



**THE EFFECT OF STRATEGIC SOURCING PRACTICE ON
ORGANIZATIONAL PERFORMANCE: SOURCING PERCEPTION SURVEY
OF AMREF HEALTH AFRICA IN ETHIOPIA**

**BY
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Declaration

I, the under signed, declare that this thesis entitled *‘Effect of Strategic Sourcing Practice on Organizational Performance: Sourcing perception Survey of Amref Health Africa in Ethiopia,* is my original work and to the best of my knowledge has not been presented for a degree by any other person, and that all the sources of material used for the thesis have been duly acknowledged.

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This is to certify that the thesis carried out by Eyerusalem Ketema on the topic entitled: *“Effect of Strategic Sourcing Practice on Organizational Performance: Sourcing Perception Survey of Amref Health Africa in Ethiopia”* is her original work and is suitable for submission for the award of Master of Art Degree in Logistics and Supply Chain Management.

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Abstract

Strategic sourcing is a very crucial part of Supply Chain Management. This research was conducted to analyze the relationship between effect of strategic sourcing practice (measured in terms of supplier development, long-term relationship, effective procurement Planning and Communication), and organizational performance which is the operational performance in Amref Health Africa in Ethiopia. A descriptive correlation research design was used to achieve the purpose of the study. Owing to the small number of the total population, the study had employed census survey to quantitatively assess the supposed relationship between the dependent and independent variables. Questionnaire was used as the formal instrument of data collection. A total of 54 questionnaires were distributed and 52 of them were filled and returned to make the response rate about 96 percent. These samples were drawn from the total population using purposive sampling techniques. Moreover, the data gathering tools for this research were questionnaire and document analysis. Data collected using these instruments were analyzed using descriptive statistics and t-test. Finally, the study revealed that there was a statistically significant positive correlation between strategic sourcing practice (measured in terms of Supplier Development, Long-term Relationship, Effective Procurement Planning and Communication), and operational performance. And also it suggested that the levels of strategic sourcing practices and operational performance are moderate in the case of AHAE as the perceived evaluation of the respondents reply.

Key words: *Operational Performance , Organizational Performance and Strategic Sourcing Practices*

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The Researcher

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List of Acronyms and Abbreviation

AHAE: Amref Health Africa in Ethiopia

CQS -qualifications selection,

FBS- fixed budget selection consultants’

NGO- Non-Governmental Organization

OP- Operational Performance

PAT- Principal-Agent Theory

QBS-quality based selection

QCBS, - quality and cost based selection

RBD- Resource Based Dependency

RBT- Resource Based Theory

ROA-Return on Asset

ROI- Return on Investment

SCM: Supply Chain Management

SD- Standard Deviation

SNNPR- Southern Nations, Nationalities, and People’s Region

VIF- Variance Inflation Factor

CHAPTER ONE

1. INTRODUCTION

It briefly reviews previously done research works of different authors on strategic sourcing. Moreover, it states the problem of concern that the study attempts to address and then goes on stating what the study is looking to achieve and its importance for the individual researcher and anyone interested on the subject matter. In other words, background, statement of the problem, objectives, significance, scope, definition of key terms and organization of the study are discussed. In addition, it describes the research design and methodology that have been used.

1.1. Background of the study

Effective strategic sourcing is very crucial concept of supply chain management. Sourcing is researching the market for potential input sources, securing the continuity of these sources, searching for alternative sources and keeping the relevant knowledge up to date (Vollman, Berry, and Whybark, 2004).

Sourcing evolves from traditional purchasing approach and there are different definitions for sourcing. Sourcing defined as a strategic sourcing and global sourcing. But this study only focuses on strategic sourcing which is popular definition of the term.

According to Lysons and Farrington (2006), defines strategic sourcing as “concerned with the longer-term decision relating to high – profit, high supply risk items and low-profit, high supply risk bottleneck product and services”. It’s also concerned with the formulation of long-term purchasing policies, supplier base, partnership sourcing, reciprocal and intra - company trading, globalization and countertrade, the purchase of capital equipment and ethical issues. Sourcing costs represent 40 to 80 percent of the cost of goods sold, and 30 to 50 percent of revenues – a ratio that has remained constant in most industries for many years. Companies excelling in strategic sourcing save almost 10 to 20 times as much as it costs to operate their sourcing operations. The effort required to reduce 10 percent of the sourcing cost is much less than gaining similar amount of revenue (Chopra and Meindl, 2003).

Strategic sourcing consists of processes of planning, evaluating, implementing and controlling all sourcing activities undertaken by an organization to achieve its long-term goals (Carr and Smeltzer 1997).

Sourcing decisions are very important for any organizations that want to focus on its core competencies and outsource other activities in order to gain and retain competitiveness.

Amref Health Africa, the largest African led international organization on the continent, provides training and health services to over 30 countries in Africa. Founded in 1957 as the Flying Doctors of East Africa to bring critical health services to remote communities, Amref Health Africa now delivers preventative, community-based health care. With a focus on women and children, Amref Health Africa manages a full range of medical and public health programs tackling the most critical health challenges facing the continent: maternal and child care, HIV & TB, malaria, clean water and sanitation and surgical and clinical outreach.

Amref Health Africa: Ethiopia Office: Amref Health Africa was registered in Ethiopia and opened its project office in Addis Ababa in 1998 and remained a project office until 2002, when it became a fully-fledged Country Program. Since 2002, the country program has grown from one project in Addis Ababa city to about 18 projects in four regions (Addis Ababa, Afar, SNNPR, Amhara and Oromia) in 2014. In 2015, the organization had an overall budget of US\$9,581,000 from the different donors.

The study aimed to analyze strategic sourcing practice and operational performance in Amref Health Africa Ethiopia Office.

1.2. Statement of the Problem

Procurement practices touch many core aspects of a company's operations and, hence, their successful deployment and use are critical to performance and survival (Markus *et al*, 2013). The industry's procurement practices are fragile and predisposed to regular discontinuities. They are fraught with recurrent delays and occasional inability to deliver the produce to the destination markets (WB, 2010). Dias, (2012) indicates that the vulnerabilities in the private sector evidenced in the erratic shedding and re-employment of staff when faced with downstream and upstream linkage discontinuities thereby affecting organizational performance.

Failure to implement or delayed implementation of recommended procurement practices has resulted in unnecessarily high operation costs, poor inventory control, unacceptable supplier appraisals standards, uncoordinated business activities, and failure to attract and retain experienced and skilled personnel in the procurement positions, thus affecting the function's performance (Mugambi, 2011).

According to World Bank (2011) Only about a third of managers participate in advocating for structured procurement practices, which is what you would expect someone managing the supply chain to do. Just 20% claim to be communicating use of business insights in enhancing procurement practices; only 17% could even tell in what segment procurement practices fall in their companies (Hayton, 2010). The effect of this is that very few organizations have been able to add value, efficiency and effectiveness through proper procurement as different models have shown how procurement process has a link to improved organizational performance (DTI, 2012). Therefore, the purpose of this study was to assess the relationship between Effect of strategic sourcing practice (measured in terms of Supplier Development, Long-term Relationship, Effective Procurement Planning and Communication), and operational performance in Amref Health Africa in Ethiopia.

Amref Health Africa (AHA) has Procurement and Disposal Policy & Procedures Manual that stipulates to all stakeholders in Amref Health Africa - Headquarters and all other offices in Africa on how goods, services, works and donations will be procured (Amref Health Africa, 2014). The organization has developed its policy based on three guiding principles: Customer Satisfaction, Business Analysis and Process. To procure quality goods and services in the appropriate quantity and time to fully satisfy the customer requirements and assist in providing the highest standards in delivery of Amref Health Africa activities. By customer here we mean the internal users of goods and services procured i.e. department/directorates staff and students (Amref Health Africa, 2014).

Amref Health Africa has a procurement policy which briefs different tasks including Pre-qualification, Sourcing, Tendering, Signatories for contracts, etc. In case of sourcing, Amref Health Africa shall make purchases on the basis of specifications furnished by directorates/units.

The user and the technical departments will undertake quality control aspects jointly from the specification to delivery stage (Amref Health Africa, 2014).

Amref Health Africa has procedure and criteria to be used to compare and evaluate proposals for selecting service supplies. It includes quality and cost based selection (QCBS), fixed budget selection (FBS), consultants' qualifications selection (CQS), and quality based selection (QBS) or predetermined rates.

According to the recent Amref Health Africa in Ethiopia (AHAE) organizational capacity assessment report conducted in 2016, AHAE's organizational performance has been measured in two aspects: 1) financial performance and 2) Operational performance (Amref Health Africa, 2016). The report depicts that over the past five years most of projects planned annual budget were spent highly at the end of each fiscal years and its indicated that the ultimate goal of projects were spending on the planned annual budget at the end of the day regardless on focusing of quality, cost, and strategic thinking. The challenge of delayed deliveries, poor quality outputs, poor procurement planning, and lack of good supplier relationship management were sought as major bottleneck.

In this light, strategic sourcing plays is assumed a key role in ensuring that this is achieved, therefore there is a need for firms to ensure that they don't only source but source strategically. However, the effect of strategic sourcing on organization performance has not yet been researched in many non-governmental organizations in Ethiopia. This study also desires to provide information for organizations and practitioners in the NGOs industry on the effect of strategic sourcing on organization performance. This study will only focus on the organization's operational performance.

This particular research intends to answer the following research questions.

1. How Strategic Sourcing Practice Relates with Operational Performance in AHAE?
2. How Supplier Development Relates with Operational Performance in AHAE?
3. How supplier Long-term Relationship Relates with Operational Performance in AHAE ?
4. How the effective procurement plans Relates with Operational performance at AHAE?
5. Which dimensions of Strategic Sourcing Practice predict Operational Performance?

1.3. Objective of the study

1.3.1. General Objective

The general objective of this study is to analyze the effect of strategic sourcing practice and organization performance: Perception of sourcing survey of Amref Health Africa in Ethiopia (AHAE) non-governmental organization.

1.3.2. Specific Objectives

The study will specifically address the following objectives:

- ✚ to assess the extent of effect of strategic sourcing practice and operational performance in Amref Health Africa in Ethiopia (AHAE)
- ✚ to analyze the relationship between the different dimensions of strategic sourcing practice and operational performance, and
- ✚ to analyze the dimensions of strategic sourcing practice that predict operational performance of Amref Health Africa in Ethiopia

1.4. Significance of the Study

This study wishes to enhance the existing body of literature by contemplating the areas of the literature that have not yet been examined or considered and incorporating these factors into the current study. It identifies the effect of strategic sourcing practice on organization performance. The study is essential for NGO leaders and managers since most NGO's spending on procurement of goods and services. This study also benefit various procurement managers in understanding how sourcing if properly done can immensely cut down on organizational cost, hence improving the overall organizational performance.

1.5. Delimitation of the study

The proposed research intends to investigate the study focus in NGO industry. As Amref Health Africa is a continental organization operating in different African countries, it has a great deal of supply chain management. However, due to shortage of time and budget it only targets Amref Health Africa in Ethiopia. In addition, the study delimit on the study on strategic sourcing. As well the study only focused on the operational performance.

