha value
1. Strategic Purchasing	7	.872
2. Resource Performance	5	.922
3. Output Performance	8	.908
4. Flexibility performance	7	.884

Source: Field Work, 2023

4.6.2 Exploratory Factor Analysis (EFA)

Although the results from the reliability test shown in table 4.7 indicate that all the scales for their respective constructs had strong internal consistency, it became necessary to perform exploratory factor analysis (EFA) to help explore the interrelationships among and the dimensionality of constructs (Pallant, 2007). Hence, to demonstrate convergent validity, it was necessary to run EFA on each sub-construct. EFA was found more appropriate as some of the items were developed by the researcher and also the sample size of the study was not large enough to allow for confirmatory factor analysis (CFA). This analysis was performed in SPSS.

Using Principal Axis Factoring and Direct Oblimin with Kaiser Normalization for rotation, with Varimax rotation, seven factors were fixed to extract. In all the analyses, the system was

set to extract components with Eigenvalues above 1.0 and also suppress coefficients with smaller loadings (thus, less than 0.50).

The Kaiser-Meyer-Olkin value was .806, exceeding the recommended value of .6 and Bartlett's Test of Sphericity reached statistical significance, supporting the factorability of the correlation matrix (Pallant, 2007).

Given a minimum loading of .50, the following items were retained. For SP, items retained were SP 1, 2, 3 and 5 then for RPERF, items retained were RPERF 1-4, for OPERF, items retained were OPERF 4,5,7 and 8 then for FPERF, items retained were FPERF 1, 3, 4 and 5.

Items removed from each construct were those which could not load or had had cross-loadings with other components. After dropping the unwanted constructs and items, a satisfactory model was attained with each block of items loading onto its theoretically specified constructs. The remaining items after the EFA can be seen in Table 4.8.

