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COLLEGE OF ARCHITECTURE AND PLANNING

DEPARTMENT OF BUILDING TECHNOLOGY

**ASSESSMENT OF SUPPLIER APPRAISAL AND RATING IN PROCUREMENT
ENTITIES IN GHANA**

BY

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**A THESIS SUBMITTED TO THE DEPARTMENT OF BUILDING
TECHNOLOGY IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR
THE DEGREE OF**

MASTER OF SCIENCE (MSc) IN PROCUREMENT MANAGEMENT

JUNE, 2014.

DECLARATION

I declare that I have personally undertaken the study herein submitted. I therefore hold sole responsibility for the views expressed and that except portions where references have been duly cited, this dissertation is the outcome of my research.



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DEDICATION

I dedicate this dissertation first of all, to God almighty, for his guidance, protection and favours, and the entire Inkoom family.

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ACKNOWLEDGEMENT

TO GOD BE THE GLORY

Boundless is my appreciation to all who have contributed to the achievement of this study. My appreciation goes to my supervisor, DR. DEGRAFT OWUSU MANU for his helpful comment, guidance and constructive criticisms, support and inspirational supervision.

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ABSTRACT

Previously commonly used supplier appraisal criteria have solely focused on quality, service or delivery and price.

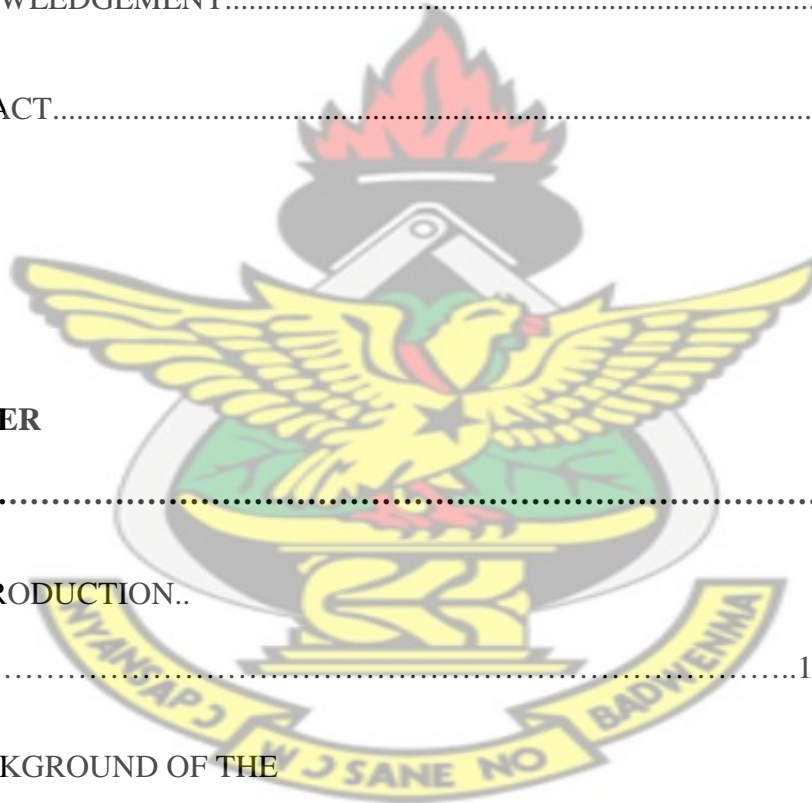
Literature have in recent years suggested that some instruments or criteria for appraising suppliers were just about measuring quality and other quantitative measures such as price and service at the very most (Doney and Cannon 1997; Wilson 1994). As a matter of fact many existing appraisal measures fail to consider other important factors in appraising suppliers which are mostly qualitative in nature. The purpose of the research is to identify how buying organizations appraise suppliers and to identify the key supplier competencies (criteria) currently appraised on. The study also pinpoints those variables that have been identified by research as crucial elements of a buyer-supplier relationship but have been frequently omitted in the supplier appraisal processes. Findings however reveal that only few of responding firms have a formal supplier appraisal process in place and that other factors were not predominantly considered in the supplier appraisal process. The study also makes use of both qualitative and quantitative approaches for methodology where interviews and questionnaire will be used as data collection instruments. It also sought to identify challenges and weaknesses in the appraisal processes as well as its strengths with the view of suggesting recommendations that could be used to reinforce the processes. Recommendations included proper reviewing of weighting criteria, supplier rewards, short courses or training, debriefing, Reinforcement of Institutional structures and frequency of assessment.

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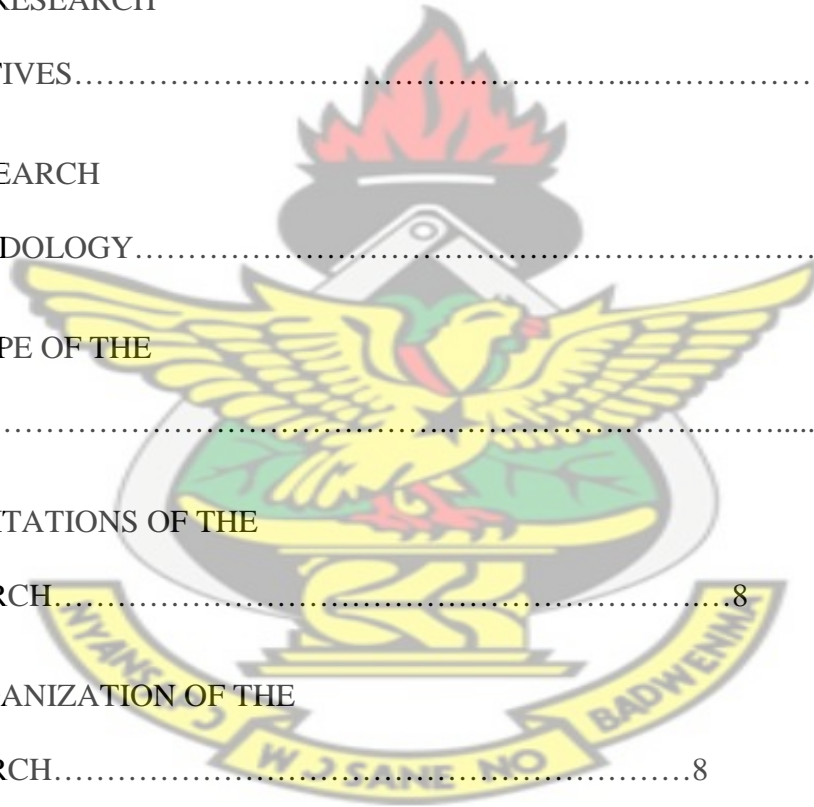
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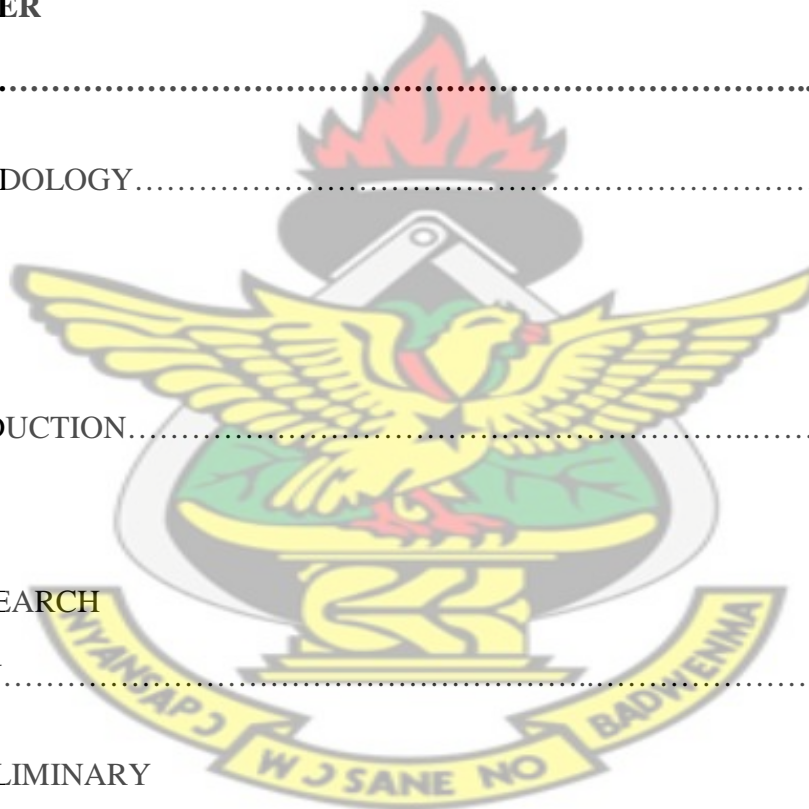
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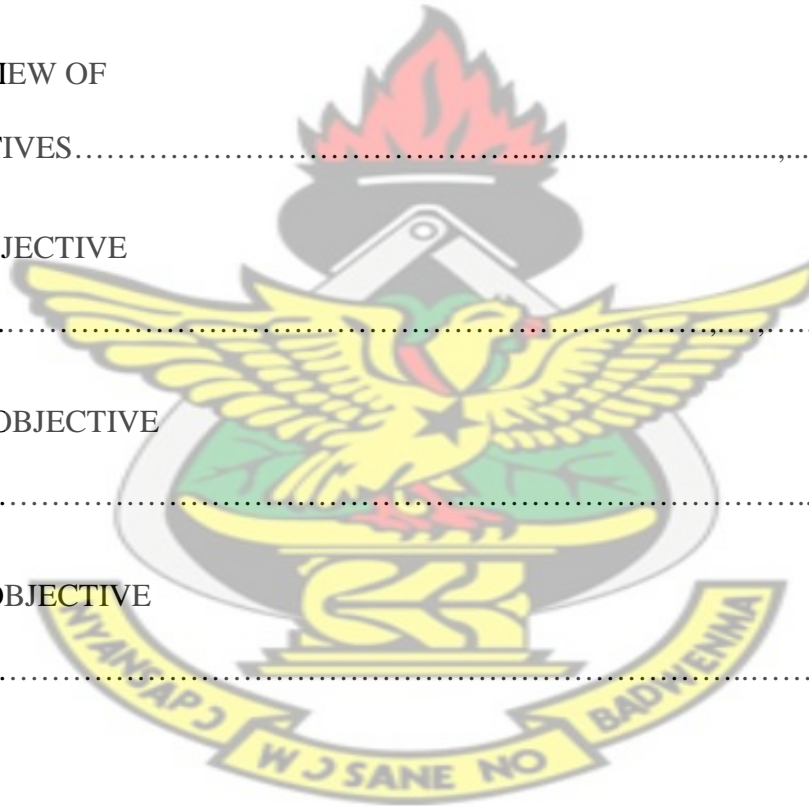


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CHAPTER ONE

1.0 INTRODUCTION

Supplier appraisal is the evaluation and monitoring of supplier's capability to ensure successful delivery of commercial outcomes. Supplier appraisal may also arise when a prospective supplier/vendor applies to be put on the buyer's approved list or in the course of negotiation when the buyer wishes to assure himself that a supplier can meet requirements reliably. For the purpose of this research work it is the assessment of existing suppliers on the basis of their delivery, prices, production capacity, and quality of management, Technical capabilities and service.