1.6. Organization of the study

The study is organized into five chapters. The first chapter is the introduction of the study. Related literature deals with reviewed in the second chapter. The third chapter gives an explanation on research design and methodology. Presentation, analysis and interpretation of

data are shown in the fourth chapter. The fifth chapter summarizes and concludes findings of the study. In addition, the fifth chapter presents recommendations based on the findings of the study.

1.7. Definition of terms

Sourcing is researching the market for potential input sources, securing the continuity of these sources, searching for alternative sources and keeping the relevant knowledge up to date (Vollman, Berry, and Whybark, 2004).

Organization performance: Organizational performance refers to how well an organization achieves its market-oriented goals as well as its financial goals. (Porters Generic Strategy)

Non-Governmental organizations (NGO) is any non-profit, voluntary citizens' group which is organized on a local, national or international level (Heggli, 2010).

CHAPTER TWO

2. Related Literature Review

2.1 Introduction

This chapter briefly introduced and provided a synopsis of literature specific to concepts and ideas of SCM, Supply Chain Management Practice and firm's performance, Operational Performance, Supply Chain Performance in humanitarian organization Related organizational performance. Based on the literature reviewed, this thesis sought to compose and evaluate those research questions and identifies measurement variables which are used for answering those research questions in designed to assess sourcing practice and operational performance in AHAE Mission. Figure I. presents the research conceptual frame work that was adapted from related literatures and analyzed for this research.

Sourcing has increasingly assumed a pivotal strategic role in supply-chain management. Yet, claims of the strategic role of sourcing have not been fully subjected to rigorous theoretical and empirical scrutiny

2.2. Strategic Sourcing

Strategic sourcing is defined as the process of planning, implementing, controlling, and evaluating highly important purchasing in an effort to meet a firm's goals (Carr and Smeltzer, 2000; Carr and Pearson, 1999 and 2002). A number of articles address the need for purchasing to assume a more strategic role (Carr and Smeltzer, 2000; Carter and Narasimhan, 1994, 1996a, and 1996b; Ellram and Carr, 1994; Narasimhan and Das, 1999; and Pearson and Gritzmacher, 1990). A strategic sourcing function is viewed by top management as an important resource of the firm. From a theoretical perspective, a firm's resources can be used to support its capabilities so the firm can achieve a competitive advantage (Carr and Pearson, 2002; and Reck and Long, 1988). The strategic sourcing is involved in the firm's strategic planning process and purchasing is treated as an equal to other major functions in the firm (Freeman and Cavinato, 1990). At a macro level, a strategic use of purchasing requires a purchasing manager to monitor the company's environment, forecast changes in that environment, share relevant information with suppliers and colleagues in other functions, and identify the company's competitive advantages and disadvantages relative to its suppliers. At a micro level, strategic purchasing involves the

identification of critical materials, the evaluation of possible supply disruptions for each of them, and the development of contingency plans for all identifiable supply problems (Burt and Soukup, 1985). In order to compete effectively in the world market, a company must have a network of competent suppliers. Supplier assessment and selection is designed to create and maintain such a network and to improve various supplier capabilities that are necessary for the buying organization to meet its increasing competitive challenges. A firm's ability to produce a quality product at a reasonable cost and in a timely manner is heavily influenced by its suppliers' capabilities, and supplier performance is considered one of the determining factors for the company's success (Krause, Scannell, and Calantone, 2000; Krause, 1997; Tan, Lyman, and Wisner, 2002; Monczka, Trent, and Callahan, 1994; Tan, Handfield, and Krause, 1998; Choi and Hartley, 1996; Shin, Collier, and Wilson, 2000; and Davis, 1993). Consequently, without a competent supplier network, a firm's ability to compete effectively in the market can be hampered significantly. There are several key reasons why suppliers are becoming increasingly critical to the competitive success of different firms. First, manufacturers are beginning to focus on their core competences (Prahalad and Hamel, 1990) and areas of technical expertise (i.e. firms concentrating on what they do best). An emphasis on internal competences requires greater reliance on external suppliers to support directly non-core requirement. Second, developing effective supply base management strategies can help counter the competitive pressures brought about by intense worldwide competition. To remain globally competitive, firms must receive competitive performance advantages from their suppliers that match or exceed the advantages that suppliers provide to leading foreign competitors. Third, suppliers can support directly a firm's ability to innovate in the critical areas of product and process technology. As organizations continue to seek performance improvements, they are reorganizing their supplier base and managing it as an extension of the firm's business system (Vonderembse and Tracey, 1999; Trent and Monczka, 1998; and Morgan and Monczka, 1996). Given that over 50% of the cost of goods sold worldwide is derived from purchased materials, supplier selection is an important strategic decision and serves as a source of competitive advantage (Simpson, Siguaw, and White, 2002).

2.3.The Concept of Performance Measurement in a Supply Chain Context

Performance measurement is generally defined as the process of quantifying the efficiency and effectiveness of action, where effectiveness is meant to gauge the extent to which customer's requirements are met, while efficiency measures how economically firm's resources are utilized to achieve a predetermined level of customer satisfaction (Neely et al., 1995 on Agami, Saleh and Rasmy, 2012). However, firm performance is a multi-dimensional concept that involves many aspects in its measurement. Akyuz & Erkan (2010) argued that despite the large number of works done on performance measurement, the existing literature lacks a unified definition of what is included and excluded. However, it has been also asserted that performance concept includes both financial and non-financial (operational) aspects and related measures wherein the financial aspect supposed to include sales, profitability and Return on Investment (ROI) as pertinent measures among others, whereas the non-financial aspect, on the other hand, supposed to include measures like inventory performance and cycle time to mention few (Martin and Patterson, 2009).

According to Thakkar, Kanda, and Deshmukh (2009) SCM is affected by, and in turn affects, many aspects of the firm's operations, and environment, the supply chain performance measurement is a difficult proposition. Similarly, Otto and Kotzab (2003) asserted that performance in a supply chain context and its measurement is dependent on the unique notions and problems, which can be identified beyond the perspectives available to be considered, and hence, none of the available alternatives is an optimal approach for all contexts; instead, from the SCM holistic requirements, different performance metrics should be combined. Thakkar *et al.* (2009) also suggested, in this respect, that performance measurement metrics should have the capability to capture the essence of organizational performance, ensure an appropriate assignment of metrics to the areas where they would be most appropriate, minimize the deviation that exist between the organizational goals and measurement goals, and measures, and reflect their clear linkages with various levels of decision-making such as strategic, tactical, and operational.

Regarding the application of specific performance metrics in the supply chain management context, some studies suggest the blended and balanced use of both financial, i.e. revenue, profit, ROA and ROI... etc, and non-financial/operational, i.e. inventory reduction, improved delivery service, decreased order cycle times and greater product availability...etc, metrics (e.g.

Thakkar, Kanda, and Deshmukh, 2009; Li, Ragu-Nathanb, Ragu-Nathanb, and Raob, 2006; Gunasekaran, Patel, and Macgraughey, 2004). Through a structured literature review on supply chain integration and performance, Van der Vaart and van Donk (2008) reinforced this claim by revealing that the majority of literatures they reviewed have examined the effect of supply chain management on combination of overall measures, operational costs measures and customer service measures;

However, on the same study Van der Vaart and van Donk (2008) also argued that it would be very difficult to attribute total supply chain or firm performance to particular supply chain factors especially when performance is measured in overall terms such as market share, ROI and profitability since with these general measures, there are many other (both economic and managerial) variables that impact on performance items (Rodriguez, 2009; Van der Vaart and van Donk, 2008). Similarly, Huo et al. (2014) stressed that though financial performance has been widely used as a key output measure of firm performance; numerous studies have pinpointed the limitations in relying on financial performance measures in supply chain studies.

2.4 Theoretical Foundation

2.4.1 Resource Based Theory (RBD)

Resource Based Theory (RBD) promoted by Pfeffer and Salancik (1978), is the study of how the exterior resources of organizations affects the performance of the organization. The procurement of exterior resources is a significant tenet of both the strategic and tactical management of any company. A implications in the procurement efficiency of the buying firms especially in tapping into the connection with suppliers as their important and dependable associates. Thus this theory props up the concept of supplier development RBT proposes that actors lacking in crucial resources will seek to create relationships with (i.e., be dependent upon) others in order to acquire required resources. Just like sellers on buyers for precious markets and buyer will depend on suppliers for external resources. Also, organizations endeavor to alter their reliance relationships by lessening their own reliance or by increasing the dependence of other organizations on them. Within this viewpoint, organizations are viewed as coalitions altering their structure and patterns of behavior to acquire and maintain required external resources. Acquiring the external resources required by an organization comes by diminishing the organization's reliance on others and/or by increasing other's reliance on it, that is, modifying an organization's influence with other organizations.

According to the Resource Based Theory of the firm (RBT), firms actively exchange resources in their operation. We can see that intentional nets of actors are a form of collaboration, in which the main elements or components from management can be recognized. In addition, we see that it is possible to identify the different – but simultaneously extant – modes of management, and we propose that in the supply net context they are influencing, control and monitoring, coordination, and integration. (Svahn & Westerlund, 2007)

2.4.2 Network Theory: Network theory is the core on the relationships a firm has with other firms, and on how these relationships influence a firm's behavior and outcomes (Thorelli, 1986). Network theory inform on choice of which firms an organization chooses to buy from or engage with as alliance partners.

Centrality is a key concept within network theory. Centrality refers to how critical a firm is within a network. High supremacy refers to a firm that is always sought out as a partner. Such firms enjoy high regard and status among the network (Gulati *et al.*, 2000). Being central within a network would seem to offer the potential to improve the four key competitive priorities within supply chains: quality, speed, cost, and flexibility (Hult *et al.*, 2006). A highly central firm can tap its tight links in order to rush orders when required, make seamless transitions over time and seek out the provider offering the best materials and lowest prices. Therefore, with regard to sourcing, a firm should endeavor to be central to its network and should seek sources that are central to their networks. (Thorelli, 1986)

2.4.3. The Principal-Agent Theory (PAT) Based on the separation of ownership and control of economic activities between the agent and the principal, various agency problems may arise, such as asymmetric information between the principal and the agent, conflicting objectives, differences in risk aversion, outcome uncertainty, behavior based on self-interest, and bounded rationality. The contract between the principal and the agent governs the relationships between the two parties, and the aim of the theory is to design a contract that can mitigate potential agency problems. The “most efficient contract” includes the right mix of behavioral and outcome-based incentives to motivate the agent to act in the interests of the principal (Eisenhardt, 1998; Logan, 2000).

The alignment of incentives is an important issue in SCM. Misalignment often stems from hidden actions or hidden information. However, by creating contracts with supply chain partners

that balance rewards and penalties, misalignment can be mitigated (Narayanan and Raman, 2004; Baiman and Rajan, 2002).

2.5. Empirical review

In this section, the researcher reviewed empirical studies touching on Strategic sourcing and organizational Performance.