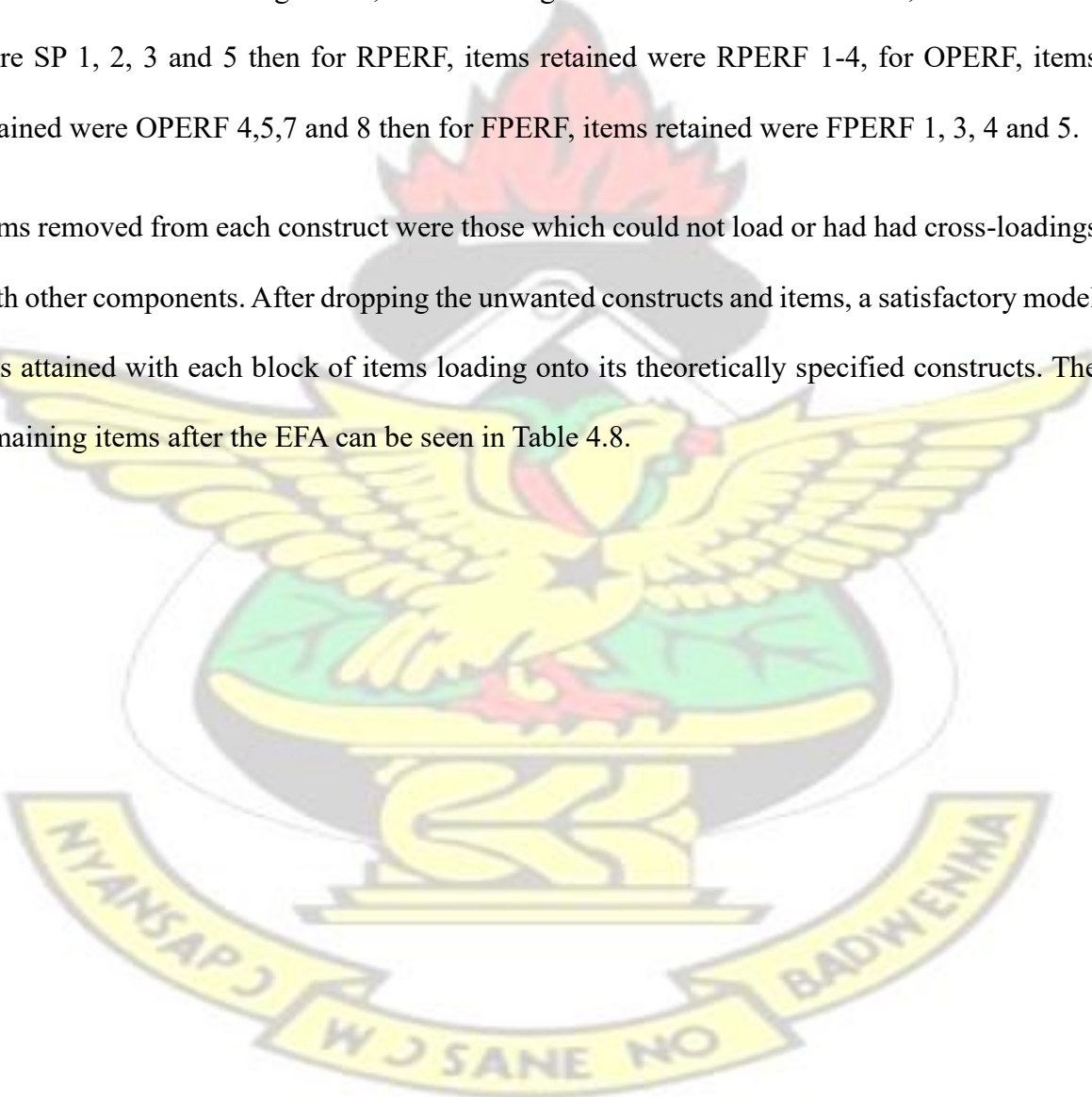


Table 4.8: Factor Loadings and Validity and Reliability Results from EFA

Constructs	Item	Details	Component			
			1	2	3	4
Strategic Purchasing	SP1	Purchasing is included in the firm's strategic planning process				.915
	SP3	The purchasing function has a good knowledge of the firm's strategic goals				.755
	SP4	Purchasing performance is measured in terms of its contributions to the firm's success				.693
	SP5	Purchasing department plays an integrative role in the purchasing function				.539
Resource Performance	RPERF1	I think our company's performance in "total cost of resources used" is good		.755		
	RPERF2	I think our company's performance in "total cost of distribution" is good		.877		
	RPERF3	I think our company's performance in "total manufacturing cost" is good		.754		
	RPERF4	I think our company's performance in "cost associated with held inventory" is good		.785		
Output Performance	OPERF4	I think our company's incidences of "backorder/stockout" are fewer.			.598	
	OPERF5	company's performance in "customer response time" is better.			.760	
	OPERF7	"shipping errors" are fewer.			.609	
	OPERF8	I think our company's "customer complaints" are fewer			.734	
Flexibility performance	FPERF1	I think our company can quickly accommodate and respond to demand variations, such as seasonality	.750			
	FPERF3	I think our company can quickly accommodate and respond to periods of poor supplier performance.	.759			
	FPERF4	I think our company can quickly accommodate and respond to periods of poor delivery performance.	.839			
	FPERF5	I think our company can quickly introduce new products into the market.	.836			

Notes:

1. Extraction Method: Principal Axis Factoring.
2. Rotation Method: Varimax with Kaiser Normalization.
3. Rotation converged in 4 iterations.

Source: Field Work, 2023

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4.7 Test of Model

In establishing the effect of strategic purchasing on supply chain performance, correlation and regression analysis were employed.

There was a single independent variables considered which was strategic purchasing (S), while there were three dependent variables which were resource performance (R), output performance (O) and flexibility performance (F).

The regression estimates were given as:

$$R = \beta_0 + \beta_1 S + \varepsilon \dots\dots\dots \text{Equation 1}$$

$$O = \beta_0 + \beta_1 S + \varepsilon \dots\dots\dots \text{Equation 2}$$

$$F = \beta_0 + \beta_1 S + \varepsilon \dots\dots\dots \text{Equation 3}$$

Where, β_0 = constant of proportionality β_1 = Coefficient of Strategic

Purchasing Dependent Variable ε = error term

S = Strategic Purchasing

R = Resource Performance

O = Output Performance

F = Resource Performance

Table 4.9: Correlations of Variables and Descriptive Statistics

Constructs	1	2	3	4
1. Strategic Purchasing	1			
2. Resource Performance	.515**	1		
3. Output Performance	.523**	.626**	1	
4. Flexibility performance	.299**	.471**	.572**	1
Mean	5.89	5.76	5.95	5.82
Standard Deviation	0.695	0.874	0.974	0.933

Note:

** Correlation is significant at the 0.01 level (1-tailed).

Source: Field Work, 2023

The correlation results shown in Table 4.9 above generally revealed that respondents from the selected firms in the beverage industry partly attribute their supply chain performance to their

strategic purchasing activities. Also, strategic purchasing had positive correlations with all the supply chain performance indicators and they were significant at 0.01. However, the relationships are not strong since most of the coefficients (r) is less than 0.5. However, correlation between strategic purchasing and flexibility performance was though positive but quite low (.299).