This introduction chapter is going to give some background information about the subject and describe the reasons why it is important. Later on will be described objectives and limitations to the thesis as well as description about each of the chapters.

1.1 BACKGROUND OF THE STUDY

Purchasing and suppliers are of major strategic importance to most buying organizations today. This is because a substantial amount of the resources used by a company are made available through its suppliers. Purchases from suppliers account for more than half of total costs for most companies and in some industries, such as electronics, telecommunications, construction, and automotive, this portion is normally substantially higher (Gadde and Håkansson 2001).

Suppliers are important to buying firms not only in financial terms. To an increasing extent they provide customers with new technology. Supplier performance thus

considerably impacts on the efficiency and effectiveness of the customer firm and is of vital importance.

To make sure that the performance of vendors is adequate, a multitude of supplier appraisal processes are conducted to test their suitability. Some of these procedures deal mainly with efforts of securing that suppliers function in accordance with expectations in the short run, while others focus on the long-term development of suppliers and its connection to performance.

In a survey of 350 Fortune-500 companies Krause and Ellram (1997) found that supplier appraisal was deemed a vital part of supplier development programs. Even those companies that had no formalized development program regarded supplier appraisal very important. Carr and

Pearson (1999) conducted a study of 739 firms in a cross industry analysis and observed that firms with a strategic approach to purchasing were more involved in supplier appraisal than other firms. It was shown also that this strategic approach had a positive impact on buyer-seller relationships and, finally, supplier appraisal systems had a positive effect on the buying firm's financial performance.

1.2 STATEMENT OF THE PROBLEM

Supplier appraisal is an area that is continuing to receive significant attention in literature. Effective appraisal and selection of suppliers is considered to be one of the critical responsibilities of purchasing managers. The appraisal process often involves the simultaneous consideration of several important supplier performance attributes that include price, delivery lead-times, and quality. The criticality of supplier selection is evident from its impact on firm performance and, more specifically, on final product attributes such as cost, design, manufacturability, quality, and so forth (Burt 1984; Burton 1988). Several researchers have emphasized the importance of the supplier appraisal process (Banker and Khosla 1995; Burt 1984; Burton 1988; Dickson 1966; Dobler et al. 1990). More recently, Banker and Khosla (1995) have identified the supplier appraisal/evaluation issue as an important decision area in operations management.

The motivation for this research primarily also stems from three critical issues associated with the supplier appraisal problem in industry. First, supplier evaluation techniques utilized in industry are mostly based on simple, weighted scoring methods that primarily rely on subjective judgments and opinions of purchasing managers or staff involved in the supplier appraisal process. While this approach has its advantages (e.g., the experience and contextual knowledge of purchasing staff is used in appraising suppliers), one of its limitations is that the weights for various supplier performance attributes used in the weighted, additive scoring model are arbitrarily set. Thus, the final ranking of suppliers is heavily dependent on the assignment of these weights, which are often difficult to specify in an objective manner. Two problems are encountered in real settings. Supplier appraisals are usually done in a group setting. In group appraisals,

although it is relatively easy to get concurrence on the importance rankings for the first few supplier performance attributes, it is difficult to reach consensus beyond the first few attributes of performance. The consensus decisions will have to be revisited as the group composition changes due to resignations and job reassignments. A more balanced approach that effectively integrates managerial judgments with objective methods can significantly improve the consistency of the decision making process.

Second, in most firms, the appraisal process is based only on supplier performance outcomes such as price, quality, and delivery. While these outcome measures are important in appraising supplier performance, they only deal with part of the supplier appraisal problem. For example, a supplier may be achieving high levels of performance by utilizing enormous amounts of resources and thus be an inefficient performer. From a strategic perspective, firms may be more inclined to develop long term relationships with suppliers that are both high performers and highly efficient. This is because such suppliers are more likely to have the infrastructure and organizational capabilities in place to effectively meet the changing demands of the buying firm in the long run. Thus, in order to comprehensively evaluate the performance of suppliers, it is also necessary to consider the type and amount of input resources (i.e., practices relating to the technical, managerial, and operational capabilities) utilized in generating performance outcomes.

Therefore, a measure of efficiency in addition to performance solely based on outputs (e.g., cost, quality, and delivery performance) is warranted.

Third, in order for firms to improve their decision making effectiveness relating to supplier development efforts through supplier process improvement and benchmarking,

effective deployment of scarce resources for supplier development programs, and restructuring of the supply base and reallocation of order quantities among suppliers, an objective and comprehensive method that can be consistently applied across all suppliers is needed.

In addition most firms actually do not appraise suppliers at all leaving them with no idea whether their suppliers are meeting their performance demands or not.

1.3 RESEARCH QUESTIONS

The key research questions articulated to facilitate the inquiry are:

1. What are the key common criteria in appraising suppliers?
2. What are the areas to be appraised?
3. What are the approaches to supplier appraisals?
4. Who should appraise?
5. What are the challenges in supplier appraisals?

1.4 AIM AND OBJECTIVES OF THE RESEARCH

This section addresses the research aim, research objectives, and research questions.

1.4.1 AIM

To assess techniques procurement entities use in evaluating the performance of their suppliers.

1.4.2 RESEARCH OBJECTIVES

In order to answer the research questions and to achieve the overall research aim as stated above, the following research objectives are set:

1. To identify existing or current supplier appraisal techniques used in appraising suppliers.
2. To identify the performance appraisal criteria used in the appraisal of suppliers.
3. To identify the strengths and weaknesses of supplier appraisals and suggest recommendations.

1.5 RESEARCH METHODOLOGY

The applied method of the study is the use of the interview. Through that process, the respondents can be interacted with on how they go about supplier appraisals. The participants are procurement practitioners or head of procurement entities.

This particular research activity will be conducted using the guidelines of both the quantitative and the qualitative research approaches. In this light, the research study will make use of the survey and the interview techniques as methods for the data gathering activities. The qualitative aspect of research will be used in order to provide in-depth discussion regarding the concepts of supplier appraisal and classification. Meanwhile, the quantitative part of the research activity will make possible the quantification of concepts and ideas that are otherwise immeasurable within the qualitative paradigm. The

utilization of both the quantitative and the qualitative research approaches will be used to provide comprehensive understanding on the selected research topic.

Therefore, discussions will reflect the use of both these academic research approaches.

The survey method will be facilitated through the use of survey questionnaires. This will include inquiries on the general characteristics, particularly the socio-demographic information of the selected research procurement entities. Quantifiable inquiries will be likewise contained in the survey forms and questionnaire regarding the research topic and the Internet in general.

Additional data and information will also be used to support as well as contradict the findings of the study depending on the credibility of the authors and the journals where they were found published. The use of secondary data and information will likewise serve as validity and reliability indicators of the researcher to ensure that the collected data from the survey and the interview methods could be used to strengthen the findings and results of the study. This will hopefully come up to unbiased presentation and discussion of the collected data and information from the indicated research methodologies.

1.6 SCOPE OF STUDY

The research is going to be narrowed to the greater Accra region, emphasis will however be put on public procurement entities which will be purposively selected to study the extent to which appraisal is given consideration, the techniques used and a recommendation to ensure effective supplier evaluation. This will be done by making observations on the selected entities in the region, administering questionnaires to people involved in the appraisal processes and conducting interviews with several stakeholders in the procurement industry. The case study chosen for the research was GRIDCO, however the company doesn't undertake supplier appraisals hence after the research a supplier evaluation matrix will be proposed to be used by the organization. The findings will also be adopted by the head of the procurement to advice management of GRIDCO on the improvement and proper appraisal of suppliers.

1.7 LIMITATIONS OF THE RESEARCH

The research has few limitations. These limitations include:

- Analysis, findings, recommendations and conclusions of the thesis will be generated from results collected from respondents through questionnaire and interview.

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1.8 ORGANIZATION OF THE RESEARCH

This research has been divided into five (5) independent interrelated chapters. Chapter one contains the general introduction and background to the research. The problem statement is also presented in this chapter. The research aim and its specific objectives, the scope and limitations were also included. Chapter two dealt with review of literature. It consists of an elaborate review of other researchers on the subject matter. It will also deal with appraisal techniques which the case study entities use in their individual outfits. Chapter three will consist of the methodology adopted for the research viz: sample population, sample size determination, sampling technique questionnaire design and distribution, research design, primary and secondary data sources, and administration and statistical tools. Chapter four will consist of analysis and discussion of results and chapter five will be conclusion and recommendations, which will consist of review of research objectives.