2.5.1. Supplier Development

Supplier development is defined as any effort of a buying firm working with its supplier(s) to increase the performance and/or capabilities of the supplier(s) and meet the buying firm's short- and/or long-term supply needs as well as promote on-going improvements that are intended to benefit both buyer and supplier(s) (Wagner, 2011, Ahmed, and Hendry, 2012). The objective of supplier development is generally twofold from the buyer's perspective: firstly, to reduce cost, improve quality, and streamline delivery; and, secondly, to educate suppliers in a systematic process to keep driving continuous improvement; alternatively it has been conceived as one of the most important choices that could be employed by buying firms to manage problems buying firms may experience in their supply networks, such as underperformance of current suppliers, failure of current suppliers to support buying firms' strategic growth or unavailability of capable suppliers (Ahmed, and Hendry, 2012).

The SCM literature has also stressed on the significance of supplier development in supporting a firm's operations strategy by ensuring that suppliers' performance and capabilities meet the needs of the buying firm (Humphreys, Li and Chanc, 2004). Regarding the pertinent initiatives of supplier development, the extant literature have indicated that buying firms typically improve suppliers' performance and capabilities by setting supplier performance goals, providing the supplier with training, providing the supplier with equipment, technological support and even investments, exchanging personnel between the two organizations, evaluating supplier performance, recognizing supplier progress in the form of rewards, conducting visits to supplier's sites to assess its process and collaborations with supplier in materials improvement, (Krause, Robert, Handfield, and Tyler, 2007; Humphreys et al., 2004; Sanchez-Rodriguez, 2009).

2.5.2. Long-term Orientation

Long-term orientation in the context of buyer-supplier relationship can be defined as the tendency to stick on relationships for a relatively longer period between a firm and its suppliers (Prajogo et al., 2012). According to (Paulraj and Chen 2005) long-term orientation focuses on initiatives that enhance superior relational characteristics between supply chain members and create a win-win situation for the buyer and its suppliers instead of adversarial relationships. Firms with short-term orientation rely on the efficiencies of market exchanges to maximize their gains in a transaction, whereas firms in a long-term orientation rely on relational exchange to maximize their gains over a series of transactions (Ganesan, 1994). Through close relationships with suppliers, buyers are more willing to share risk and reward, encourage mutual planning and problem-solving efforts, and maintain the relationships over a longer period of time (Li et al., 2007; Chen et al., 2004).

It has been also claimed that in the context of supply chain management effective supplier relationships in the sense of creating long-term relationships with key suppliers helps firms achieve superior performance by reducing cost, improving quality, and enhancing customer responsiveness or flexibility (De Toni et al., 1994 on Prajogo et al., 2012). Moreover, by building up on the results of prior studies, (Chen et al, 2004) suggested that present day competitiveness has brought about a marked evolution in supply management where the achievement of superior performance in terms of cost, quality and flexibility (customer responsiveness) is increasingly dependent on long-term relationship with suppliers. Long-term Orientation is “operationalized by items tapping the extent to which the buying firm: (a) expects its relationships with key suppliers to last a long time; (b) works closely with key suppliers to improve product quality; and (c) views the suppliers as an extension of the company; in turn (d) suppliers see their relationship with the buying firm as a long-term alliance (Krause and Ellram, 1997; Shin et al., 2000).

2.5.3. Communication

Information sharing/exchange is the extent to which a firm shares a variety of relevant, accurate, complete and confidential ideas, plans and procedures with its supply chain partners in a timely manner (Cao et al., 2009; Simatupang and Sridharan, 2004). Information sharing has been described as the heart, lifeblood, nerve center, essential ingredient or foundation of supply chain collaboration (Cao et al., 2009). Supply chain partners who exchange information regularly are

able to work as a single entity and can understand the needs of the other partner better and, hence, can respond to market change quicker (Li et al., 2006). By building up on the findings of prior studies, Li et al. (2006) suggested that simplified material flow, including streamlining and making highly visible all information flow throughout the chain, is the key to an integrated and effective supply chain.

Communication becomes crucial in these turbulent economic times as it drives the firm into becoming a collaborative structure (Krishnapriya, and Rupashree, 2014). It has been revealed that buyer and supplier strategic information flows positively impact the relationship-specific performance of both sharing and receiving parties, among which delivery time, quality and flexibility are prevalent (Klein and Rai, 2009). However, to realize the streamlining effect of information, the information shall be more proprietary, tacit and holistic than the data traded in arm's length relationship, given the fact that levels of information sharing as well as quality and relevance of information shared become critical aspects in deciding success in collaborative efforts in buyer-supplier relationships (Krishnapriya, and Rupashree, 2014; Cao et al., 2009).

Communication is operationalized to include the extent to which the firm and its key suppliers: (a) share critical, sensitive information related to operational and strategic issues; (b) exchange such information frequently, informally and/or in a timely manner; (c) maintain frequent face-to-face meetings; and (d) closely monitor and stay abreast of events or changes that may affect both parties (Krause and Ellram, 1997; Carr and Pearson, 1999; Carr and Smeltzer, 1999).

2.5.4. Effective procurement plan

According to Baily, *et.al*, (2005), procurement plan is derived from the plans which have been formulated and should allow for subsequent comparison, evaluation and control of the efforts made to meet the company's objectives. In addition to that budget should be prepared in relation to relevant financial projections and overall company estimates with regards to e.g. return on investment. A multi- year procurement plans may be prepared and integrated into the medium term budgetary expenditure framework. The benefits of good planning include: better alignment of procurement activities to strategic objectives, improved quality analysis for recommending a course of action, justifying the project is worth doing, testing that implementation is realistic and achievable, detecting the potential impacts and pitfalls before starting knowing the sustainability of service or product design and delivery. An effective procurement plan provides an organized

means whereby time and money are saved. It also provides a framework to that guides the achievement of tasks and duties. (Langford, 2010, Kakabadse, 2005).

2.5.5. The Variables of operational Performance

As mentioned on prior part of this chapter, it would be very difficult to attribute total supply chain or firm performance to particular supply chain factors especially when performance is measured in overall terms such as market share, ROI and profitability since with these general measures, there are many other (both economic and managerial) variables that impact on performance items (Rodriguez, 2009; Van der Vaart and van Donk, 2008). Therefore, Van der Vaart and van Donk (2008) suggested that it seems potentially more fruitful to relate the level of collaboration in a single buyer-supplier relationship to the performance of that particular relationship, which in fact is supposed to involve mostly operational aspects or Operational performance measures. Similarly, Huo et al. (2014) stressed that though financial performance has been widely used as a key output measure of firm performance; numerous studies have pinpointed the limitations in relying on financial performance measures in supply chain studies.

On the basis of such arguments, this study would adopt operational performance of focal firms (i.e. Amref Health Africa in Ethiopia) to assess its strategic sourcing practice. In this regard, it has been stressed that while many performance frameworks have been advanced in the literature on operations and supply chain management advocating the use of various operational performance measures, cost, quality, flexibility, and delivery are widely regarded as constituting the major operational performance variables (Vereecke and Muylle, 2006). In a similar fashion, Sanchez-Rodriguez (2009) has defined purchasing/operational performance as the effectiveness in procuring materials at the lower total cost of acquisition, on time, of the right quality and in the right quantities. Similarly, it has been argued that internal customer satisfaction has been identified as the most important element of purchasing performance outcome in several studies since the measures of the operational successes of purchasing such as quality of purchase, on time delivery and both volume and mix flexibility have a direct implications on the satisfaction of the user organ, hence, determining the level of internal customers' satisfaction (Sanchez-Rodriguez, 2009). On the basis of such arguments, this study would adopt operational performance of focal organization to assess its sourcing practice. In this regard, it has been stressed that while many performance frameworks have been advanced in the literature on operations and supply chain management advocating the use of various operational performance

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The four dimensions of operational performance are quality, delivery, flexibility and cost (Prajogo, 2012). Quality with respect to conformance product specification and product quality performance. Delivery is operationalized to on time delivery/speed of delivery. Flexibility is seen in terms of mix and volume while cost in terms of operation cost.

2.6. Conceptual framework

The conceptual framework illustrates the interaction between independent variables and the dependent variable in the study. In this study, the independent variables are; supplier development, long-term orientation, effective procurement planning and communication while the dependent variable will be operational performance. The conceptual framework is presented in the figure I. The conceptual framework is a combined modification of the conceptual frameworks developed by prior studies (i.e. Sanchez-Rodriguez, 2009; Prajogo, 2011; Chen et al., 2004)

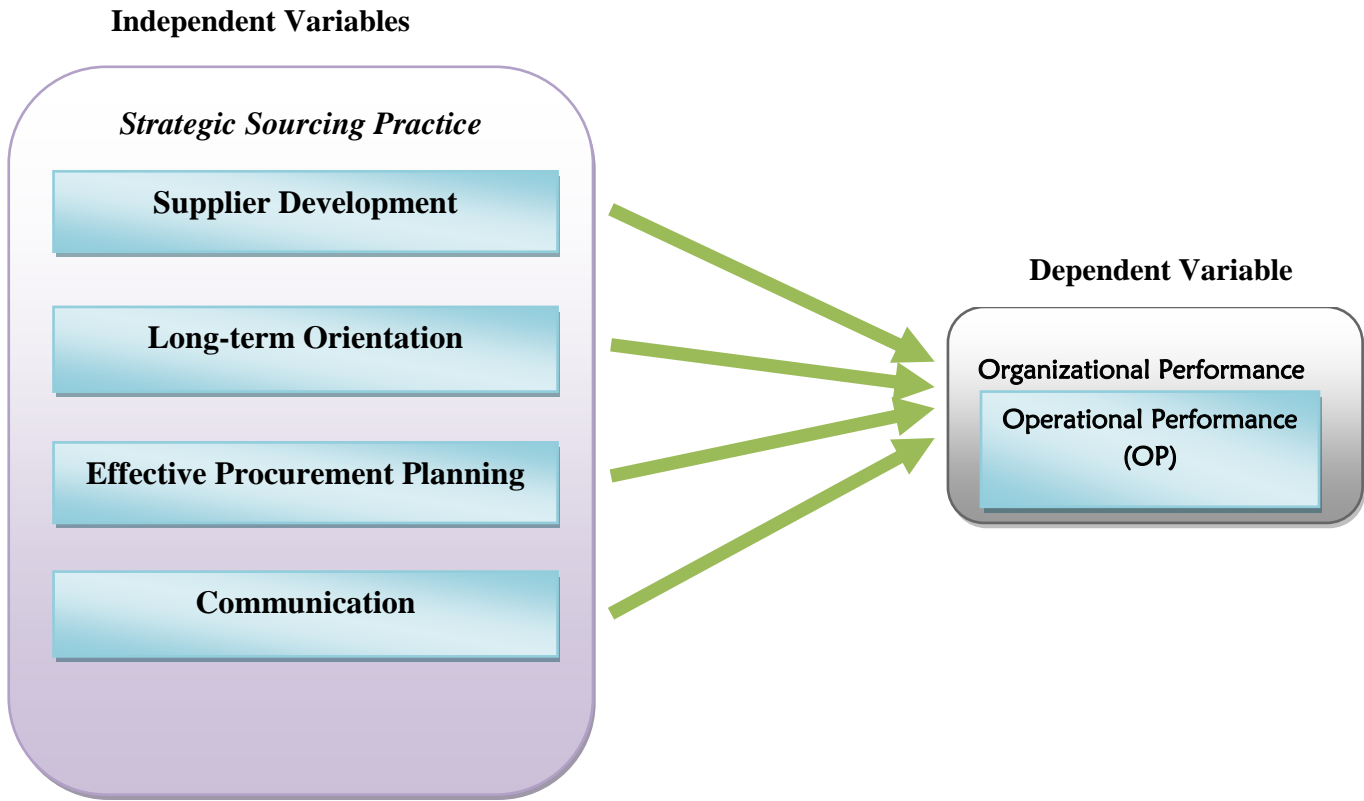


Figure I: Conceptual model(adapted from Sanchez-Rodriguez, 2009); (Prajogo, 2012); (Chen et al. 2004)

CHAPTER THREE

3. METHODOLOGY OF THE RESEARCH

3.1. Introduction

The designing and methodological aspect of a particular study is the roadmap that the study should follow in its pursuit of the desired outcome. Hence, due care shall be given while spelling out this roadmap. In view of that, a detailed account has been given to the description of the particular design the research would employ; the data sources and methods of collection; the target population, unit of analysis and respondents; the types of instruments and their development procedure; the variables and corresponding measurement items; and data processing, analysis and presentation procedures.