4.7.1 Model Assessment

From the reliability and validity tests run, the model estimation process began with creating composite variables and interaction term and then examining relevant assumptions underlying the method of estimation employed in the study. Relying on each of the set of retained measures, arithmetic mean was used to create the composite variables. The three supply chain performance indicators that passed the reliability tests and were treated as composite variables by averaging their respective items remaining. Same was done with the strategic purchasing variable.

The researcher used ordinary least square regression analysis to estimate the study's proposed model. The main outcome variables were resource performance, output performance and flexibility performance and the main predictor variable was strategic purchasing.

For Model 1, resource performance was been predicted by strategic purchasing. In the case of Model 2, output performance was being predicted by strategic purchasing and in Model 3, flexibility performance was being predicted by strategic purchasing .

The results to these effect relationships could be seen from Table 4.10.

Table 4.10: Ordinary Least Square Regression Estimates

Variables:	Standard Estimates		
	Supply Chain Performance		
	Model 1	Model 2	Model 2

Hypothesized

Direct Effect

Strategic Purchasing .648(5.381)** .733(5.490)** .401(2.800)*

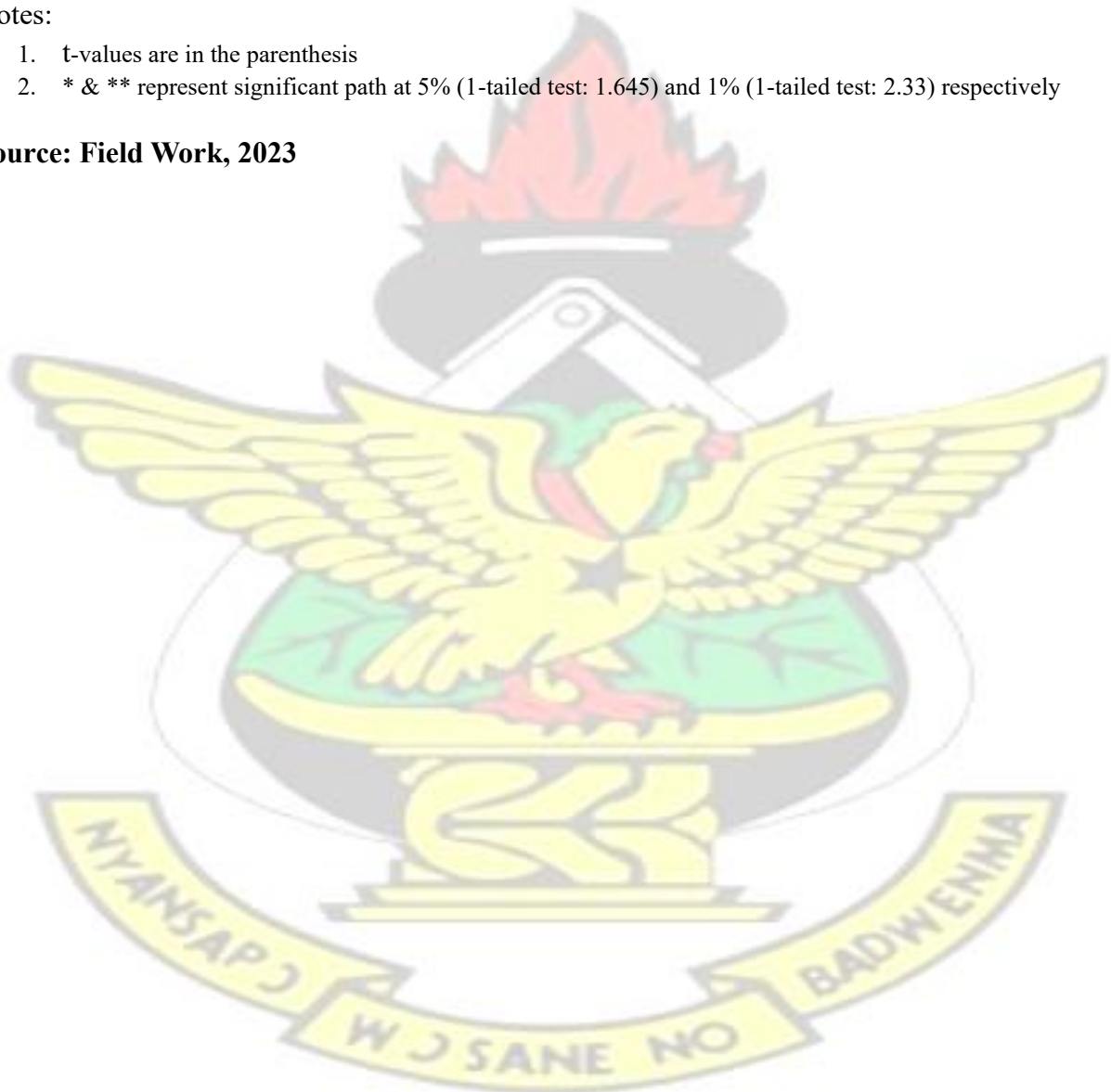
FIT INDICES χ^2

(df)	16.436 (1)	21.037(1)	6.290(1)
χ^2/df	16.436	21.037	6.290
F-Statistics	28.951	30.138	7.840
R²	.266	.274	.089

Notes:

1. t-values are in the parenthesis
2. * & ** represent significant path at 5% (1-tailed test: 1.645) and 1% (1-tailed test: 2.33) respectively

Source: Field Work, 2023



4.7.2 Hypothesis Testing and Findings

The modified models and summary of the results of the hypotheses tested are displayed in

Table 4.11: Summary of Results

Variables		Results	Remarks
Dependent Variable:	Resource Performance		
Independent Variable:	Strategic Purchasing	$\beta = .648$; $t=5.381$; $R^2=26.6\%$	Positive effect, significant
Dependent Variable:	Output Performance		
Independent Variable:	Strategic Purchasing	$\beta = .733$; $t=5.490$; $R^2=27.4\%$	Positive effect, significant
Dependent Variable:	Flexibility Performance		
Independent Variable:	Strategic Purchasing	$\beta = .401$; $t= 2.800$; $R^2=8.9\%$	Positive effect, significant

Source: Field Work, 2023

From the research model, strategic purchasing was posited to influence the three dimensions of supply chain performance namely resource performance, output performance and flexibility performance. Reliability tests through Cronbach Alpha and EFA were and all variable passed with problematic items which measured the constructs removed. The null hypothesis was that strategic purchasing had a significant and positive effect on each dimension of supply chain performance.