General Introduction: Background, Problem

Statement, Aim, Objectives,

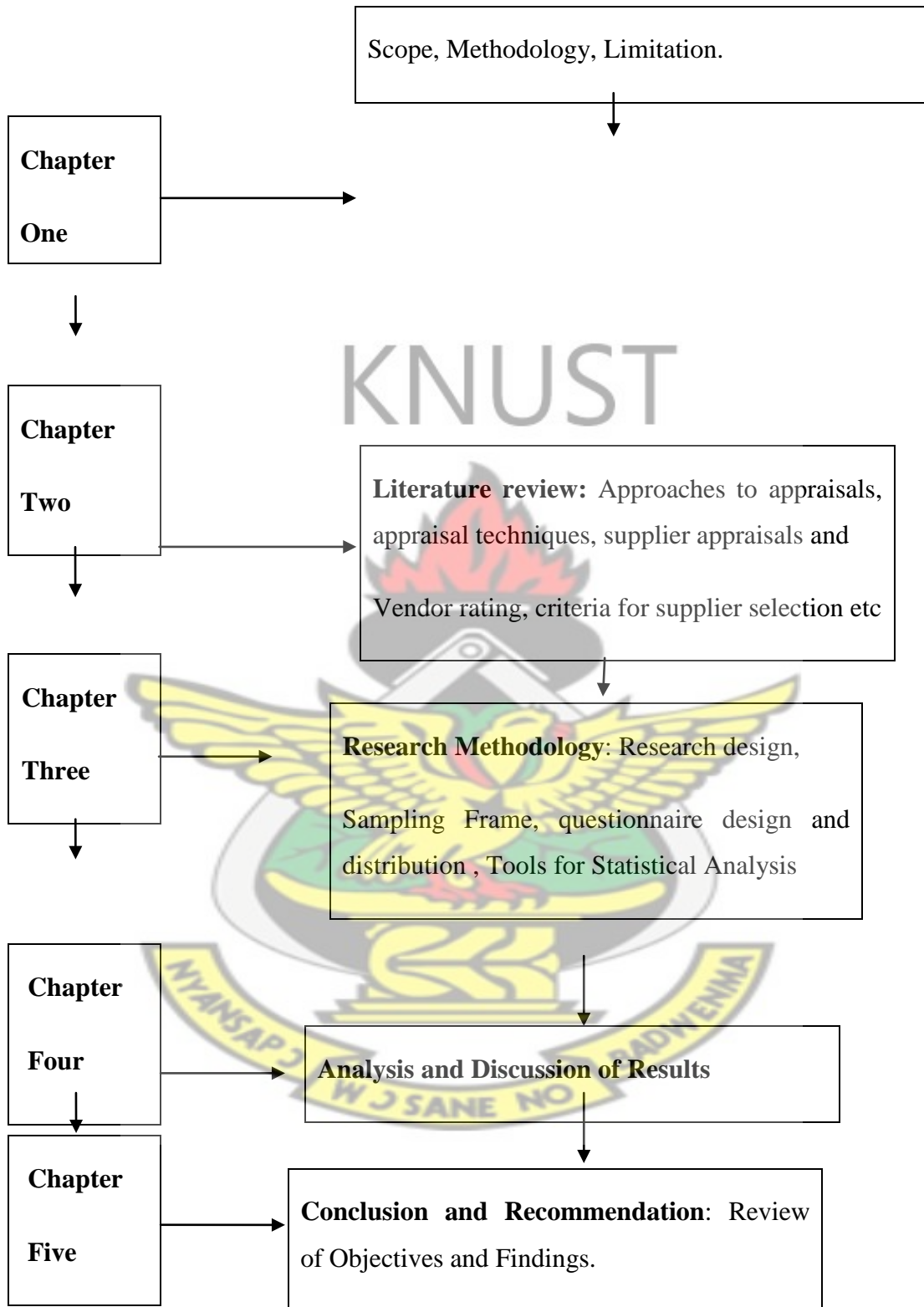


Figure 1: Conception Framework of the Research Process

CHAPTER TWO

LITERITURE REVIEW

2.1 INTRODUCTION

These three terms supplier appraisal, supplier approval and supplier rating are sometimes confused. Each of the three terms has been defined as follows:

Supplier appraisal is the assessment of a potential supplier's capability of controlling quality, delivery, quantity, price and all other factors to be embodied in a contract. Supplier approval on the other hand is the placing of an enterprise on an approved list of suppliers following a process of supplier appraisal.

Supplier rating is an index of the actual performance of a supplier. Each term has one or more synonyms. Thus supplier or vendor evaluation is synonymous with supplier appraisal; supplier certification with supplier approval and supplier performance with supplier rating. The three activities may be regarded as aspects of a continuous process. Supplier appraisal leads to supplier approval followed by supplier rating. Supplier rating may lead either to re-approval or reappraisal and removal from the list of approved suppliers.

2.2 Supplier appraisal its occurrence and involvement

The benefits of supplier appraisal are expressed in various ways. For example, Carr and

Pearson (1999:457) represents one common view when arguing that supplier appraisal "provides the buying firm with a better understanding of which suppliers are performing well and which suppliers are not performing well". This type of information might, for example, be used "to identify suppliers that could benefit most from supplier development efforts" (Forker and Mendez 2001). Besides these expressions of 'general' benefits supplier appraisal is advocated from the perspective of the various functions of the firm. Some illustrative examples are found concerning, for example, product development (De Toni and Nassimbeni 2000a), logistics (Schmitz and Platts 2003), just-in-time manufacturing (Willis and Huston 1989, De Toni and Nassimbeni 2000b), and total quality management (Giunipero and Brewer 1993).

There are a few studies illustrating the actual occurrence of supplier appraisal. For example,

Simpson et al. (2002) found that about half of the purchasing managers in a survey of 299 US firms used formal supplier appraisal systems. Purchasing Magazine, in a large survey with purchasing managers across the US, showed that 61 % of the companies used formal performance measurement systems in relation to their suppliers (Morgan 2000).

Pearson and

Ellram (1995) compared small and large firms in the electronics industry in a national survey with regard to the utilization of supplier appraisal programs. The study showed that large companies were more involved in formal reviews than were small firms. Of the large firms

58% made a formal review every year, or more frequently, while the corresponding figure for small companies was 33%.

Some studies have analyzed which functions in the buying companies that are involved in the appraisal of supplier performance. In the study of the electronics industry it was observed that purchasing, engineering, and production/operations were the functions mostly involved in appraisals. Also R&D, general management, and finance played some role in this respect (Pearson and Ellram 1995).

This first part of the literature review indicates that supplier appraisal may benefit various departments of the buying company. Reaping these benefits requires that different departments become involved in the performance appraisals. It is quite likely that these representatives of the buying company emphasize different dimensions of supplier performance, thus making the evaluation procedure complicated.

2.3 PERFORMANCE APPRAISAL DIMENSIONS AND CRITERIA

Roylance (2008) defined **supplier appraisal** as the process of evaluating and approving potential suppliers by qualitative or quantitative assessment. According to Gordon (2008), this process can also apply to current suppliers in order to measure and monitor their performance.

Generally, when a supplier selection decision needs to be made, the buyer establishes a set of evaluation criteria that can be used to compare potential sources.

The methods used in supplier selection are intending the effectiveness of the purchasing decisions and implementing decision-making mechanism systematically. Traditionally, price and cost used to be the dominating dimension in the evaluation of supplier performance (for example, Wilson 1994). Over time a number of complementary dimensions have been proposed, but in practice the majority of supplier appraisals have long tended to be routinely viewed as consisting of just three factors: price/cost, quality, and delivery (Hirakubo and Kublin 1998).

More diversified views of supplier performance have been presented by advocates of so called 'multiple criteria models', for example, Talluri and Sarkis (2002), Weber (1996), and Roodhooft and Konings (1996). While the traditional vendor/supplier appraisal methods primarily considered financial measures in the decision making process, more recent methods lay emphasis on the incorporation of multiple vendor criteria into appraisal process.

Tan, Lyman and Wisner (2002) proposed an evaluation model, which provides a representative view of the nature of these multi-criteria models, involving the following dimensions and aspects:

Product and delivery assessment, including appraisals of quality level, on-time delivery, correct quantity, service level and price/cost of product.

Capacity assessment, including appraisals of willingness to change product/services to meet changing needs flexible capacity and communication skills/systems.

Others are Information assessment, including evaluations of willingness to share sensitive information and to participate in new product development and value analyses. But Boer et al.(2001) complained that as the number of criteria increases it becomes a problem.

The above criteria illustrates that performance can be evaluated in several dimensions. The most common measurements including cost, delivery, and product quality, focus on the output of the supplier. When companies have long-term ‘partnership’ relationships with suppliers though, output criteria need to be complemented with processual criteria and structural criteria (Ellram 1990).

2.4 PROCESSUAL AND STRUCTURAL CRITERIA

Appraisal with regard to processual criteria addresses what the supplier does, rather than achieves, and typically includes whether employees adhere to standard operating procedures or not. Structural criteria relate to the potential performance and reflect what could be done by the supplier in consideration of the resource body available; thereby including criteria such as employee competence and equipment capability. Processual and structural criteria for performance appraisal in general are suggested by Scott (1995) and can be traced further back to Yuchtman and Seashore (1967).

2.5 CUSTOMER-SUPPLIER INTERDEPENDENCY

The discussion this far has focused on the appraisal of individual suppliers. There are several suggestions that the appraisal of supply performance needs to be extended beyond the individual supplier. One theme in this respect relates to what is identified as ‘close’ or ‘deep’ relationships. In these relationships customer and supplier are interdependent in a number of ways. What the supplier actually can do for the customer is strongly

influenced by the customer's actions. Therefore, the relevant unit of evaluation should be the relationship rather than the supplier. Lamming et al. (1995) presents a relationship assessment model, suggesting criteria for the evaluation of the supplier, the customer, and the relationship. Also O'Toole and Donaldson (2002) advocate a relationship performance approach and particularly emphasize the relevance of using both financial and non-financial measures.