3.2. Research Design

Research design is a blueprint for empirical research aimed at answering specific research questions or testing specific hypotheses through specifying the methods and procedures for collecting and analyzing the needed information (Bhattacharjee, 2012). Therefore, use of an appropriate research design is something that could not be subjected to compromise if a viable research finding is sought to be achieved.

This particular study adopted a cross-sectional census survey design to quantitatively assess the association between strategic sourcing practice and Operational performance. On the one hand, and the predictive power of the dimensions of strategic sourcing practice on operational performance the organization. This method is best suited for studies that have individual people as the unit of analysis though other units of analysis, such as groups, organizations or dyads (pairs of organizations, such as buyers and suppliers), are also studied using surveys, since such studies often use specific persons from each unit as key informants or a proxy for that unit (Bhattacharjee, 2012).

Thus, descriptive and explanatory research approaches have been deployed. Besides, the research used some descriptive statistics (i.e., measure of central tendency such as: mean; and measures of spread: standard deviation), along with different inferential tools were used so as to elaborate the relationship and interactions between variables.

3.3. Source Data

The proposed study data source will be both primary and secondary. All Amref Health Africa in Ethiopia staffs are source of primary data. The Amref health Africa in Ethiopia structure has classified its staffs into two categories; Program and Support Staff. The target population comprised of staff at Amref Health Africa in Ethiopia who had a direct and indirect involvement of sourcing process and administrative staffs at the lower level are being excluded. Secondary data has been obtained from Amref Health Africa website, annual book, policies and strategy, annual reports documents and publications. Moreover, different journals, books, published & unpublished materials that contain data related to the study subject will be used as secondary data sources.

The HR department has thorough information of both program and supportive staff employees exit at country and field offices.

3.4. Target Population, Unit of Analysis and Respondents

The target population comprised of staff at Amref Health Africa in Ethiopia who had a direct and indirect involvement of sourcing process and administrative staffs at the lower level and staffs who don't have direct involvement for sourcing (Janators, cleaners, drivers, guards) being excluded. The total number of the organization staffs are 130 and there are nineteen projects and eight departments in the organization. Due to the very small number of the target population, which are nineteen projects and eight departments, it has been decided to consider the entire population in the study, i.e. to conduct census survey, rather than sampling from the population. This is on the basis of the suggestion that if the target population is smaller (e.g. 200 or less) census survey is very appropriate and effective since virtually all population would have to be sampled in small populations to achieve a desirable level of precision (Israel, 2013).

Table 3.1: Proposed and Actual Number of Respondents

S.No.	Name of Projects	Proposed No. of Respondents	Actual No. of Respondents
1	ASSUR Project	2	2
2	DFATD project	2	2
3	SEE	2	2

S.No.	Name of Projects	Proposed No. of Respondents	Actual No. of Respondents
4	Comic Relief Project	2	2
5	Sanitation Daily Project	2	2
6	Result Project	2	2
7	YES I DO Project	2	2
8	Dera Project	2	2
9	DEPP Project	2	2
10	Clinical Outreach Project	2	2
11	Packard Project	2	2
12	Polio Project	2	2
13	Cancer Treatment Project	2	2
14	GAVI Project	2	2
15	HRH Project	2	2
16	M-WEB	2	2
17	WASH for Everybody's Project	2	2
18	Spain WASH	2	2
19	Midwifery Project	2	2
20	HR Department	2	2
21	Finance	2	2
22	Procurement	3	3
23	Administration	2	2
24	Store	1	1
25	Logistics	2	2
26	Communication	1	1
27	M&E	3	1
	Total	54	52

Source: Amref Health Africa in Ethiopia Human Resource department

3.5. Instrument and Method of Data Collection Research Instrument

The study used self-administered questionnaire. Each respondent given a consent form to read and sign before completing the questionnaire and the primary researcher explained the procedure

of the questionnaire and written instructions were also provided. The survey questionnaire instrument is comprised of three sections: 1) Strategic Sourcing Practice: Supplier development, Long-term relationship, effective procurement planning and communications 2) Operational Performance and 3) a section concerning demographic information of gender, age, education level, job type and tenure in the industry. These questions were answered in a 5-point Likert scale ranging from 1=Strongly disagree to 5=Strongly Agree

3.5.1. Method of Data collection

The researcher obtained permission from the Human Resources Manager of the organization involved in the study to conduct the research in their companies, and permission will be granted. As far as the procedure of data collection is concerned, contacts had been initially made to respondents to explain the purpose and nature of the study so as to achieve the desired response rate. Then, the questionnaire was distributed to and collected physically for those who located in Head Office but the researcher sent and collected the questionnaire for individuals who located in different field offices via e-mail.

3.5.2. Instrument Validity

This study addressed content validity through the review of literature and adapting instruments used in previous research. It refers to the relevance of the instrument or measurement strategy to the construct being measured (Fitzpatrick, 1983). According to Compbell (1960) identified the most commonly used methods for demonstrating validity are referred to as content-related, criterion related, & construct-related validity. Validity refers to the test or measurement strategy measures and how well it does so. In addition, Groth-Marnat, (2003) define content validity the extent to which the test or measurement strategy measures a theoretical construct or trait.

Apart from the initial attempt to strongly ground the development of the questionnaire on the extant literature, it was subjected to pre-test to further ensure its content validity as suggested by Chen et al. (2004) and Li et al (2006). Accordingly, six experienced sourcing experts working at three separate organizations have critically reviewed the items in the questionnaire for possible ambiguity, lack of clarity and appropriateness of the items. Similarly, as proposed by Chen et al. (2004), these experts were also asked to assess the extent to which the items sufficiently address the subject area. Consequently, on the basis of the comments, some amendments were made to make the items clearer, unambiguous and more representative/comprehensive.

3.6. Variables and Measurement

As far as the study variables are concerned, this particular study has involved four independent variables/factors for the measurement of the construct of the effect of strategic sourcing practice, and one dependent variable/factor for the measurement of the construct of operational performance of the organization. The four independent variables that make strategic sourcing are supplier development, long-term orientation and effective procurement planning and communication; whereas the single dependent variable that build organizational performance is operational performance. Accordingly, after a comprehensive review of related literature five items were identified to measure supplier development; while effective procurement planning and long term relationship were assigned to be measured via five and six items each, with additional four items set aside for the measurement of communication. Moreover, the dependent variable namely operational performance were measured through five separate items.

Table 3. 2: Variables and measurement items

Variable/Factor	Measurement Items	Adopted From
Supplier Development	Regular visit to key suppliers' site; rewarding and recognizing suppliers for best performance; collaboration in materials improvement; supplier certification program; providing key suppliers with capital for new investments at their facilities;	Sanchez-Rodriguez (2009); Humphreys, Li, and Chan (2004)
Long-term Orientation	Long-lasting relationship; collaboration to improve suppliers' quality in the long run; viewing suppliers as an extension of one's company; suppliers tendency to see the relationships as a long-term alliance; essentially evergreen relationship;	Prajogo et. al.(2012); Chen et al.(2004); Krause et al. (2007)
Effective procurement Planning	Effective and efficient utilization of available resources, effective procurement process, quality item procurement, and effective cost estimation,	Lysons and Gillingham, (2003); Basheka, (2008)

Communication	Informing in advance of changing needs; exchange of proprietary information; informing about events or changes that may affect the other party; information exchange frequency; timeliness, accuracy, and completeness of exchanged information;	Chen et al.(2004); Krause et al. (2007); Li et al. (2006)
Operational Performance	Minimum cost of purchased materials; overall quality of purchased materials; on-time delivery of ordered materials;inventory performance; internal customer satisfaction;	Huo et al. (2014); Sanchez-Rodriguez (2009);Vereecke and Muylle(2006); Prajogo et. al (2012)

Adapted from (Sileshi ,2015)

3.7. Method of Data Analysis and Presentation

The study data were analyzed using Statistical Package for the Social Science (SPSS) version 20.0 since this survey is quantitative nature and, was aiming at instructive the relationship between strategic sourcing practice and operational performance of the organization, the application of statistical techniques was a compulsory requirement. Hence,

Demographic information of respondents were summarized in graphs and table; whereas, the degree of strategic sourcing practice in all dimensions and operational performance in the case organization were being analyzed by using descriptive statistics such as mean and standard deviations of the respondents' scores.

Inferential statistics is particularly Pearson Product Moment Correlation Coefficient was applied to analyze the relationship between strategic sourcing practice and operational performance of the organization. Pearson Product Moment Correlation Coefficient is a widely used statistical method for obtaining an index of the relationship between variables when this relationship is linear (Tharenou, Donohue, and Cooper, 2007). Moreover, multiple regression analysis was made as part of the overall data analysis endeavor with the aim of revealing the extent to which

the factor of strategic sourcing influence the operational performance of the organization. Finally, detail interpretation and discussion of the results of the statistical analysis was provided.

3.8. Ethical Consideration

According to Saunders, Lewis and Thornhill (2001, p.130) “Ethics refers to the appropriateness of your behavior in relation to the rights of those who became the subject of your work, or are affected by it”. The data were collected from the sample respondent through questionnaires; the respondents were not required to write their name. The result of the study is to be used for academic purpose only and the response of the participant is fully confidential. The information that the respondent gave was analyzed without any change by the researcher. Furthermore, the work that has been used in this research as a base for this study were cited appropriately as the researcher respect the work of previous studies.

This chapter has presented a description of the methodology used in this study. It has covered the choices and motivations regarding research design, population and sampling techniques, instruments of data collection, methods of data analysis, validity and reliability of the research and research ethics.