From the results, in model 1, it could be seen that strategic purchasing had a significant and positive effect on resource performance ($\beta = .648$; $t=5.381$; $R^2=26.6\%$) at 1% level of significance. The R^2 value imply that about 26.6% changes in resource performance of any firm can be attributed to strategic purchasing activities.

Similarly, in model 2, it could be seen that strategic purchasing had a significant and positive effect on output performance ($\beta = .733$; $t=5.490$; $R^2=27.4\%$) at 1% level of significance. The R^2 value imply that about 27.4% changes in output performance of any firm can be attributed to strategic purchasing activities.

Finally, in model 3, it could be seen that strategic purchasing had a significant and positive effect on flexibility performance ($\beta = .733$; $t=5.490$; $R^2=8.9\%$) at rather 5% level of significance. The R^2 value imply that about 8.9% changes in flexibility performance of any firm can be attributed to strategic purchasing activities.

The results implied that strategic purchasing has much impact on output performance and resource more than flexibility performance. This is because as purchasing mostly acquire inputs to the firm, it begins the firm's production or operations system, it is necessary to be considered as strategic to determine the firm's supply chain performance and organisational performance as a whole ((Baily et al., 2008; Van Weele, 2005; Chen et al., 2004).

4.8 Discussion of Findings

This study sought to examine the effect of strategic purchasing on supply chain performance: empirical study among Ghanaian firms in the beverage industry. There was review of extant literature to come out with some strategic purchasing practices. Also, supply chain performance was measured with three dimensions namely resource performance, output performance and flexibility performance.

These were modelled into a framework and hypothesized paths were tested empirically through the use of a sample of staffs and management of manufacturing firms in Sekondi-Takoradi. Using a 5-point Likert Scale to measure the scales per construct, descriptive statistics were run for the individual constructs and reliability tests were also run before the models were run.

The first hypothesis postulates that strategic purchasing have a significant and positive effect on resource performance ($\beta = .648$; $t=5.381$; $R^2=26.6\%$) at 1% level of significance. The study did find support for this assertion. It could be seen that strategic purchasing had a significant and positive effect on resource performance. The R^2 value imply that about 26.6% changes in resource performance of any firm can be attributed to strategic purchasing activities. Empirical research shows that companies with strategic purchasing can have long-term, cooperative business relationships and effective communication, and gain much more responsiveness to the needs of their suppliers (Carr and Smeltzer, 1999; Carr and Pearson, 1999). When purchasing people actively make strategic supplier decisions, they are worried that the determined suppliers not fall into contentment.