The second type of extended analysis takes a supply chain perspective. The need to incorporate the whole supply chain in the performance appraisal on the supply side is discussed by, for example, Van Hoek (1998) and Beamon (1999). A framework for performance measures in a supply chain environment is developed by Gunasekaran et al. (2001). A vast number of performance indicators (financial and non-financial) are developed on strategic, tactical, and operational levels respectively.

2.6 SUPPLIER SELECTION CRITERIA

Many studies focused on figuring out appraisal criteria used for supplier selection.

Dickson (1966) first proposed supplier quality evaluation when he engaged in an interview with industrial procurement managers and summarized 23 criteria that were applied for supplier appraisal. The top three appraisal criteria are quality, delivery, and previous performance. The study of Lehmann and O'Shaughnessy (1982) presented five criteria of performance, economics, integrative, adaptive, and legalistic for appraising suppliers. Caddick and Dale (1987) suggested using quality, effectiveness of production plan and control system, previous performance, purchased items, and price as supplier appraisal criteria. Patton (1996) proposed seven criteria for supplier appraisal, and they were price, quality, delivery, sales support, equipment and technology, procurement, and finances. Tagaras and Lee (1996) recommended adopting cost (including both direct and indirect costs), delivery, and incoming quality as supplier appraisal criteria. Choi and Hartley (1996) and Barbarosoglu and Yazgac (1997) considered that suppliers could be appraised from quality of shipment, delivery, and cost. Maloni and Benton (1997) and

Beamon (1998) appraised the performance of supply chain management by cost. Su and Chang (2001) suggested quality, price, delivery, quantity, and service for supplier appraisal and selection.

There have been many researches regarding to supplier appraisal criteria since Dickson (1966), and it is not easy to distinguish which criteria are major and how the priority of criteria should be from these reports. Based on Dickson's investigation result in 1966, Weber et al. (1991) examined 74 papers regarding supplier appraisal and published between 1967 and 1990, and determined the corresponding frequencies of the 23 appraisal criteria mentioned on these papers. Price, delivery, quality, and service are the four of the most popular criteria for supplier appraisal.

Beside the criteria that provide quantitative data, some other qualitative criteria are also important for supplier appraisals. In Ellram's research (1990) supplier selection, not only quantitative criteria such as cost, quality, and delivery needed to be applied but also several qualitative criteria were recommended for evaluating suppliers' performance and potential. These qualitative criteria were compatibility of management, consistency of goal, and supplier's strategy.

Some researchers were interested in figuring out the appraisal criteria in different industries or operation. Qiu (1994) recommended quality, price, delivery, and quantity as the criteria for appraising and selecting suppliers in order to achieve a world class manufacturer. Chen (1998) studied how the laptop companies in Taiwan managed suppliers and found that generally cost was the most important when Taiwanese companies evaluated suppliers' performance. As to the suppliers of key components, the

top three evaluation criteria to supplier performance were quality, cost and on-time delivery. Huang (2000) chose the Taiwanese companies in the industries of automobile, motor, bicycle, and computer which may or may not join the Corporate Synergy Development (CSD) system. He found that quality was the most important for supplier selection in these industries. Regarding to another important supplier appraisal item, cost, it was found that it was weighed differently among these companies.

The tier-2 companies (or “supplier companies”) in the CSD system and the companies not joining the CSD system considered cost as very important criterion for supplier selection; in comparison, the tier-1 companies (or “customer companies”) in the CSD system thought cost to be less important. Hu (2003) tried to find out the major criteria of supplier selection and evaluation in the high-technology industry in Taiwan. Chu (2004) investigated the differences of perspectives in supplier selection between high-tech and traditional industries and between multinational companies and outsourcing suppliers.

Dickson(1966) reconfirmed his earlier observation that price was not a consistently important factor in the vendor selection process. Similarly, technical capability, production capacity, and warranties while considered by the respondents in his research to be very important for some of the purchases were also deemed unworthy of much consideration in other instances. Dickson (1966) finally concluded that three factors were crucial in the choice of vendors: the ability to meet quality standards, the ability to deliver the product on time, and performance history. Dickson also made a few generalizations about the importance of factors in the supplier selection process. The more complex the product/service being purchased, the more factors are likely to be considered, and in these cases, price is likely to be relatively unimportant. Dickson concluded that the nature

of the item to be purchased has a major influence on the factors that are considered when selecting a supplier. As such, he doubted the credibility of one universal system for supplier analysis that could be appropriate for all kinds of purchasing decisions. Dickson (1966).

2.6.1 Supplier Selection Criteria: A Review of Weber's Study

Several criteria for supplier appraisal and selection have been proposed by researchers since 1966. One significant study that considered the multi-objective nature of supplier selection was done by Dickson in 1966 (Weber et al., 1991) as stated above. This study ranked the importance placed on as much as 23 criteria by purchasing agents and managers.

Weber and other researchers reviewed as much as 74 articles which address supplier selection criteria in manufacturing and retail environments (Weber et al., 1991). Their research made use of Dickson's 23 criteria in ranking and analyzing the various supplier selection criteria that has appeared in the literature in recent times.

The researchers discovered that net price, delivery and quality were discussed in 80%, 59% and 54% of the 74 articles reviewed respectively, and that these three criteria were rated as having extreme or considerable importance by Dickson. Moreover, production facilities and capability and technical capability were discussed in 31% and 20% of the articles respectively and were also rated by Dickson as having considerable importance.

Geographical location was discussed in 22% of the articles and was rated as having average importance. According to the researchers, several criteria (such as warranties and

claim policies, communication system, impression, labor relations record, amount of past business, and reciprocal agreements) have received little attention in the last five years.

Dickson's 23 criteria for evaluating and selecting suppliers gave the researchers an insight regarding the necessary factors employed in the supplier appraisal and selection problem (Weber et al., 1991). However, factors employed in current studies on supplier appraisal and selection (Tahriri et al., 2008; Kumar et al., 2009; Enyinda et al., 2010) such as quality, cost, reliability, delivery, trust, quality certification of the supplier, regulatory compliance, risk, financial position, supplier profile and management and organisation were considered by the researchers to be considerably important factors in conducting similar researches on supplier appraisal and selection in recent times.

2.7 SUPPLIER RANKING

Several supplier ranking approaches were studied or developed for supplier appraisal and selection, and these approaches are introduced as below.

Categorical method: According to the studies of Timmerman (1986) and Willis and Huston (1990), categorical method is to list the criteria of supplier evaluation first. When performing supplier evaluation, each supplier is ranked by specifying one of three levels (good, regular, or poor) to each of these criteria, and the one getting the most criteria with "good" ranking is the best supplier.

Weighted point method: Willis and Huston (1990) explained this method in steps. First is to determine and list the criteria for supplier evaluation (which is like categorical method), and second is to assign weight or importance to each criterion. When evaluating

suppliers, surveyors score subjectively on each criterion, and a supplier's final score is the sum of each criterion's score multiplying it's given weight. The higher final score the supplier gets, the better the supplier is considered.

Vender profile analysis, VPA: In order to reduce human uncertainty when scoring on evaluation criteria for different suppliers, Thompson (1990) recommended vender profile analysis for supplier evaluation. VPA is modified from weighted point method and the major difference is that VPA requests to input a range of performance score on each evaluation criterion instead of a distinct value (score). Once getting all the ranges of all the criteria, Monte Carlo simulation is applied to estimate the average performance score of a supplier.

Dimensional analysis, DA: Different evaluation criterion has different unit, which makes evaluation results of these criteria could not be summed up directly. Willis and Huston (1990) represented this method of dimensional analysis for performance comparison between two suppliers. One supplier's score of one evaluation criterion is divided by another company's score of the same criterion, so that the effect of unit difference can be eliminated.

Vender performance index, VPI: Willis et al. (1993) proposed another method, vender performance index, for supplier evaluation. Vender performance index is modification from dimensional analysis and has similar calculation. The major difference is to divide a supplier's performance score of one evaluation criterion by a standard score set by the supplier-evaluating company other than to divide by another supplier's score. Therefore, VPI is easier than DA for figuring out the best supplier because all suppliers'

performances can be evaluated together by VPI but every time only two suppliers are compared by DA.

Analytic hierarchy process, AHP: Besides evaluation criteria, it is also very important to specify the weight to each criterion for supplier selection, and AHP is one method for figuring out the weights. To establish a supplier evaluation equation, generally a set of evaluation criteria need to be determined first, then AHP is applied to define the weights for these criteria, and then suppliers are rated on each criterion with weight to get the final evaluation result.

Narasimhan (1983) applied AHP to figure out the weights of evaluation criteria for supplier selection and supplier decision would depend on the sum of a supplier's score on each criterion multiplying weight.

Yang et al. (2006) endeavored to construct an outsourcing evaluation system of light emitting diode (LED) industry in Taiwan. Five perspectives were derived from the four perspectives of balanced scorecard (BSC) to establish this evaluation system, and they were financial capability, customer service capability, process capability, learning and growth capability, and response capability. 35 evaluation indicators were also selected under the five perspectives to fit with the characteristics of LED industry. Then AHP was used to determine the weight of each indicator and each perspective.

Cost-ratio method: Timmerman (1986) suggested quality, delivery, and service for supplier performance evaluation. Instead of using the three criteria directly, it is suggested to collect all the related cost data then to estimate the respective percentage of unit price for each evaluation criterion.

Cost of quality method, COQ: Fish and Shambu (2001) applied the concept of COQ (Cost of Quality) to turn evaluation criteria, such as quality, delivery, and service, into indexes of cost, and then suggested using these cost indexes for evaluation of supply chain's performance.