CHAPTER FOUR

4. RESULTS, ANALYSIS, AND INTERPRETATION

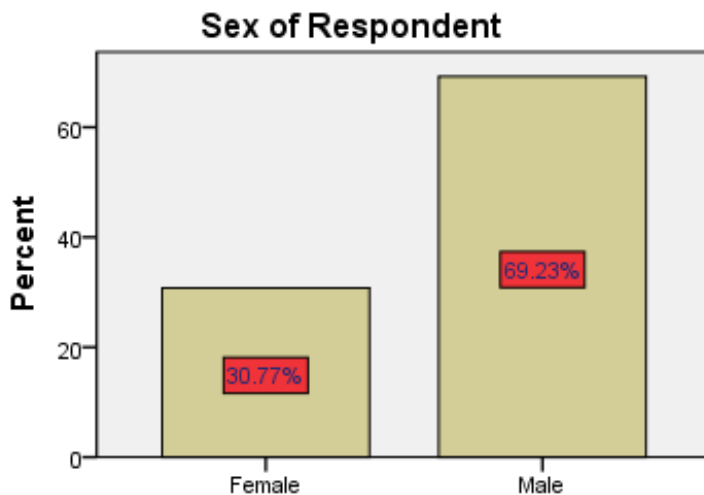
4. Presentation, Analysis and Interpretation of Data

This chapter contains the presentation, analysis and interpretation of data. The points dealt with in the chapter are the general characteristics of the sample population and the computed t-test for strategic sourcing and operational performance of the organization. Accordingly, for the interest of keeping logical flow of the presentation, subsequent to instrument reliability test the demographic information of respondents is highlighted, followed by the presentation of descriptive statistics, correlation analysis and regression analysis in that order.

4.1. Analysis of the Characteristics of Respondents

The total 54 questionnaires distributed and 52 questionnaires were returned and effectively used for analysis that shows response rate of 96%.

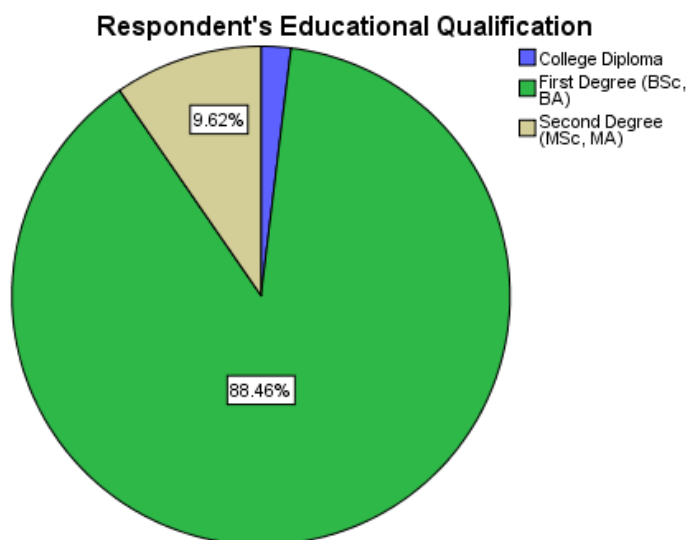
Figure II: Characteristics of Respondents in Relation to Sex



Source : Survey Result, 2017

Figure II deals with sex distribution of respondents. Accordingly, 16 (30.77%) were male and 36(69.23%) were female respondents were involved during the study. The data shows that, females participation was very high. Therefore, immense efforts are expected from the organization to encourage male participation in the staff.

Figure III. Number of Respondents in Relation to Educational Qualifications



Source: Survey Result, 2017

Figure III depicts the educational qualifications of respondents. Consequently, there were a total of 52 respondents who were involved in the study. As a result, the data revealed that there were 46 (88.46%) BA/BSC, 5 (9.62%) MA/MSC, and 1 (1.92%) Diploma qualified respondents involved in the provision of information through questionnaires. From these data, the majority 46 (88.46%) respondents had an academic qualification of BA/BSC. Generally, from the data one can conclude that, this study tried to cover respondents from different educational qualifications.

Table 4.1. Respondents by Work Experience

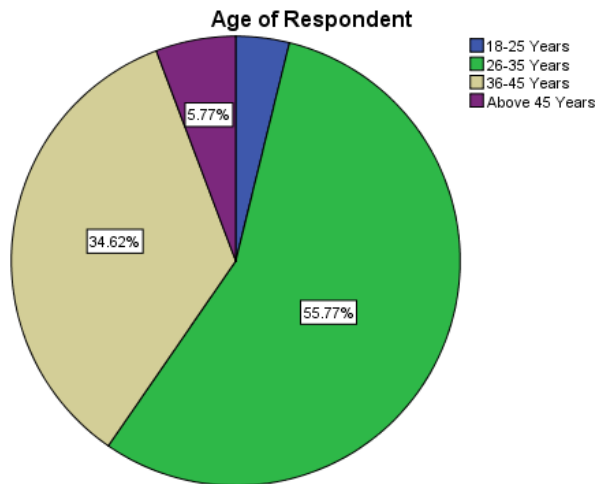
Variable	Choice	Frequency	Percent
Service Year on the Current Position	1 to3 Years	16	30.8
	4 to 7 Years	18	34.6
	8 to 10 Years	12	23.1
	Above 10 Years	6	11.5
	<i>Total</i>	<i>52</i>	<i>100.0</i>

Source: Survey Result, 2017

Table shows characteristics of respondents by work experiences. As indicated in the tablet, 16 (30.8%) of the respondents were between 1-3 years, the majority 18 (34.6%) of the respondents were between 4-7 years of experiences, 12 (23.1%) were between 8-10 years, and the rest 6

(11.5%) were above 10 years of experience. It can be concluded that, data for this study was collected from least experienced to more experienced respondents.

Figure V. Respondents by Age



Source: Survey Result, 2017

In figure V respondents' age is concerned, the majority of the respondents (55.77%) were aged between 26 to 35 years followed by the age categories of 36 to 45 years, above 45 years and 18-25 years respectively with percentage scores of 34.62%, 5.77% and 3.84% respectively.

4.2. Reliability and Validity test

According to Anders Jonsson and Gunilla Svingby,(2007), reliability analysis is concerned with the internal consistency of the research instrument. Most of the studies investigating intra-rater reliability by using Cronbach's alpha to estimate raters' consistency, and the majority report on alpha values above .70, which, according to Glasswell, and Harland cited on Anders Jonsson and Gunilla Svingby (2007), is generally considered sufficient. As multiple items in all constructs were used, the internal consistency/reliabilities of the effect of strategic sourcing practices and operational performance, were assessed and the following table shows the summary of reliabilities of all constructs.

Table 4.2: Cronbach's alpha

Dimension	No. of Items	Cronbach's Alpha
Supplier Development	5	0.803
Long-term relationship	6	0.893
Effective procurement planning	5	0.833
Communication	4	0.765
Operational Performance	5	0.816

Source: Survey Result, 2017

The above table implies that all alpha values for the respective dimensions were well above the suggested cut-off value of 0.7 (Cronbach, 1951), hence implying the reliability of the instrument that measures the study constructs, i.e. the items under the respective scales could properly measure the dimension/variables of concern. The lowest alpha value was 0.765 and it was in the case of communication, whereas the highest was for Long-term relationship with the alpha value of 0.893.

4.3. Descriptive Analysis

The composite mean value shows the average of all respondents' perceptions on a certain dimension. While, standard deviation shows how diverse are the perceptions of respondents for a given dimension. For instance, high standard deviation means that the data are wide spread, which means that respondents give variety of opinion and low standard deviation implies that respondent's express close opinion.

The rule of thumb pertaining to the intervals for breaking the range in measuring variables that are captured with five point scale (that ranges from strongly disagree to strongly agree) is 0.8, which is actually found by dividing the difference between the maximum and minimum scores to the maximum score Kidane (2012). Hence, a calculated composite mean value that ranges from 1 to 1.80 implies strong disagreement, whereas the remaining ranges of 1.81 to 2.6, 2.61 to 3.4, 3.41 to 4.2 and 4.21 to 5.00 representing respondents' perceptions of disagreement, neutrality, agreement and strong agreement respectively.

Descriptive statistics was assessed in an effort to examine the mean scores and the corresponding standard deviations under the respective scales of both the dimensions of the independent

variable, namely strategic sourcing practice, and the dependent variable, namely operational performance of the organization. Hence, this particular attempted to answer some of the research questions on the basis of the perceptions of the respondents on the level of the practice of strategic sourcing in their respective projects and the corresponding operational performance of the organization. Composite scores of mean and standard deviation were calculated for the four scales of strategic sourcing practice, namely supplier development, long-term relationship, effective procurement planning and communication, and for the scale of operational performance of the organization. The resulting composite scores of mean and standard deviation are presented on Table 4.3 as follows.

Table 4.3. Composite scores of mean and standard deviation

Dimension/Scale	Mean	Standard Deviation
Supplier Development	2.76	.83
Long-term Relationship	3.44	.79
Effective Procurement Planning	3.37	.76
Communication	3.07	.81
Operational Performance	3.48	.68

Source: Survey Result, 2017

4.3.1. Respondents' Perception on Strategic Sourcing Practice

The mean values of each of the scales of strategic sourcing practice were calculated between 2.76 and 3.44 with almost comparable standard deviations that range between 0.76 and 0.83. The lowest mean value is registered in the case of supplier development followed by the mean score for communication; while long-term relationship and effective procurement planning scored comparably close mean values of 3.44 and 3.37 respectively.

4.3.2. Respondents' Perception on Operational Performance

The mean score of the scale of Operational performance is 3.48 as depicted on the above mentioned table with the lowest standard deviation of 0.68. This score is very marginally higher relative to the mean scores of the high scoring dimensions of strategic sourcing practice. However, the fact that the composite mean score is only 3.48 suggests that respondents were rating their respective projects operational performance as moderate, as in the case of their evaluation regarding most of the dimensions strategic sourcing practice.

4.4. Analyzing the Correlation between strategic sourcing and operational performance

In this part of the study, Correlation analysis was conducted to determine whether a statistically significant relationship exists between the dimensions of strategic sourcing practice (i.e. supplier development, long-term relationship, effective procurement planning and communication) and operational performance. Correlation analysis helps to determine the relationship among variables by giving insight on the strength and direction of relationship. The coefficient of correlation could take values ranging from -1 to +1, where the signs signifying the direction of relationship. As per the guide line suggested by Field (2005), the strength of relationship that ranges from 0.1 to 0.29 shows weak relationship; 0.3 to 0.49 is moderate; and >0.5 shows strong relationship between the two variables. A correlation value of 0 implies the absence of relationship among variables, a result between 0.1 and 0.3 indicates weak relationship, whereas a result between 0.4 and 0.6, and 0.7 and 0.9 imply respectively moderate and strong relationships among variables, while a correlation coefficient of 1 suggests a perfect relationship (Dancy and Reidy, 2004).

The result of the correlation analysis conducted to analyze the relationship between the dimensions of strategic sourcing practice and operational performance is presented on the following table:

Table 4.4: Compounded correlation matrix

		Operational Performance
Supplier Development	Pearson Correlation	.568**
	Sig. (2-tailed)	.000
	N	52
Long-term Relationship	Pearson Correlation	.700**
	Sig. (2-tailed)	.000
	N	52
Effective Procurement planning	Pearson Correlation	.682**
	Sig. (2-tailed)	.000
	N	52
Communication	Pearson Correlation	.777**
	Sig. (2-tailed)	.000
	N	52
**. Correlation is significant at the 0.01 level (2-tailed).		