The second hypothesis postulates that strategic purchasing have a significant and positive effect on output performance ($\beta = .733$; $t=5.490$; $R^2=27.4\%$) at 1% level of significance. It could be seen that strategic purchasing had a significant and positive effect on output performance. The R^2 value imply that about 27.4% changes in output performance of any firm can be attributed to strategic purchasing activities.

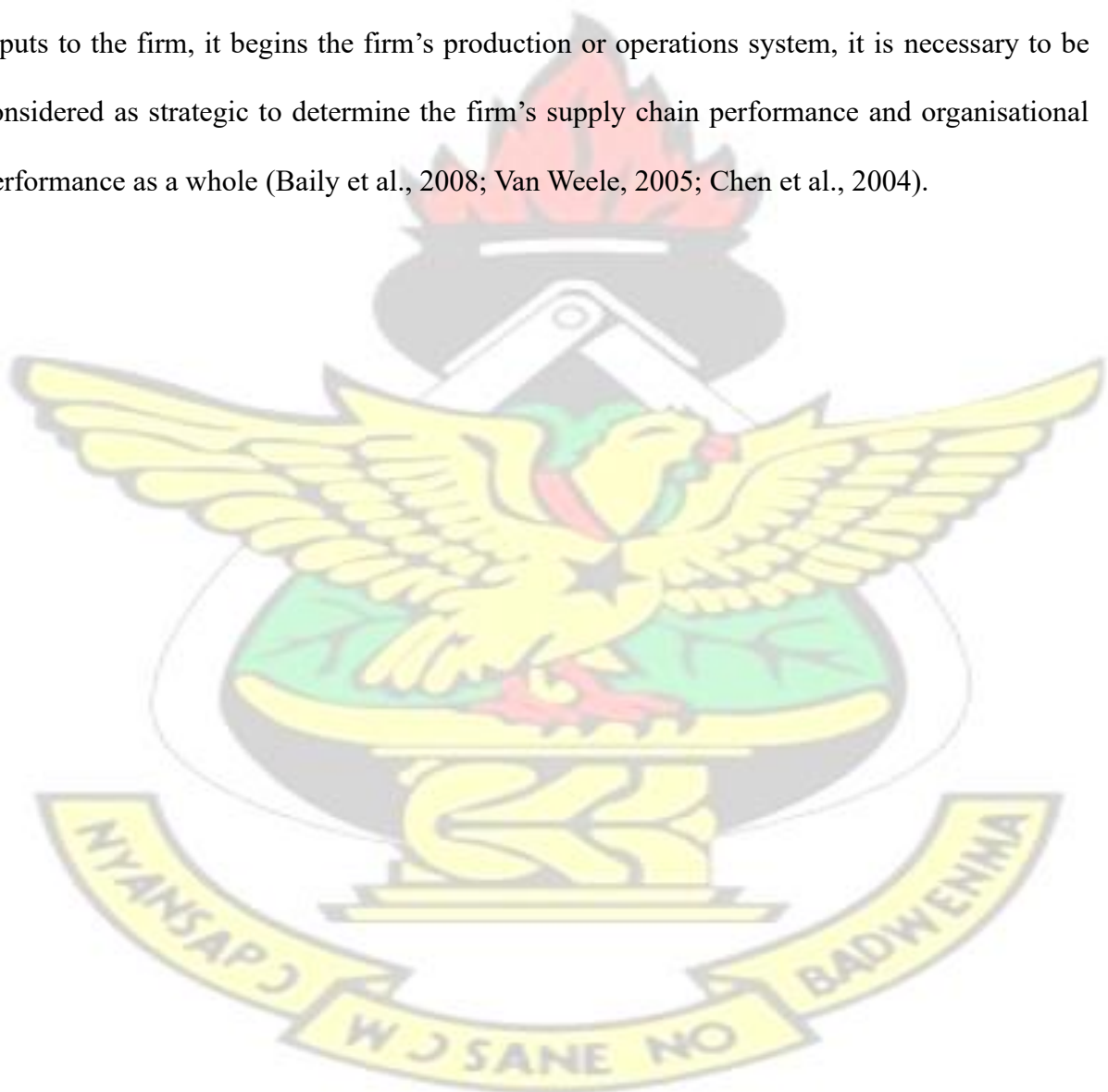
The third hypothesis postulates that strategic purchasing have a significant and positive effect on flexibility performance ($\beta = .733$; $t=5.490$; $R^2=8.9\%$) at rather 5% level of significance. It could be seen that strategic purchasing had a significant and positive effect on flexibility performance. The R^2 value imply that about 8.9% changes in flexibility performance of any firm can be attributed to strategic purchasing activities.