2.8 SUPPLIER APPRAISAL PRIOR TO SELECTION

Supplier selection is a complex problem involving qualitative and quantitative multi criteria considerations. Hence, supplier selection process requires a formal, systematic and rational selection models. Literature is awash with various supplier selection approaches and some of them are discussed hereunder.

As to supplier selection process, Zhang (1996) recommended a process for competent supplier selection as the following steps:

The buying organization organizes a cross-function team of competent professionals composed with departments of purchasing, marketing, production, and quality assurance in order for supplier selection. Zhang (1996)

Secondly an interview is conducted with managers of the supplier company to understand how they manage, what they are concerned, and whether they are willing to cooperate with the customer company's requests (such as shipments of small-quantity components). Zhang (1996)

A cross-function team is sent to survey the supplier company on site in order to check the supplier's quality assurance system, production management, technical capabilities, equipment, and finances. Zhang (1996)

The supplier company is then made to review the design specifications and quality requirement of the customer or buying company then to make a quotation accordingly.

(Zhang, 1996)

The buying organization then reviews the supplier's quotation. Negotiate and work with the supplier to make quoted price reasonable.

The buying organization then helps the supplier to produce components that will meet specification and requirement once when quotation negotiation is done and purchasing price is confirmed.(Zhang, 1996)

(Hsu, 2004) also conducted empirical study to demonstrate a general supplier selection process of a typical global company as below:

First there is a request confirmation of a new supplier, that is a consensus to find a new supplier must be reached by heads inside a company before starting supplier selection process.(Hsu, 2004)

Secondly a preliminary review is also conducted i.e. the department of supply chain management performs preliminary review by a basic questionnaire and a supplier's company profile and business style review to figure out suppliers that meet basic requirements of the buying organization.(Hsu, 2004)

The buying organization then looks at the criteria confirmation for supplier selection. An internal conference is held after preliminary review to examine preliminary review results and to confirm the criteria of supplier selection which will be put on an advanced questionnaire.

Generally supplier selection criteria included are capabilities (finances, management, technology, manufacturing, resource availability, quality assurance and control system, risk management, and after-sales service), performance of customer service, product quality and reliability, price, and a supplier's location.(Hsu, 2004)

The organization then performs a data collection and advanced questionnaire review i.e.all suppliers are requested to reply the advanced questionnaire in time. Department of supply chain management follows up and reviews these replied questionnaires first. Then the suppliers passing questionnaire review are submitted for cross department review. Timing and team members for supplier on-site survey are determined if there is no objection to questionnaire review results.(Hsu, 2004)

The Supplier on-site survey is then carried out; a survey team goes to visit the supplier, clarifies issues on the advanced questionnaire with the supplier, and examines whether the supplier is capable to meet the company's requirements.

Each member of supplier survey team makes comments and scores from his/her professional viewpoint. The supplier which wins the most scores and gets the most members' positive comments will be submitted for superiors' review and approval.(Hsu, 2004)

When supplier decision is made, usually the department of supply chain management is responsible to inform the approved and disapproved suppliers. Requests for improvement are sent to the approved supplier and the supplier needs to reply with a corrective action plan. (Hsu, 2004)

Based on several studies and business practices, (Hsu, 2004) constructed a selection procedure, mainly for component supplier selection and was described as follows;

A quotation review is conducted the buying organization examines a supplier's quotation to verify if the supplier is capable to meet the company's requirement.

The organization then conducts a survey in a supplier site to examine all the concerned capabilities, processes, system, and working situation. They then rate suppliers according to their performances on order fulfillment, finances, cost, quality, organization and management, and other concerned criteria (such as working environment, certification, green policy, etc.)

Supplier selection is then conducted; Benchmarking, categorical method, weighted-point method, or cost-ratio method are recommended to choose proper suppliers.(Hsu, 2004).

2.9 APPRAISAL BASED ON CARTER'S Cs PRINCIPLE

Some entities also appraise suppliers based on the principles of Carter's Cs.

Carter's 10 C's are an all inclusive means of making sure that a thorough method is adopted in regards to the supplier evaluation and that it is fair for all potential entrants. Carter's 10 C's method of appraising suppliers has undergone various enhancements (from its original incarnation of the 7 Cs) and represents an ideal star point for those involved in recruiting or appraising suppliers. Developing a standardized set of requirements will help simplify the process and remove subjectivity. (Carter, 1995)

Carter's Cs

i. Competency-of the supplier to undertake the tasks required:

It is ascertained whether the supplier has the skills to deliver the goods, works or services required by the buying organization.

ii .Capacity-of the supplier to meet the purchaser's total needs

iii. Commitment-of the supplier to the customer in terms of quality, cost driving and service

iv. Control-systems in relation to inventory, costs, budgets, people and information

v. Cash-resources and financial stability ensuring that the selected supplier is financially sound and is able to continue in business into the foreseeable future

vi. Cost-commensurate with quality

vii. Consistency- the ability of the supplier to deliver consistently and, where possible, improve levels of quality and service.

viii. Culture-suppliers and purchasers should share similar values

ix. Clean-suppliers and products should satisfy legislative and other environmental requirements

x. Communication-can the supplier communicate and receive information electronically? Carter, R (1995)

2.10 SUPPLIER /VENDOR RATING

“A **Supplier rating system** (sometimes called vendor rating) complements the evaluation and accreditation system in that it measures the performance of approved suppliers on an ongoing basis and supplier’s meaningful feedback in order to improve performance.” (Roynance, 2008)

The purpose of the supplier rating system is to measure and report performance of approved suppliers in order to improve their performance. Such variables as delivery, quality, and price are commonly used for this purpose. The rating can be subjective and quantitative.

Quantitative measures are usually easy to define and track in comparison to subjective measures since the real data on actual performance already exists. Nevertheless, this type of rating has the following disadvantages:

The cost of collecting data might be high, ratings are not necessarily always scientifically accurate, sometimes supplier performance is affected by outside factors and the subjective rating is considered difficult as it relies on the expertise of the individuals who judge supplier performance.

All subjective appraisals can be lost once the buyer decides to leave (Lysons and Gillingham, 2003, 339).

The activity of comparison of a supplier’s performance with a performance on a previous order or another supplier’s performance is also known as vendor rating. The aim of

vendor rating system is to give suppliers different types of status according to their performance level.

The process of vendor rating begins with the identification of strategically matching suppliers.

The next step is to determine the critical factors that will be used for measuring supplier performance. The variables are considered critical if they can add value by decreasing the costs or improving customer service, or the combination of both. After the variables are determined, each supplier is judged on each factor. The ranking could be numeric or a Likert-scale. Each rating criterion should be weighted according to the importance of the overall vendor rating (eNotes community, 2013). The rating system can be effective only if it is consistent, measurable and objective. Last but not least, the rating system must be open to all.

A buyer has to be ready to discuss with a supplier the reasons behind his evaluation. The results have to be reported and discussed on a regular face-to face basis, usually every three months. In some cases a meeting has to be arranged immediately and in some cases only two meetings in a year is enough. A buyer and a supplier have to work together in order to eliminate any defects that have been revealed during the process of evaluation. For new suppliers it is good to organize reporting meetings every month. The next action that plays an important role in supplier evaluation process is to recognize and point out the achievements of the best suppliers in the portfolio. The award may be represented by three types of certificate: gold, silver and bronze. New suppliers may be nominated for a “best new supplier of the year” award certificate (Roylance 2008).

2.10.1 Rating measurement criteria

According to Roylance (2008) any rating system is based on three essential dimensions: price, quality and service. The maximum score is 100 points and they can be allocated in different ways depending on a product group. The reason is that for some products quality is much more important than the price and vice versa.

Examples of the criteria commonly used in supplier rating are presented below.

Price- Competitive pricing, The prices should be comparable to other suppliers of similar products.

Price stability- Prices should be stable over time.

Advanced notice of price changes- The supplier should inform in advance about price changes.

Discounts and payment terms offered.

Quality, Durability, Reliability and Service.

On-time delivery- whether the products/services are delivered on the promised date.

Complaint handling- The vendor should respond in a timely manner to any complaint.

Compliance with purchase order- The supplier should fulfill purchased order requirements and conditions.

Technical support- In addition to technical documentation a supplier should also provide maintenance, repair and installation services.

Emergency support- The emergency support for replacement or repair of defective products should be provided.

Responsiveness-The supplier should respond in a timely manner.

Communication efficiency- Are the communication methods efficient enough?

Based on the information provided in the article of eNotes community (eNotes community2013), delivery is the fourth independent factor to measure. It may include the following measurement criteria:

Time- Does the actual delivery date correspond to the promised one?

Quantity- The supplier should deliver the right products in the right quantity.

Lead time- The average delivery time should be comparable to other vendors supplying similar products.

Packaging- Is the packaging is suitable, undamaged, properly marked?

Documentation- The documents such as packing lists and invoices should contain correct material codes and purchase order numbers.

Emergency delivery- Does the supplier provide emergency delivery?

Furthermore, in comparison to Roylance, who sees on-time delivery as a part of quality dimension, other authors such as Lysons and Gillingham (2003), Handfield et al.

(2009) also point out delivery performance as an independent, fourth factor to measure.

The real test of the success of supplier rating is the reality of satisfactory performance by the supplier. The actual performances are monitored and decisions on future business are based on these assessments. Generally, there is an element of subjective appraisal by the buyer, but there are rating systems that attempt to rectify the failings of subjective rating.

Systems tend to involve three basic considerations in a good purchase which are Quality, Delivery and Price.

The purpose of a vendor rating is therefore to evaluate the performance of the vendor in respect of one or more of the factors, price, quality, delivery and service of an actual supplier. To provide the buyer with objective information in which judgments relating to source selection can be based. To enable the buyer to provide the supplier with an indication of his or her performance rating and where improvements, if any, are required.