Source: Survey Result, 2017

As clearly seen on the aforementioned table a moderate positive relationships have been identified between supplier development and operational performance ($r=0.568$, $p=0.01$), and between effective procurement planning and operational performance ($r=0.682$, $p=0.01$). Whereas, strong positive relation have been identified between long-term relationship and operational performance ($r=0.70$, $p=0.01$), and between communication and Operational performance ($r=0.777$, $p=0.01$). All the relationships are statistically significant at 99% confidence level.

The results recommend that all the dimensions of strategic sourcing practice have positive relationship with the operational performance of AHAE (Amref Health Africa in Ethiopia), though the strength of relationship is somehow different for the dimensions involved since it has been revealed that long-term relationship and communication have exhibited strong correlation with the dependent variable than the moderate relationship witnessed in the case of supplier development and operational performance, and communication and operational performance. This implies that supplier development initiatives, such as conducting regular visits to suppliers' sites, rewarding and recognizing suppliers for their best performance and collaborating with suppliers in materials improvement, among others; and sharing of relevant, timely and accurate information with suppliers regarding events that affect the other party and other worthy proprietary information in the required frequency, are somehow positively related to how the buying firms perform in assuring reduced cost of purchasing, materials quality, on-time delivery, inventory performance and overall satisfaction of their internal user organs.

In addition, engaging in long-term contractual agreements (framework agreements), working to make the relationship sustainable, long lasting and collaborating with suppliers so as to make better their quality in the long-run, among others; buying firms perform in assuring reduced cost of purchasing, materials quality, on-time delivery, inventory performance and overall satisfaction of their internal user organs.

Apart from the above compounded correlation analysis, separate correlation analyses had also been made to reveal the relationship between the four dimensions of strategic sourcing practice and the individual measures of operational performance. This is to address the suggestion that combining different performance measures into one compound measure and ascribing that strategic sourcing practices have positive effects on different performance measures at more or less equal levels is a questionable assertion since compounding different supply chain management practices and different performance measures does not help firms to identify the

individual contribution of any supply chain practice to a specific type of performance (Prajogo et al., 2012). Hence, the results of the separate correlation analyses made between the dimensions of the dependent variable and the individual measures of operational performance are provided as follows:

Table 4.5.: Supplier development Vs individual measures of Operational performance

		Minimum Cost of materials	Quality of materials	On-time delivery	Inventory performance	Internal customers' satisfaction
Supplier Development	Pearson Correlation	.474**	.493**	.443**	.392**	.358**
	Sig. (2-tailed)	.000	.000	.001	.004	.009
	N	52	52	52	52	52
** . Correlation is significant at the 0.01 level (2-tailed).						

Source: Survey Result, 2017

A Pearson product-moment correlation was conducted to evaluate the relationship between supplier development and individual measures of operational performance. Accordingly, the data indicated in table 4.5, there was a statistically significant positive correlation between supplier development and individual measures of operational performance such as minimum cost of materials, quality of materials, on-time delivery, inventory performance and internal customer satisfaction ($p < 0.01$).

The result that supplier development has positive relationship with operational performance is also supported by Sanchez-Rodriguez (2009) though the strength of relationship exhibited in the case of the later is somehow smaller. According to Prajogo et al (2011) found a significant positive relationship among aspects of supplier development practice and the dimensions of operational performance in the study that attempted to separately measure the association between some factors of strategic sourcing practice and individual aspects of operational performance. But, the characteristic of supplier development considered in the aforementioned study did have relatively strong association with the improvement of the quality of purchased items than the association they had exhibited with the assurance of reduced material cost and shorter delivery time, in which case the strengths of relationship are relatively smaller as the case in this particular study.

The fact that supplier development identified to have positive association with operational performance is a reflection of the suggestion that supplier development is critical in supporting a firm's operations strategy by ensuring that suppliers' performance and capabilities meet the

needs of the buying firm (Wagner, 2011; Humphreys et al., 2004). Sileshi, (2012) also found the result similar to this research.

Table 4.6: Long-term relationship Vs individual measures of operational performance

		Minimum Cost of materials	Quality of materials	On-time delivery	Inventory performance	Internal customers' satisfaction
Long-term Relationship	Pearson Correlation	.637**	.516**	.514**	.471**	.506**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	52	52	50	52	52
**. Correlation is significant at the 0.01 level (2-tailed).						

Source: Survey Result, 2017

A Pearson product-moment correlation was conducted to evaluate the relationship between long term relationship and individual measures of operational performance. Accordingly, the data indicated in table 4.6, there was a statistically significant positive correlation between Long term relationship and individual measures of operational performance such as minimum cost of materials, quality of materials, on-time delivery, inventory performance and internal customer satisfaction ($p < 0.01$).

Strong positive correlation between long-term relationship and rapid handling of customer order (i.e. shorter delivery time) and swift response to customer complaints, where the later two items were meant to measure the performance of the buying firm. Chen et al. (2004). According to Prajogoet al. (2012), strategic long-term relationship has been found to have a strong positive relationship with the improvement of delivery time, flexibility and purchase cost reduction in the study. This is portrayed that when industrial buyers intended to commit themselves in to a strategic long-term oriented relationship with their key suppliers, there would be a joint tendency to improve future performances since in the long run, the invisible hand of the market favors firms whose behavioral orientation support trust and cooperation rather than competition and opportunism, and such behavioral orientation enable buyers and suppliers to work together to increase the likelihood of cooperation to reduce costs and/or enhance product quality through relationship-specific investments (Hill, 1990 on Chen et al.,2004). Strategic relationship under the conditions of a regular long-term contract with suppliers involves more than just transactional activities (i.e., selling-buying), but also high- level coordination of suppliers' systems and capabilities, which has positive effects on cost, quality, and cycle time (Monczka et al., 1998 on Prajogoet al.,2012).

Table 4.7: Effective Procurement Planning Vs individual measures of operational performance

		Minimum Cost of materials	Quality of materials	On-time delivery	Inventory performance	Internal customers' satisfaction
Effective Procurement Planning	Pearson Correlation	.552**	.552**	.601**	.514**	.373**
	Sig. (2-tailed)	.000	.000	.000	.000	.006
	N	52	50	52	52	52
**. Correlation is significant at the 0.01 level (2-tailed).						

Source: Survey Result, 2017

A Pearson product-moment correlation was conducted to evaluate the relationship between effective procurement planning and individual measures of operational performance. Accordingly, the data indicated in table 4.7 there was a statistically significant positive correlation between Effective procurement planning and individual measures of operational performance such as minimum cost of materials, quality of materials, on-time delivery, inventory performance and internal customer satisfaction ($p < 0.01$).

The finding also showed some significant relationship between quality and institutional performance concurring with the finding of (Adamson, 1988; Davis, 1992; Feldman, 1991). The importance of procurement planning has been recognized and most researchers agree that procurement planning supports activities and the quality specification of the product which has a key link to organizations performance. Edvardsson (1998) contents that specification is an integral part of the procurement function.

Basheka, (2008) in his findings concludes that planning is a process that consists of many steps and the bottom line is that planning is not concerned with future decisions but rather with the future impact of decisions made today. The results further revealed that the departments prepared annual procurement plans and that the procurement plans were prepared and the goals set participatory. Procurement plans therefore influence operational performance in the sense that they provide focused and efficient utilization of available resources, help in budgeting and planning and therefore with adequate provision of funds due to procurement plans, performance is assured.

Table 4.8.: Communication Vs individual measures of operational performance

		Minimum cost of materials	Quality of materials	On-time delivery	Inventory performance	Internal customers' satisfaction
Communication	Pearson Correlation	.594**	.544**	.659**	.615**	.539**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	52	52	52	52	52
**. Correlation is significant at the 0.01 level (2-tailed).						

Source: Survey Result, 2017

A Pearson product-moment correlation was conducted to evaluate the relationship between communication and individual measures of operational performance. Accordingly, the data indicated in table 4.8, there was a statistically significant positive correlation between communication and individual measures of operational performance such as minimum cost of materials, quality of materials, on-time delivery, inventory performance and internal customer satisfaction ($p < 0.01$).

Also the study findings shown that communication has strong relation ship with the individual operational performance measure namely on time delivery followed by inventory performance. This particular finding is also consistent with the findings of other studies. For instance it has been revealed that effective communication between buyers and their key suppliers, measured in terms of the relevance, timeliness, level and frequency of the information shared, has positive relationship with rapid handling of customers' order on the buyers' side (Chen et al. 2004). On the other hand, the level and quality of information shared among buyers and suppliers have identified to have a positive relationship with the operational aspects of firms performance, such as fulfillment performance (shorter delivery time) inventory performance and flexibility (Simatupang and Sidharan, 2005). According to (Li et al., 2006) the key to the seamless supply chain is making undistorted and up-to-date information available at every node within the supply chain, hence taking the available information and sharing it with other parties within the supply chain can be used as a source of competitive advantage.

4.5. Regression Analysis

In order to determine how the dimensions of the independent variable predict the dependent variable, multiple linear regression analysis was conducted. Multiple linear regression analysis is a method of estimating or predicting a value on some dependent variable given the values of one or more independent variables. Unlike correlations, the primary purpose of regression is prediction (Marczyk G, DeMatteo D, and Festinger D, 2005). Thus, the magnitude of the predicting power of the dimensions of the independent variable (i.e. supplier development, long-term relationship, effective procurement planning and communication) on the dependent variable (i.e. Operational performance) has been analyzed via multiple linear regression method..However, test of multicollinearity was conducted before the regression analysis.

4.5.1.Multicollinearity Analysis

Multicollinearity refers to the situation in which the independent variables are highly correlated in a way that has undesirable implication on the outcome of regression analysis. According to Robert (2006), if collinearity is discovered then one can either remove one of the variables or create a new variable that combine the previous two that were highly inter-correlated because when the predictor variables are highly correlated, they share essentially the same information and together, they may explain a great deal of the dependent variable, but may not individually contribute significantly to the model.The impact of multicollinearity is, therefore, to reduce any individual independent variables predictive power by the extent to which it is associated with the other independent variables (Beyan, 2014).

Thus, together, they may explain a great deal of the dependent variable, but may not individually contribute significantly to the model. Before conducting the regression analysis Tolerance and Variance Inflation Factor (VIF) values were calculated to check multicollinearity. According to (Robert, 2006) Tolerance value is an indication of the percentage of variance in the predictor that cannot be accounted for by the other predictors implying the fact that very small values indicate overlap or sharing of predictive power, whereas VIF is the reciprocal of Tolerance.

Accordingly, Tolerance and Variance Inflation Factor (VIF) values were calculated to check multicollinearity and the result is presented on table 4.9 below. The Tolerance value is an indication of the percentage of variance in the predictor that cannot be accounted for by the other

predictors implying the fact that very small values indicate overlap or sharing of predictive power (Robert, 2006).

Table 4.9: Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Supplier Development	.56	1.81
	Long-term Relationship	.27	3.49
	Effective Procurement Planning	.32	3.16
	Communication	.54	1.85

Source: Survey Result, 2017

The calculated Tolerance value of the dimensions of the independent variable is ranging from 0.27 in the case of long-term orientation to 0.56 in the case of supplier development. The remaining two dimensions, namely communication and effective procurement planning have Tolerance values of 0.32 and 0.54 respectively. All the Tolerance values are within the acceptable level of greater than 0.1, whereas the VIF values are also less than the cut of value of 10. The fact that the Tolerance and VIF values are falling within the acceptable limit entails in this particular study multicollinearity is not a serious problem.