Purchasing plays a strategic role when comprised in strategic planning and implementation at the same level as other functional areas. This appears when the significance of purchasing is acknowledged, generally approved, and implemented by top management (Ellram and Carr,

1994). If very well established, these strategies can have significant positive effects on the performance of supply chain by decreasing costs, increasing quality, minimizing average inventory levels, ensuring on-time deliveries, and improving customer responsiveness

(Swinder and Seshadri, 2001; Ellram and Liu, 2002; Chen et al., 2004; Carr and Pearson, 2002).

The results implied that strategic purchasing has much impact on output performance and resource more than flexibility performance. This is because as purchasing mostly acquire inputs to the firm, it begins the firm's production or operations system, it is necessary to be considered as strategic to determine the firm's supply chain performance and organisational performance as a whole (Baily et al., 2008; Van Weele, 2005; Chen et al., 2004).



CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of findings in the previous chapter. It also presents the conclusion of the study and recommendations in relation to the findings of the study. Using a simple random and convenience sampling techniques, one hundred (100) responses were gathered from the staff and management of selected firms in the beverage industry. The overall response rate was 82%.

5.2 Summary of Findings

The summary of the study's findings are presented in line with the research objectives as follows:

5.2.1 Summary of Respondents' Demographics

It was revealed that the selected firms in the beverage industry is dominated by males. Most of the respondents were less than 30 years, followed by those within 31 – 40 years age bracket. With regards to the number of years worked within their respective companies, it was realized that most of the respondents had worked there between 1 – 3 years, followed by those who had been working there for more 4 – 6 years respectively.

For their educational background, it could be seen that most of the respondents were first degree holders, followed by those who had HND and Masters education.

Hence, it could be concluded that these statistics show that relatively, the respondents are abreast with the strategic purchasing activities for some time now and are capable of providing the necessary data.

5.2.2 Strategic purchasing activities that Ensures Supply Chain Performance in the selected firms

The second objective of the study was to examine the extent of supply chain performance among selected firms in the beverage industry of Ghana. Based on the study of Beamon (1999), three dimensions of supply chain performance were adopted namely resource performance, output performance and flexibility performance. This was done by using a 7 point scale was employed, measuring “1=strongly disagree” through to “4=neither agree nor disagree” to “7=strongly agree” each of these items.

Among the 5 items that measured resource performance, all had mean values more than 5.0 implying agreement, and this is an indication that resource performance is ensured vehemently practised among selected firms in the beverage industry.

Similarly, among the 8 items that measured output performance, only one item measured a mean value of less than 5.0, with the rest exceeding 5.0. This shows that respondents indicated that output performance is ensured vehemently practised among selected firms in the beverage industry.

Finally, among the 7 items that measured output performance, only one item measured a mean value of less than 5.0, with the rest exceeding 5.0. This shows that respondents indicated that output performance is ensured vehemently practised among selected firms in the beverage industry.

5.2.3 The Effect of Strategic purchasing on supply chain performance.

The last objective of this study was to determine the association between strategic purchasing and supply chain performance among selected firms in the beverage industry of Ghana. Prior to estimating the theoretical framework developed for the study, it became necessary to assess

the suitability of the items used in measuring the constructs. In checking for reliability of the measures, Cronbach Alpha was used to verify the internal consistency among the measures. Also, exploratory factor analysis (EFA) was used to determine convergent validity where some constructs and items were removed and others retained.

The correlation results revealed that generally revealed that respondents from the selected firms in the beverage industry partly attribute their supply chain performance to their strategic purchasing activities. Also, strategic purchasing had positive correlations with all the supply chain performance indicators and they were significant at 0.01.

From the results, in model 1, it could be seen that strategic purchasing had a significant and positive effect on resource performance at 1% level of significance. The R^2 value imply that about 26.6% changes in resource performance of any firm can be attributed to strategic purchasing activities.

Similarly, in model 2, it could be seen that strategic purchasing had a significant and positive effect on output performance at 1% level of significance. The R^2 value imply that about 27.4% changes in output performance of any firm can be attributed to strategic purchasing activities.