2.11 CHALLENGES IN SUPPLIER APPRAISALS

Brown (1996) and Monczka et al. (2005) found out that these were common problems associated with Supplier appraisals:

2.11.1 Too much data and wrong data: Data used was too much or the wrong data was used in the appraisal. When too much data is used, users can focus on data that is less critical or important for a company. Wrong data could be used and may instead of improving the performance will rather create a conflict with other measures. Brown (1996) and Monczka et al. (2005)

2.11.2 Lack of detail: When a buying company has very little data the data can become meaningless and a company cannot use the data for decision making purposes.

2.11.3 Measures are short term focused: Often smaller and medium size companies are using performance measures that are short-term focused such as financial or operating data. Using only short-term measures will result in short-term focus throughout the supply chain which can have negative impact on the company performance. Brown (1996) and Monczka et al. (2005). The performance data to be considered for evaluation should be carefully selected. For the purpose of the evaluation, the criteria should be in quantifiable or measurable terms.

2.11.4 Lack of competence- Appraisers who are not competent enough for such tasks end up not exercising due diligence in supplier appraisals in so doing the process is not well managed. Top management should choose the appraisers or the evaluators carefully. They should have the required expertise and the knowledge to decide the criteria accurately. They should have the experience and the necessary training to carry out the appraisal process objectively.

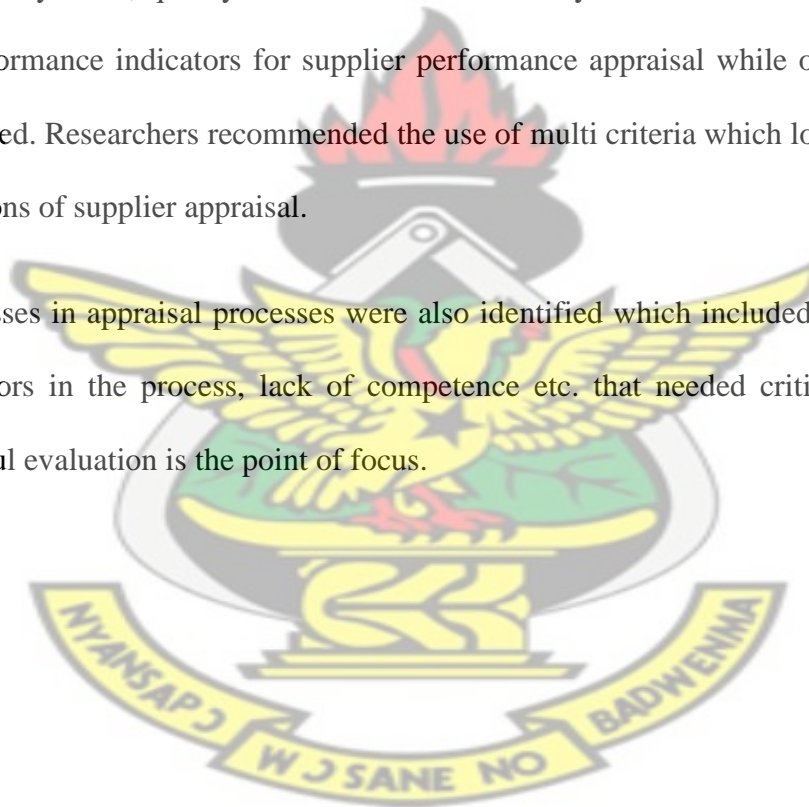
2.11.5 Errors in rating and evaluation- Many errors based on the personal bias like stereotyping, halo effect (i.e. one trait influencing the evaluator's rating for all other traits) etc. may creep in the appraisal process. Therefore the rater should exercise objectivity and fairness in evaluating and rating the performance of the suppliers.

2.12 SUMMARY OF LITERATURE REVIEW

Discussions under chapter 2 focused on supplier appraisal techniques in existence for evaluating suppliers including its involvement. It was found out that some companies appraised suppliers others did not, of those who appraised some did it frequently while others did it once in a while. Techniques involved the buyer establishing a set of evaluation criteria on which appraisal would be based.

Traditionally Price, quality and timeliness of delivery were dominants of the criteria or key performance indicators for supplier performance appraisal while other factors were overlooked. Researchers recommended the use of multi criteria which looked at other key dimensions of supplier appraisal.

Weaknesses in appraisal processes were also identified which included too much wrong data, errors in the process, lack of competence etc. that needed critical attention if a successful evaluation is the point of focus.



CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

This chapter describes the approach in which the research was carried out and explains the various methods used to conduct the research study. It describes the method used for data collection and why these methods or techniques were employed, how information was collected from this data and how the data was handled. It describes the design and development of questionnaires. Also this chapter provides steps and activities undertaken to collect data. It mainly constitutes the approach and plan that was adopted for the study.

3.2 RESEARCH DESIGN

The questionnaire method of data collection was the most preferred as far as this study was concerned. Data collection was based on identification of public entities that engaged in supplier appraisals, the techniques, criterion and approaches to supplier appraisals and vendor rating, challenges faced in supplier appraisals and measures taken for its continuous improvement.

The questionnaires were effective and efficient in collecting the data. It comprised sets of questions to which respondents gave answers to. They were administered personally to the respondents in public procurement departments selected purposively within the greater Accra region limiting the scope to a targeted few.

3.3 PRELIMINARY STUDY

The preliminary study involved reviewing existing literature relevant to supplier appraisals and vendor rating in procurement departments. The sources of information were grouped into primary and secondary which helped in the design of the Questionnaires.

3.4 DATA COLLECTION PROCEDURE

3.4.1 PRIMARY SOURCE

The primary source of data was gathered from the basis of study being the assessment of supplier appraisal and vendor rating in public procurement entities in Ghana.

3.4.2 SECONDARY SOURCE

Secondary sources of data were obtained by reviewing existing literature. Pertinent literature were read and reviewed in relation to the study. This called for regular visit to the library where books on purchasing were readily available.

The research activity also made use of secondary data from academic journals, books, and other publications that provided additional information regarding supplier appraisals and vendor rating. Published research papers that were previously conducted which likewise focused on supplier appraisals and vendor ratings were reviewed. These additional data and information were also used to support as well as contradict the findings of the study depending on the credibility of the authors and the journals where they were found published. The use of secondary data and information likewise served as

validity and reliability indicators of the researcher and ensured that the collected data from the survey and the interview methods was used to strengthen the findings and results of the study. This hopefully came up to unbiased presentation and discussion of the collected data and information from the indicated research methodologies.

3.5 DATA COLLECTION INSTRUMENTS

The researcher employed interviews, questionnaire and observation as its data collection methods and references were also made on pertinent literature relating to the study.

3.5.1 QUESTIONNAIRES

The questionnaire was mainly close-ended and consisted of the research questions which helped solicit information.

1. What are the key common criterions in appraising suppliers?
2. What are the challenges in supplier appraisals?
3. What are the areas to be appraised?
4. What are the approaches to supplier appraisals?
5. Who should appraise?

3.5.2 INTERVIEWS

The interviews were carried out especially with staff of the Procurement Units selected to find out from them certain information needed but to which satisfactory questionnaire responses may not be obtained.

3.6 DESIGN AND DEVELOPMENT OF QUESTIONNAIRES

The design of the questionnaires was based on the problem statement raised, as well as the general aims and objectives that were to be achieved at the end of the study. Study of relevant literature also offered additional help. The purpose of the questionnaires was to collect precise data from stakeholders involved in the scope of the study. All stakeholders in public procurement entities in the greater Accra region were possible respondents to questionnaires survey but 5 purposively selected entities were sent questionnaires to answer. Twenty two sets of structured questions were prepared and administered to the stakeholders in the public procurement departments in the scope for their opinions based on the questions provided. The sample size was estimated to about 20 due to time allocated for the research work. However due to difficulties of getting most of people to be interviewed and administered with questionnaires the survey captured only 15 people out of the estimated population.

3.7 DISTRIBUTION OF QUESTIONNAIRES

The questionnaires were developed and administered to the following stakeholders. They included; procurement officers, supply chain experts, staff of procurement departments, purchasing professionals and heads of procurement departments. The questionnaires were hand delivered to the respondents of public procurement departments relevant to the

scope of study. The objectives were achieved through the analysis of the response to questionnaires received from the public procurement entities selected purposively. They included procurement units of the Ministry of Finance (MoF), Ghana Police Headquarters, Local Government Secretariat, Cadbury Ghana Limited and State Insurance Company. The targeted respondents were persons who were very well versed with procurement and in particular experienced in appraisal of suppliers such as procurement officers and experts as before mentioned. One on one informal interview was also held with respondents of the entities. The questionnaires were thoroughly explained to the respondents to attain precise and accurate results.

3.8 SAMPLING PROCEDURE

The scope of the study covers the Procurement Unit and other Departments or Directorate who play a role in Supplier appraisal and vendor rating.

It is usually impossible to interview or give questionnaire to all members of the population. A sample size of the various Heads of procurement Department or Directorate were presented with questionnaires and interviewed via purposive sampling.

3.9 DATA ANALYSIS

The data collected from the survey were analyzed. This was done by determining the average response to each of the questions. The statistical package for social science (SPSS v. 13.0) and Microsoft excel were employed for the data analysis. Since the research was exploratory, an overall quantitative analysis approach was used in the data analysis and interpretation. The data was summarized in the form of charts and tables using percentages and weightings.

CHAPTER FOUR

ANALYSIS OF DATA AND DISCUSSION

INTRODUCTION

This chapter presents an analyzed and discussed results obtained from the questionnaire survey and interviews within the scope of the study with other relevant information received and considering the underlined objectives of the study. Using SPSS statistical tool of presentation, the data was represented in tables. 15 questionnaires were administered.