4.5.2. Multiple Regression Analysis Result

In a multiple linear regression analysis of such sort, ANOVA test shows the acceptability of the model from statistical perspective. Accordingly, the regression row indicates the extent of variation explained by the model, whereas the residual row indicates information about the variation that is not accounted for the model, i.e. variation on the dependent variable explained by factors not included in the model.

Table 4.10: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.245	4	3.811	21.105	.000 ^b
	Residual	8.488	47	.181		
	Total	23.733	51			
a. Dependent Variable: Operational Performance						
b. Predictors: (Constant), Communication, Supplier Development, Long-term Relationship, Effective Procurement Planning						

Source: Survey Result, 2017

In the case of this particular analysis, it has been identified that the computed F statistic is 21.105 with an observed significance level of 0.000, suggesting the statistical fitness of the regression model to the data.

Table 4.11: Model Summary and Coefficients

Model Summary	R	R Square		Adjusted R Square	Std. Error of the Estimate	
		.801a	.642		.612	.42496
Coefficients	Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	1.157	.280		4.134	.000
	Supplier Development	.040	.142	.049	.388	.699
	Long-term Relationship	.172	.142	.201	1.215	.023
	Effective Procurement Planning	.072	.150	.081	.482	.632
	Communication	.451	.118	.538	3.820	.000
a. Predictors: (Constant), Communication, Supplier Development, Long-term Relationship, Effective Procurement Planning						

Source: Survey Result, 2017

The Adjusted R Square value on the model summary table is a representation of the correlation between the observed values of the dependent variable, i.e. operational performance of the organization, and the values of the same dependent variable predicted by the multiple regression models. Hence, it suggested that larger value of the Adjusted RSquare represents a large correlation between the predicted and observed values of the dependent variable (Chandan, 2011).As clearly shown on the model summary, the value for Adjusted R Square is 0.612 suggesting that 61.2%of the variation in the dependent variable (i.e. operational performance of the organization) is explained by the model, i.e. by the combined variance in the dimensions of the independent variable, namely supplier development, long-term relationship, effective procurement planning and communication. The remaining 38.8% of the variation on the dependent variable is, therefore, explained by factors not incorporated in the model.

Though the model is fit to be used for further interpretation (as shown on the ANOVA table), a closer look at the coefficients of the independent variable shows that only communication and

long-term relationship have statistically significant (at $p < 0.05$ and $p < 0.01$ respectively) beta values and their respective standardized coefficients (beta values) indicate the relative importance of both dimensions in predicting the dependent variable, namely operational performance of the entire organization. This implies that the remaining two dimensions of the independent variable, namely supplier development and effective procurement planning couldn't make statistically significant contribution in predicting the operational performance of the organization. As far as the strength of the predicting power of the two statistically significant dimensions is concerned, it is revealed that communication has the strongest positive predicting power on the dependent variable with standardized coefficient of 0.538, followed by long-term relationship, with a standardized coefficient of 0.201.

CHAPTER FIVE

4. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter deals with the summary of major findings, conclusions and recommendations.

This study was aimed at assessing the effect of strategic supplying sources on operational performance at AMREF Health Africa in Ethiopia. Consequently, the study was conducted to test the following basic questions.

1. How Strategic Sourcing Practice relates with Operational Performance in AHAE?
2. How Supplier Development Relates with Operational Performance AHAE?
3. How supplier Long-term Relationship Relates with Operational Performance AHAE ?
4. How effective procurement plans Relates with Operational performance at AHAE?
5. How communication Relates with operational performance at AHAE
6. Which dimensions of Strategic Sourcing Practice predict Operational Performance?

5.1. Correlation Analysis

According to the findings, a moderate positive relationships have been identified between supplier development and operational performance ($r=0.568$, $p=0.01$), and between effective procurement planning and operational performance ($r=0.682$, $p=0.01$). Whereas, strong positive relation have been identified between long-term relationship and operational performance ($r=0.70$, $p=0.01$), and between communication and Operational performance ($r=0.777$, $p=0.01$). All the relationships are statistically significant at 99% confidence level.

The results recommend that all the dimensions of strategic sourcing practice have positive relationship with the operational performance of AHAE (Amref Health Africa in Ethiopia), though the strength of relationship is somehow different for the dimensions involved since it has been revealed that long-term relationship and communication have exhibited strong correlation with the dependent variable than the moderate relationship witnessed in the case of supplier development and operational performance, and effective procurement planning and operational performance. This implies that supplier development initiatives, such as conducting regular visits to suppliers' sites, rewarding and recognizing suppliers for their best performance and collaborating with suppliers in materials improvement, among others; and sharing of relevant,

timely and accurate information with suppliers regarding events that affect the other party and other worthy proprietary information in the required frequency, are somehow positively related to how the buying firms perform in assuring reduced cost of purchasing, materials quality, on-time delivery, inventory performance and overall satisfaction of their internal user organs.

There was a statistically significant positive correlation between strategic sourcing practice variables and individual measures of operational performance such as minimum cost of materials, quality of materials, on-time delivery, inventory performance and internal customer satisfaction ($p < 0.05$).

5.2. Conclusions

The composite mean scores of the scales of the independent variables, namely Supplier Development, long-term orientation, communication and effective procurement planning revealed that the respondents perceive that Amref Health Africa in Ethiopia exerted relatively moderate efforts towards the improvement of these variables. Similar to what has been witnessed in the case of the status of sourcing practice at AHAE the respondents were rating the operational performance of AHAE at best moderate.

The separate analyses of the relationship between the dimensions of strategic sourcing practice and operational performance have revealed that all of the dimensions of strategic sourcing practice have statically significant positive relationship with operational performance.

So long as the predicting power of the dimensions of the dependent variable are concerned, it has been investigated that Supplier development, long-term orientation, effective procurement planning and Communications have statistically significant beta values have an effect on the dependent variable, i.e. operational performance of AHAE. Generally, the study findings have suggested that the levels of strategic sourcing practices and operational performance are moderate in the case of AHAE as the perceived evaluation of the respondents reply. It has also revealed that, all of the dimensions of strategic sourcing practices have statistically significant positive relationship with operational performance.

Generally, the study findings have suggested that the levels of strategic sourcing practices and operational performance are moderate in the case of the Amref Health Africa in Ethiopia as the perceived evaluation of the respondents imply. It has also revealed that, though all of the dimensions of strategic sourcing practice have statistically significant positive relationship with operational performance, the strength of relationship is higher in the case of long-term relationship and communication relative to that of supplier development and effective procurement planning. Moreover, communication and long-term relationship have been identified to have statistically significant predictive power on the operational performance of AHAE.

5.3. Recommendations

Based on the major findings and conclusions of the study the following recommendations were forwarded:

Amref Health Africa in Ethiopia is required to review its existing sourcing practices and make the necessary modifications in order to benefit from the performance improvements in terms of improved quality, swift delivery time, reduced cost of goods, volume & mix flexibility of goods and satisfaction of internal customers. As discovered by the findings of the study, the level of sourcing practices and the corresponding operational performance at the disposal of Amref Health Africa Ethiopia are at best rated as moderate. The apparent moderate strategic sourcing practices and the corresponding operational performance together with the significant positive relationship that has been witnessed between the two, implicated that Amref Health Africa in Ethiopia need to work on its sourcing practices in order to enhance its operational performance. Moreover, strengthening of its long-term oriented relationship with key suppliers would also be suggested along with creating the platform to work with few strong suppliers by promoting a closer partnership oriented approaches.

Given the revelation of the study that suggested the relatively strong positive relationship that operational performance has with communication and long-term relationship, and considering the suggestion of the other finding that effective communication and long-term relationship have significant impact in explaining the changes in the dependent variable, namely operational performance, AHAE shall give special emphasis in improving communication and information

sharing with their key supplier ,on the one hand, and promoting long-term orientation by engaging in long-term contractual agreements with key suppliers, collaborating with key suppliers to improve their quality in the long-run and instilling confidence in suppliers by investing in relationship specific assets, on the other.

Moreover, given the fact that the different dimensions of strategic sourcing practice have a varying strength of relationship with the individual measures of operational performance (for instance, supplier development has relatively strong relationship with quality, long-term-relationship with minimum cost of materials, information sharing and effective procurement planing with on-time delivery), particular emphasis shall be given to the improvement of the dimension/s that would have the strongest relationship with the performance measure of special interest by Amref Health Africa in Ethiopia

5.3.1.Limitation and Suggestions for Future Studies

Like many research works, this particular study is also subjected to some limitations.

First and for most, this study does not comprehensively capture all aspects of supply chain practices as applicable to strategic sourcing practice, rather it made emphasis in revealing the associations and impact relationships that four strategic sourcing dimensions have with operational performance of AHAE. In order to benefit from a comprehensive assessment of the factors that truly affect the operational performance of the organization, future studies shall consider more dimensions of strategic sourcing practice (logistic integration, supplier selection, contract administration) that haven't been considered in this particular study as all domains cannot be covered in just one study.

Therefore, future researches can expand the domain of SCM practices by considering these additional supply chain dimensions and supply chain parties. Moreover, future researches shall be done with multiple organizations and with large number of respondents to enhance the research findings.

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APPENDIX A:
ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE
DEPARTMENT OF LOGISTICS AND SUPPLY CHAIN MANAGEMENT
POSTGRADUATE PROGRAM
QUESTIONNAIRE

“THE EFFECT OF STRATEGIC SOURCING PRACTICE ON ORGANIZATIONAL PERFORMANCE: THE CASE OF AMREF HEALTH AARICA IN ETHIOPIA”.

Dear Respondent,

My name is Eyerusalem Ketema, from Amref Health Africa. Currently I am conducting my Master thesis entitled “The effect of strategic sourcing on organizational performance: the case of Amref health Africa in Ethiopia”. The information I collect will help me to know the effect of strategic sourcing on organizational performance and forward recommendation based on results. As one of study subjects, you are selected to take part in this study. This administered questionnaire may takes about 15-20 minutes.

All of the answers you give will be confidential and will not be shared with anyone other than the researcher team. You don't have to be in the assessment, but we hope you will agree to answer the questions since your views are important. If there is any question you don't want to answer, just skip it go on to the next question or you can stop filling the questions at any time.

Thank you in advance.

Note:

- 1.No need of writing your name.
- 2.Indicate your answer with a check mark (✓) on the appropriate block/cell both for multiple choice and Likert scale questions.
- 3.If you need further explanation you can contact me and discuss the matter freely via E-mail eyerusalem.ketema1@gmail.com.

Section I: Respondents Profile:

1. Age: 18-25 years 26-35 years 36-45 years above 45 years

2. Sex: Male Female

3. Educational Qualification:

Below college diploma College diploma First Degree (BSc, BA)
Second Degree (MSc, MA)PHD and above

4. Current Position_____

5. Year of service in the current position:

1 to 3 years 4 to 7 years 8 to 10 years above 10 years

Section II: Main Questionnaire

Please indicate your choice by putting the tick mark (✓) on the appropriate cell. Where, 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

6. Please indicate the degree to which you agree with the following statements regarding the practices of collaborative buyer-supplier relationship in your company. (Please take your key suppliers of critical items in mind while rating the statements).