Finally, in model 3, it could be seen that strategic purchasing had a significant and positive effect on flexibility performance at rather 5% level of significance. The R^2 value imply that about 8.9% changes in flexibility performance of any firm can be attributed to strategic purchasing activities.

The results implied that strategic purchasing has much impact on output performance and resource more than flexibility performance. This is because as purchasing mostly acquire inputs to the firm, it begins the firm's production or operations system, it is necessary to be

considered as strategic to determine the firm's supply chain performance and organisational performance as a whole (Baily et al., 2008; Van Weele, 2005; Chen et al., 2004).

5.3 Conclusions

Empirical research shows that companies with strategic purchasing can have long-term, cooperative business relationships and effective communication, and gain much more responsiveness to the needs of their suppliers (Carr and Smeltzer, 1999; Carr and Pearson, 1999). When purchasing people actively make strategic supplier decisions, they are worried that the determined suppliers not fall into contentment. Generally, measuring supplier performance has been a really difficult task. Supplier performance measurement is the process of measuring, analyzing, managing, and monitoring vendor performance for the targets of decreasing costs, reducing risk, and providing continuous improvements in value and operations.

This research provides a clear insight into and a particular finding on the relationship between strategic purchasing practices and specific supply chain performance measures (resource performance, output performance and flexibility performance) among firms in Ghana. The studies that were conducted by previous scholars had found and stated that strategic purchasing has positive effects on overall company performance.

In this research, the findings are also in line with that statement, and identifying that among firms in Ghana especially, the strategic purchasing activities have great and positive influence on company supply chain performance. However, the effect on output performance and resource performance were more than that of flexibility performance. Therefore, firms in Ghana should have an emphasis on improving and leveraging the purchasing functions into a more strategic direction so that they achieve their performance targets' and gain significant cost savings on key resources.

5.4 Recommendations

Though the study identified a number of strategic purchasing activities being implemented by the firms in the beverage industry in Ghana, it generally found that a number factors constraint the industry from holistically enjoying its advantages. In relation to these challenges, the researcher recommends the following in line with the findings and objectives of the study:

It has been realized from extant literature that there have been several performance measures as far supply chain performance is concerned. Every industry has its means of measurement. While some use the Balanced Scorecard (BSC) and other measures. It is important for the selected firms to have own-developed performance measurement model for strategic purchasing that would make it easier to have accurate assessment of their operations.

One key driver of supply chain performance is information sharing. In order to achieve maximum level of performance, it is recommended that there is the need for internal supply chain members of selected firms as well as all external members of their supply chain to at every point in time cooperate by making information sharing an answer to this.

In order to integrate the various activities of a typical manufacturing firm as well as sharing information, contemporary information system such as ERP should be adopted. The initial cost of could be high but in the long term, it reduces unnecessary logistics costs such as back order cost, high inventory storage cost and material handling cost.

The study revealed that strategic purchasing does not much influence flexibility performance. It is therefore recommended that there should be identification and adoption of new management philosophies such as lean management, total quality management (TQM) and JIT which add value and contribute to supply chain performance. This will help reduce the overall

wastes in the manufacturing operations, as well as increasing the flexibility of the firm to improve organizational performance.

It is necessary that all efforts towards improvement supply chain performance and strategic purchasing be supported by top management. This would augur well for their adoption and implementation. Therefore, it is recommended that stakeholders of the selected firms in Ghana should be flexible to adapt to this new concept of supply chain management and value creation and develop interest to implement it in their industry so as to create value for their customers.

5.5 Areas for Further Research

In view of the findings and limitations of this study, it is recommended that these areas be further investigated:

Expansion of the scope of the study to include other industries such as the service industry, transport industry, to determine the effect of strategic purchasing practices on supply chain performance.

Carrying out a similar study in other service organization to validate the findings.

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Appendix

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY QUESTIONNAIRE

This questionnaire is part of a project work required by the Kwame Nkrumah University of Science and Technology as a partial requirement for the award of a Master of Science in Procurement and Supply Chain Management degree. The questionnaire is designed to solicit your independent views on *“assessing the effect of strategic purchasing on supply chain performance - a case of selected organisations in Sekondi-Takoradi metropolis”*. All information provided shall be treated as confidential and used strictly for Academic purpose. Please answer the following questions freely without indicating your name.