4.1 ANALYSIS OF RESULTS FROM INTERVIEWS

Upon interviewing of Key procurement experts who had remarkable experience in supplier appraisal they gave an insight of a technique they used in supplier appraisal which provides important information to purchasing as well as to supply chain colleagues relevant to manage supplier performance and initiate countermeasures. The first step of appraisal is the identification of decision/appraisal criteria which potential supplier will be appraised upon. The key performance indicators or criteria that were normally used for the appraisal are cost, quality and timeliness of delivery.

4.1.1 Quality: - of the delivered goods which could be measured by the product quality of each delivery as well as by the availability of certificates which should assure a certain standard of production process including quality. Quality management departments are

able to evaluate the quality of goods by sample tests. Production inspections are also conducted at the supplier's site to assure the buying organization that quality guidelines were being followed in producing the goods.

4.1.2 Cost:-or price performance measure refers to the direct monetary terms associated with suppliers which can be measured in two ways: First by comparison with other suppliers of the same commodity who are on buyer's supply base to ascertain which supplier was enabling the buyer achieve value for money taking also quality into consideration or second by price increase/decrease provided by the supplier due to deflations or inflations. Another strategic aspect is payment terms which are important especially for liquidity of the buyer. The supplier was also appraised by whether it considers high value commodities purchase by the buyer with long-term payment terms in combination with discounts. Importantly, Logistics that is transportation of the goods were also considered in the cost.

4.1.3 Timeliness Of delivery: - Lead times are time taken from order of the product by user departments to the time suppliers deliver the goods. Interviewees also indicated that suppliers who delivered earlier were ranked higher than those who delivered late.

After assessment of these criteria as against the individual suppliers the categorical method of ranking was used to rank the suppliers by specifying levels of 'good', 'normal' or 'poor' to come up with the best performing supplier. However the outcome of the appraisal process was not documented, records were not kept in so doing supplier performances could not be compared with future appraisals.

Upon interview another interviewee said that in their outfit what they did was to appraise with laid down criteria, most commonly used were cost, quality and time. Those suppliers who did not meet the criteria are black listed in order not to do any businesses with them in future. They did not consider developing on the suppliers who did not perform.

4.2 ANALYSIS OF RESULTS FROM QUESTIONNAIRES

4.2.1 PART ONE: GENERAL BACKGROUND INFORMATION ON RESPONDENT AND ORGANISATION

Table 4.1 Positions of Respondents

Table 4.1 summarizes the positions of respondents. Respondents were asked to indicate their positions just to be assured that the targeted respondents actually completed the questionnaire, and not for the purpose of analysis. Out of the 15 respondents who answered the questionnaires there were 2 Directors (13.3%), 5 procurement managers (33.3%), 6 members of staff (40%) and 2 store managers (13.3%).

Table 4.1 Positions of Respondents

	Frequency	Valid Percent
Director	2	13.3
Procurement manager	5	33.3
Staff	6	40.0
Stores manager	2	13.3
Total	15	100.0

Table 4.2, sought to establish the experience of the respondents in the Procurement sector. Out of the 15 respondents who answered the questionnaires 5 indicated that they had been in the procurement sector just below 5 years representing a valid percentage of 33.3% and may have insignificant experience, 6 indicated 6 to 10 years representing 40% while the remaining 4 indicated 11 to 15 years representing 26.7%. The experience of the respondents in the context of this research is determined as the number of years of practice and active involvement in the procurement sector. The idea here is that a person's years of experience is likely to have a direct influence on his knowledge on supplier appraisals effectively and therefore based on Table 4.2 those who responded to the survey are sufficiently experienced in the procurement section to provide credible data.

Table 4.2 Experience in the procurement sector

	Frequency	Valid Percent
Below 5 years	5	33.3
6-10 years	6	40.0
11-15 years	4	26.7
Total	15	100.0

Table 4.3 Experience in present organization/agency

	Frequency	Valid Percent
Below 5 years	7	46.7
6-10 years	8	53.3
Total	15	100.0

Irrespective of the years that a respondent has in the procurement sector, a respondent's years of experience with present organisation is necessary as respondent acquire more knowledge on research area when there is change of organisation. This is required to establish respondent's recent involvement in the procurement sector; Table4.3 presents the experience of the respondents in their present organization/agency. Out of the 15 respondents 7 indicated that they have been working in their present organization for just below 5 years meaning they had worked within a period of 1 to 4 years and 8 indicated 6 to 10 years representing 46.7% and 53.3% respectively.

4.2.2 PART TWO: SUPPLIER APPRAISAL TECHNIQUES & PERFORMANCE CRITERIA

Table 4.4 Supplier appraisals conducted in the procurement unit of organizations

	Frequency	Valid Percent
Yes	3	20.0
No	12	80.0
Total	15	100.0

Supplier appraisals are conducted in a few public procurement entities while others do not do appraisals. Respondents were asked to indicate whether they do or do not appraise suppliers. From Table 4.4 it was noted that out of the total respondents 3 representing 20% of valid percentage indicated that supplier appraisals were conducted in their organization while the remaining 12 representing 80% indicated that they did not do appraisals. Responses of those who didn't conduct appraisals was necessary so as to ascertain their views and contributions on the research.

Table 4.5 Criteria appraisal for cost

Level of importance	Frequency	Valid Percent
Important	1	6.7
Very important	14	93.3
Total	15	100.0

It was **necessary** to inquire from respondents the level of importance on cost as appraisal criteria. According to table 4.5 from the total respondents 1 representing 6.7% indicated that cost criteria for appraisal was important while the other 14 representing 93.3% indicated that cost was very important. Hence it was noted that cost as an appraisal criteria was significantly of higher importance.

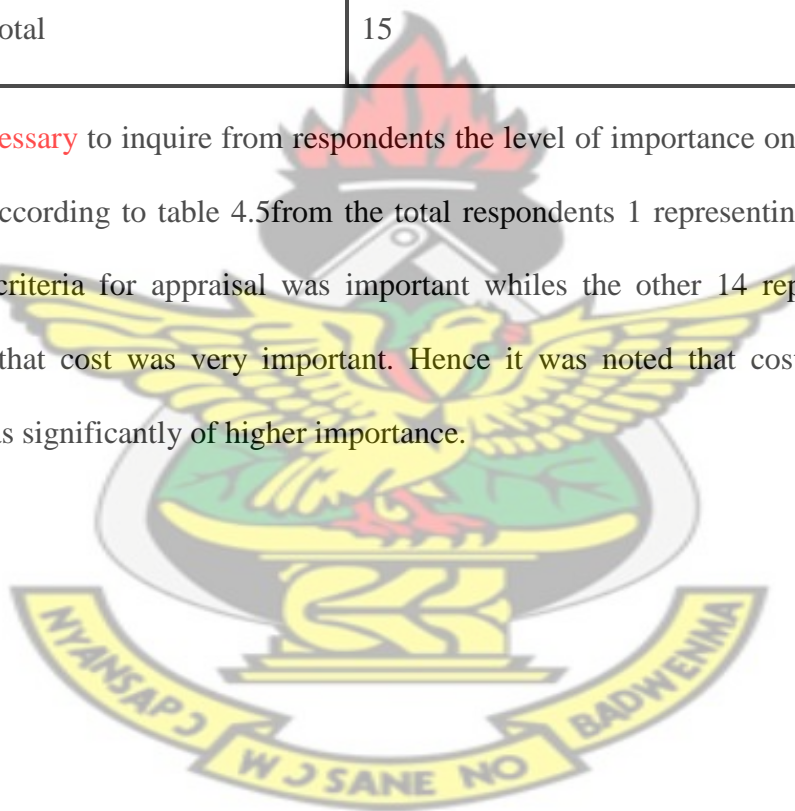


Table 4.6 Criteria appraisal for delivery

Level of importance	Frequency	Valid Percent
Important	7	46.7
Very important	8	53.3
Total	15	100.0

It was inquired from respondents the level of importance on delivery as appraisal criteria. According to table 4.6 From the total respondents 7 representing 46.7% indicated that delivery criteria for appraisal was important while the other 8 representing 53.3% indicated that delivery was very important but indications were not as higher as that of the cost criteria.

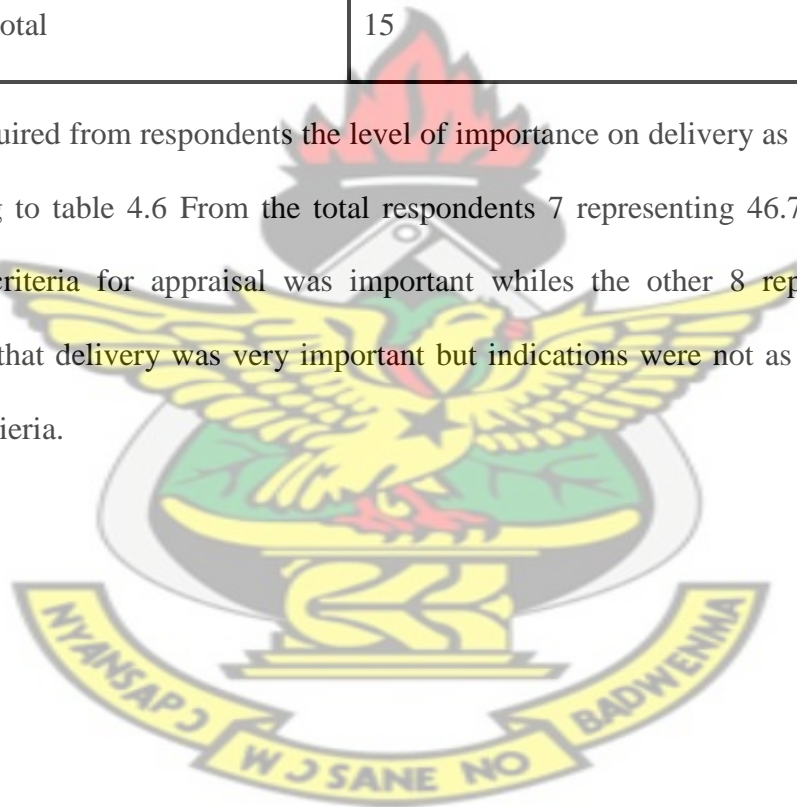


Table 4.7 Criteria appraisal for previous experience

Level of importance	Frequency	Valid Percent
Neutral	2	13.3
Important	10	66.7
Very important	3	20.0
Total	15	100.0

According to Table 4.7 the level of importance of previous experience by the respondents recorded as follows; 2 respondents representing 13.3% indicated that it was of neutral importance, 10 representing 66.7% indicated it was important and 3 representing 20% indicated it was very important. The significance of the higher percentage of 66.7% means that those respondents didn't see previous experience as highly important as the other criteria even though they thought it was also important.