No.	Measurement Items	Score				
		1	2	3	4	5
Supplier Development						
6.1	We conduct regular visits to suppliers' sites					
6.2	We reward and recognize suppliers for their best performance					
6.3	We collaborate with key suppliers in materials improvement					
6.4	We use a supplier certification program to certify supplier quality					
6.5	There is a system placed to measure suppliers performance in regular basis					
Long-term Relationship						
6.6	We expect our relationships with key suppliers to last a longer time					
6.7	We have long-term contractual agreements with key suppliers					
6.8	We collaborate with key suppliers to improve their quality in the long run					
6.9	We view our key suppliers as an extension of our company					
6.10	Key suppliers see our relationships as a long-term alliance					
6.11	The relationship we have with key suppliers is essentially evergreen					
Effective Procurement Planning						
6.12	There is a culture of joint procurement planning with concerned departments.					
6.13	Procurement planning is an integral part of the organization's strategic planning.					
6.14	Procurement planning is a smooth exercise in AHAE					
6.15	There are no emergency purchases in AHAE					
6.16	Procurement planning implemented as per the schedule					
Communication						
6.17	Suppliers are provided with any information that might help them					
6.18	Exchange of information takes place frequently, informally and/or in a timely manner					
6.19	We keep each other informed about events or changes that may affect the other party					
6.20	We have frequent face-to-face planning/communication					

7. Please indicate the degree to which you agree with the following statements regarding the purchasing performance of your company.

No.	Measurement Items	Score				
		1	2	3	4	5
Operational Performance						
7.1	We are successful in minimizing cost of purchased materials,					
7.2	We are successful in assuring quality of purchased materials,					
7.3	We are successful in assuring on-time delivery of ordered materials,					
7.4	We are successful in assuring volume and mix flexibility,					
7.5	Internal customers are much satisfied with the achievements of our purchasing function					

APPENDIX B:
Correlation and Regression Table

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	49	94.2
	Excluded ^a	3	5.8
	Total	52	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.803	5

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
13.92	15.952	3.994	5

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	50	96.2
	Excluded ^a	2	3.8
	Total	52	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.893	6

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
20.80	23.224	4.819	6

Reliability

Case Processing Summary

		N	%
Cases	Valid	50	96.2
	Excluded ^a	2	3.8
	Total	52	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.833	5

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
16.84	12.831	3.582	5

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	52	100.0
	Excluded ^a	0	.0
	Total	52	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.765	4

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
12.29	10.601	3.256	4

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	50	96.2
	Excluded ^a	2	3.8
	Total	52	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.816	5

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
17.54	11.600	3.406	5

Descriptive

Descriptive Statistics

	N	Mean	Std. Deviation
Study Respondent	52	26.50	15.155
SupDeve	52	2.7673	.83700
LongTRela	52	3.4410	.79884
EfeProPla	52	3.3731	.76289
Communi	52	3.0721	.81400
OperPerfo	52	3.4885	.68217
Valid N (listwise)	52		

S

Correlations

		Correlations				
		SupDeve	LongTRela	EfeProPla	Communi	OperPerfo
SupDeve	Pearson Correlation	1	.692**	.691**	.601**	.568**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	52	52	52	52	52
LongTRela	Pearson Correlation	.692**	1	.813**	.742**	.700**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	52	52	52	52	52
EfeProPla	Pearson Correlation	.691**	.813**	1	.750**	.682**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	52	52	52	52	52
Communi	Pearson Correlation	.601**	.742**	.750**	1	.777**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	52	52	52	52	52
OperPerfo	Pearson Correlation	.568**	.700**	.682**	.777**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	52	52	52	52	52

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		SupDeve	We are successful in minimizing cost of purchased materials,	We are successful in assuring quality of purchased materials,	We are successful in assuring on-time delivery of ordered materials,	We are successful in assuring better inventory performance,	Internal customers are much satisfied with the achievements of our purchasing function	
Correlations	SupDeve	1	.474**	.493**	.443**	.392**	.358**	
		Pearson Correlation						
		Sig. (2-tailed)	.000	.000	.001	.004	.009	
		N	52	52	50	52	52	
	We are successful in minimizing cost of purchased materials,	Pearson Correlation	.474**	1	.511**	.562**	.501**	.400**
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.003
		N	52	52	50	52	52	52
	We are successful in assuring quality of purchased materials,	Pearson Correlation	.493**	.511**	1	.456**	.505**	.433**
		Sig. (2-tailed)	.000	.000	.001	.000	.000	.002
		N	50	50	50	50	50	50
	We are successful in assuring on-time delivery of ordered materials,	Pearson Correlation	.443**	.562**	.456**	1	.529**	.437**
		Sig. (2-tailed)	.001	.000	.001	.000	.000	.001
	N	52	52	50	52	52	52	
We are successful in assuring better inventory performance,	Pearson Correlation	.392**	.501**	.505**	.529**	1	.423**	
	Sig. (2-tailed)	.004	.000	.000	.000	.000	.002	
	N	52	52	50	52	52	52	
Internal customers are much satisfied with the achievements of our purchasing function	Pearson Correlation	.358**	.400**	.433**	.437**	.423**	1	
	Sig. (2-tailed)	.009	.003	.002	.001	.002	.002	
	N	52	52	50	52	52	52	

** . Correlation is significant at the 0.01 level (2-tailed).

		LongTRela	We are successful in minimizing cost of purchased materials,	We are successful in assuring quality of purchased materials,	We are successful in assuring on-time delivery of ordered materials,	We are successful in assuring better inventory performance,	Internal customers are much satisfied with the achievements of our purchasing function
LongTRela	Pearson Correlation	1	.637**	.516**	.514**	.471**	.506**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	52	52	50	52	52	52
We are successful in minimizing cost of purchased materials,	Pearson Correlation	.637**	1	.511**	.562**	.501**	.400**
	Sig. (2-tailed)	.000		.000	.000	.000	.003
	N	52	52	50	52	52	52
We are successful in assuring quality of purchased materials,	Pearson Correlation	.516**	.511**	1	.456**	.505**	.433**
	Sig. (2-tailed)	.000	.000		.001	.000	.002
	N	50	50	50	50	50	50
We are successful in assuring on-time delivery of ordered materials,	Pearson Correlation	.514**	.562**	.456**	1	.529**	.437**
	Sig. (2-tailed)	.000	.000	.001		.000	.001
	N	52	52	50	52	52	52
We are successful in assuring better inventory performance,	Pearson Correlation	.471**	.501**	.505**	.529**	1	.423**
	Sig. (2-tailed)	.000	.000	.000	.000		.002
	N	52	52	50	52	52	52
Internal customers are much satisfied with the achievements of our purchasing function	Pearson Correlation	.506**	.400**	.433**	.437**	.423**	1
	Sig. (2-tailed)	.000	.003	.002	.001	.002	
	N	52	52	50	52	52	52

** . Correlation is significant at the 0.01 level (2-tailed).

		EfeProPla	We are successful in minimizing cost of purchased materials,	We are successful in assuring quality of purchased materials,	We are successful in assuring on-time delivery of ordered materials,	We are successful in assuring better inventory performance,	Internal customers are much satisfied with the achievements of our purchasing function
EfeProPla	Pearson Correlation	1	.552**	.552**	.601**	.514**	.373**
	Sig. (2-tailed)		.000	.000	.000	.000	.006
	N	52	52	50	52	52	52
We are successful in minimizing cost of purchased materials,	Pearson Correlation	.552**	1	.511**	.562**	.501**	.400**
	Sig. (2-tailed)	.000		.000	.000	.000	.003
	N	52	52	50	52	52	52
We are successful in assuring quality of purchased materials,	Pearson Correlation	.552**	.511**	1	.456**	.505**	.433**
	Sig. (2-tailed)	.000	.000		.001	.000	.002
	N	50	50	50	50	50	50
We are successful in assuring on-time delivery of ordered materials,	Pearson Correlation	.601**	.562**	.456**	1	.529**	.437**
	Sig. (2-tailed)	.000	.000	.001		.000	.001
	N	52	52	50	52	52	52
We are successful in assuring better inventory performance,	Pearson Correlation	.514**	.501**	.505**	.529**	1	.423**
	Sig. (2-tailed)	.000	.000	.000	.000		.002
	N	52	52	50	52	52	52
Internal customers are much satisfied with the achievements of our purchasing function	Pearson Correlation	.373**	.400**	.433**	.437**	.423**	1
	Sig. (2-tailed)	.006	.003	.002	.001	.002	
	N	52	52	50	52	52	52

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation

		Communi	We are successful in minimizing cost of purchased materials,	We are successful in assuring quality of purchased materials,	We are successful in assuring on-time delivery of ordered materials,	We are successful in assuring better inventory performance,	Internal customers are much satisfied with the achievements of our purchasing function
Communi	Pearson Correlation	1	.594**	.544**	.659**	.615**	.539**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	52	52	50	52	52	52
We are successful in minimizing cost of purchased materials,	Pearson Correlation	.594**	1	.511**	.562**	.501**	.400**
	Sig. (2-tailed)	.000		.000	.000	.000	.003
	N	52	52	50	52	52	52
We are successful in assuring quality of purchased materials,	Pearson Correlation	.544**	.511**	1	.456**	.505**	.433**
	Sig. (2-tailed)	.000	.000		.001	.000	.002
	N	50	50	50	50	50	50
We are successful in assuring on-time delivery of ordered materials,	Pearson Correlation	.659**	.562**	.456**	1	.529**	.437**
	Sig. (2-tailed)	.000	.000	.001		.000	.001
	N	52	52	50	52	52	52
We are successful in assuring better inventory performance,	Pearson Correlation	.615**	.501**	.505**	.529**	1	.423**
	Sig. (2-tailed)	.000	.000	.000	.000		.002
	N	52	52	50	52	52	52
Internal customers are much satisfied with the achievements of our purchasing function	Pearson Correlation	.539**	.400**	.433**	.437**	.423**	1
	Sig. (2-tailed)	.000	.003	.002	.001	.002	
	N	52	52	50	52	52	52

** . Correlation is significant at the 0.01 level (2-tailed).

APPENDIX C: REGRESSION TABLES

Regression

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Communi, SupDeve, LongTRela, EfeProPla ^b		Enter

a. Dependent Variable: OperPerfo

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.801 ^a	.642	.612	.42496

a. Predictors: (Constant), Communi, SupDeve, LongTRela, EfeProPla

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.245	4	3.811	21.105	.000 ^b
	Residual	8.488	47	.181		
	Total	23.733	51			

a. Dependent Variable: OperPerfo

b. Predictors: (Constant), Communi, SupDeve, LongTRela, EfeProPla

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.157	.280		4.134	.000
	SupDeve	.040	.104	.049	.388	.699
	LongTRela	.172	.142	.201	1.215	.230
	EfeProPla	.072	.150	.081	.482	.632
	Communi	.451	.118	.538	3.820	.000

a. Dependent Variable: OperPerfo