ADMINISTERED TO KEY STAFFS OF FIRMS

PART 1: BACKGROUND DATA

1. Your Gender?

Male ☐

Female ☐

2. What is your age?

Less than 30 years ☐ 30-40 years ☐ 41-50 years ☐ 51 and above ☐

3. How long have you worked in your organisation?

Less than 1 year ☐ 1-3 years ☐ 4-6 years ☐ 7-9 years ☐ 10 years and above ☐

4. What is your level of education?

JHS ☐

SHS ☐

HN ☐ D ☐ Degree ☐

Masters ☐

☐ Other, Please specify.....

PART 2: STRATEGIC PURCHASING

5. To what extent do you agree or disagree with each of the following statements. *(Use the scale in such a way that a “1” will indicate that the aspect you Strongly Disagree, “4”=Neither Agree nor Disagree and a “7” will indicate that the aspect you Strongly Agree).* You can circle the appropriate number that follows.

<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Somehow Disagree</u>	<u>Neutral</u>	<u>Somehow Agree</u>	<u>Agree</u>		<u>Strongly Agree</u>
1	2	3	4	5	6		7
In your organisation,					Response		
1. Purchasing is included in the firm’s strategic planning process	1	2	3	4	5	6	7
2. The purchasing function has a good knowledge of the firm’s strategic goals	1	2	3	4	5	6	7
3. Purchasing performance is measured in terms of its contributions to the firm’s success	1	2	3	4	5	6	7
4. Purchasing professionals’ development focuses on elements of the competitive strategy	1	2	3	4	5	6	7
5. Purchasing department plays an integrative role in the purchasing function	1	2	3	4	5	6	7

6. Purchasing's focus is on longer term issues that involve risk and uncertainty	1	2	3	4	5	6	7
7. The purchasing function has a formally written long-range plan							

PART 3: SUPPLY CHAIN PERFORMANCE

6. Indicate your level of agreement with respect to the extent of supply chain performance. *(Use the scale in such a way that a "1" will indicate that the aspect you Strongly Disagree, "4"=Neither Agree nor Disagree and a "7" will indicate that the aspect you Strongly Agree). You can circle the appropriate number that follows.*

<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Somehow Disagree</u>	<u>Neutral</u>	<u>Somehow Agree</u>	<u>Agree</u>	<u>Strongly Agree</u>
1	2	3	4	5	6	7

Your RESOURCE PERFORMANCE	Response						
1. I think our company's performance in "total cost of resources used" is good.	1	2	3	4	5	6	7
2. I think our company's performance in "total cost of distribution" is good.	1	2	3	4	5	6	7
3. I think our company's performance in "total manufacturing cost" is good.	1	2	3	4	5	6	7
4. I think our company's performance in "cost associated with held inventory" is good.	1	2	3	4	5	6	7
5. Overall, I think our company's "return on investment (ROI)" is high.	1	2	3	4	5	6	7

Your OUTPUT PERFORMANCE	Response						
9. I think our company's performance in "growth in sales" is good.	1	2	3	4	5	6	7
10. I think our company's performance in "growth in profit" is good.	1	2	3	4	5	6	7
11. I think our company's performance in "on-time deliveries" is good.	1	2	3	4	5	6	7
12. I think our company's incidences of "backorder/stockout" are fewer.	1	2	3	4	5	6	7
13. I think our company's performance in "customer response time" is better.	1	2	3	4	5	6	7
14. I think our company's "manufacturing lead-time" is shorter.	1	2	3	4	5	6	7
15. I think our company's "shipping errors" are fewer.	1	2	3	4	5	6	7
16. I think our company's "customer complaints" are fewer	1	2	3	4	5	6	7

Your FLEXIBILITY PERFORMANCE	Response						
1. I think our company can quickly accommodate and respond to demand variations, such as seasonality.	1	2	3	4	5	6	7
2. I think our company can quickly accommodate and respond to periods of poor manufacturing performance.	1	2	3	4	5	6	7
3. I think our company can quickly accommodate and respond to periods of poor supplier performance.	1	2	3	4	5	6	7

4. I think our company can quickly accommodate and respond to periods of poor delivery performance.	1	2	3	4	5	6	7
5. I think our company can quickly introduce new products into the market.	1	2	3	4	5	6	7
6. I think our company can quickly accommodate and respond to new competitors.	1	2	3	4	5	6	7
7. I think our company provides a high level of customer service to our major customers	1	2	3	4	5	6	7

7. Could you provide some recommendations to ensure a better implementation of strategic purchasing practices that leads to supply chain performance in Ghanaian business sector?

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Thank you for being part of this research.