Table 4.8 Criteria appraisal for quality

Level of importance	Frequency	Valid Percent
Important	1	6.7
Very important	14	93.3
Total	15	100.0

It was inquired from respondents the level of importance on quality as appraisal criteria. According to Table 4.8 from the total respondents 1 representing 6.7% indicated that quality criteria for appraisal was important while the other 14 representing 93.3% indicated that quality was very important. Hence it was noted that quality as an appraisal criteria was significantly of higher importance similar to cost.

Table 4.9 Criteria appraisal for time

Level of importance	Frequency	Valid Percent
Very important	15	100.0

From the total respondents time as an appraisal criteria recorded 100% as all respondents indicated that time was of significantly highest importance.

Table 4.10 Criteria appraisal for past performance

Level of importance	Frequency	Valid Percent
Important	11	73.3
Very important	4	26.7
Total	15	100.0

According to Table 4.10 the level of importance of past performance by the respondents recorded as follows; 11 respondents representing 73.3% indicated that it was important, 4 representing 26.7% indicated it was very important. The significance of the higher percentage of 73.3% means that those respondents didn't see past performance as highly important as the other criteria even though they thought it was also important.

Table 4.11 Appraisal area for goods

Level of importance	Frequency	Valid Percent
Important	1	6.7
Very important	14	93.3
Total	15	100.0

It was inquired from respondents the level of importance on areas concerned with procurement that needed appraisals. According to Table 4.11 from the total respondents 1 representing 6.7% indicated that appraisal for procurement of goods was important while the other 14 representing 93.3% indicated that it was very important signifying that it was very important to appraise suppliers in the procurement of goods.

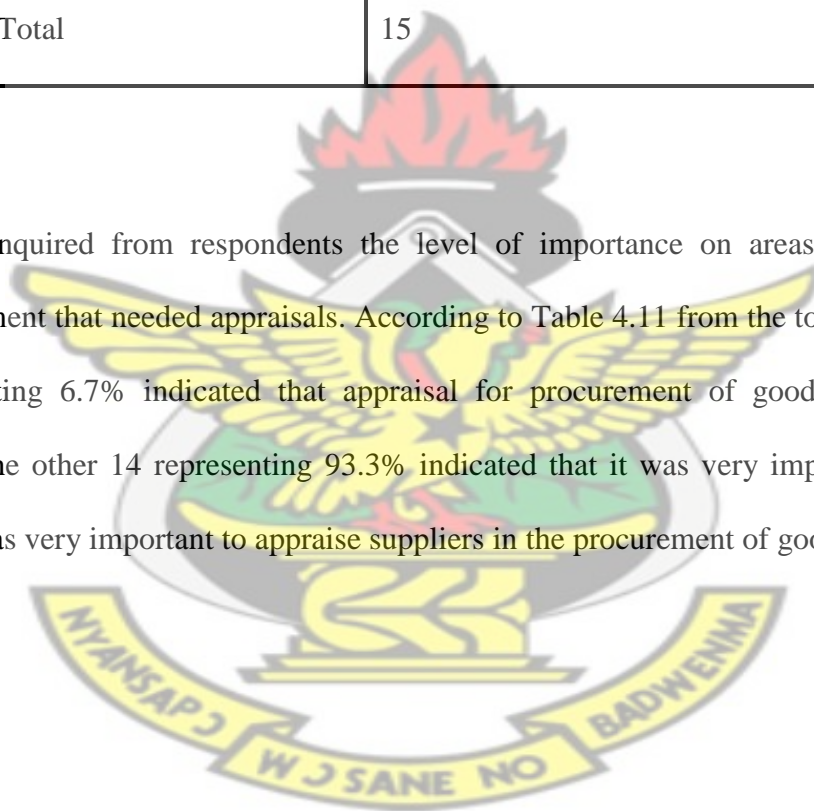


Table 4.12 Appraisal area for works

Level of importance	Frequency	Valid Percent
Important	1	6.7
Very important	14	93.3
Total	15	100.0

It was inquired from respondents the level of importance on areas concerned with procurement that needed appraisals. According to Table 4.12 From the total respondents 1 representing 6.7% indicated that appraisal for procurement of works was important while the other 14 representing 93.3% indicated that it was very important signifying that it was very important to appraise suppliers in the procurement of works.

Table 4.13 Appraisal area for services

Level of importance	Frequency	Valid Percent
Important	6	40.0
Very important	9	60.0
Total	15	100.0

Again it was inquired from respondents the level of importance on areas concerned with procurement that needed appraisals. According to Table 4.13 from the total respondents 6 representing 40% indicated that appraisal for procurement of services was important while the other 9 representing 60% indicated that it was very important signifying that it was very important to appraise suppliers in the procurement of services.

Table 4.14 Supplier appraisals conduction frequency

	Frequency	Valid Percent
Once a year	3	20.0
None	12	80.0
Total	15	100.0

Respondents were asked to indicate the frequency at which they conducted supplier appraisals in their outfit according to Table 4.14, 3 representing 20% indicated that they

conducted supplier appraisals once a year while 12 representing 80% indicated that they never conducted appraisals in their outfit and hence they never track the performance of their suppliers.

Table 4.15 Areas concerned with appraisal, finance

Level of importance	Frequency	Valid Percent
Important	3	20.0
Very important	12	80.0
Total	15	100.0

The research inquired from respondents' opinions on areas that suppliers needed to be appraised on. Suppliers' finances e.g. financial standing or capability, bank statements etc. from Table 4.15, 3 respondents representing 20% indicated that it was important while the remaining 12 representing 80% indicated that it was very important signifying that it was an area that needed serious consideration with regards to appraisals.

Table 4.16 Areas concerned with appraisal, production capacity of supplier

Level of importance	Frequency	Valid Percent
Important	2	13.3
Very important	13	86.7
Total	15	100.0

With regards to Production capacity of the supplier, respondents according to Table 4.16 indicated as follows; 2 representing 13.3% indicated that it was important while 13 representing 86.7% indicated that it was very important. From the foregoing it is obviously necessary to appraise suppliers in their production capacity to inquire whether they can meet needs of the buying organizations.

Table 4.17 Areas concerned with appraisal, production facilities of supplier

Level of importance	Frequency	Valid Percent
Important	5	33.3
Very important	10	66.7
Total	15	100.0

The facilities that the supplier uses in production was also an area respondents were to give their opinions on in terms of importance. From Table 4.17, 5 respondents

representing 33.3% indicated that it was important while 10 representing 66.7% indicated that it was very important signifying that it was also of significant importance.

Table 4.18 Areas concerned with appraisal, quality of service supplier provides

Level of importance	Frequency	Valid Percent
Important	3	20.0
Very important	12	80.0
Total	15	100.0

Respondents were again asked to indicate level of importance that service supplier provides has on supplier appraisal from Table 4.18, 3 respondents indicated that it was important representing 20% while 12 also representing 80% indicated that it was very important signifying that it was also of significant importance.

Table 4.19 Areas concerned with appraisal, human resource

Level of importance	Frequency	Valid Percent
Neutral	1	6.7
Important	11	73.3
Very important	3	20.0
Total	15	100.0

The Personnel capability of a supplier is also an important area concerned with supplier appraisal, whether they are competent to produce goods required in the supplier's outfit. Respondents were asked to indicate their opinion on the importance level of Human resource. From Table 4.19, 1 representing 6.7% indicated that it was of neutral importance, 11 representing 73.3% indicated that it was important while just 3 representing 20% indicated that it was very important. From the table it could be noted that respondents deemed it important to appraise supplier's human resources.

Table 4.20 Areas concerned with appraisal, past performance

Level of importance	Frequency	Valid Percent
Important	9	60.0
Very important	6	40.0
Total	15	100.0

Suppliers past performance was also ascertained from respondents on its level of importance. From Table 4.20, 9 respondents representing 60% indicated that it was important while the remaining 6 representing 40% indicated that it was very important.

Table 4.21 Areas concerned with appraisal, environmental and ethical factors

Level of importance	Frequency	Valid Percent
Neutral	3	20.0
Important	10	66.7
Very important	2	13.3
Total	15	100.0

It was also inquired from the respondent whether environmental and ethical factors were important in the appraisal of suppliers. 3 representing 20% indicated that they had neutral importance, 10 representing 66.7% indicated that they were important while just 2 representing 13.3% indicated that they were very important. It was noted from table 4.21 that it was important but not necessarily very important resulting from 66.7% of the respondents.

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Table 4.22 Areas concerned with appraisal, performance

Level of importance	Frequency	Valid Percent
Very important	15	100.0

All respondents representing 100% indicated strongly that Performance of highly significant importance in regards to appraising suppliers. All 15 respondents indicated that it was very important.

Table 4.23 Areas concerned appraisal, IT compliance

Level of importance	Frequency	Valid Percent
Important	13	86.7
Very important	2	13.3
Total	15	100.0

In this age of technology IT has been an area of significant importance. Respondents were inquired on the level of importance that they thought IT had on appraising suppliers. This could be linked with supplier's capability for e-procurement or e-sourcing. According to Table 4.23, 13 respondents representing 86.7% indicated that it was important while the other 2 representing 13.3% indicated that it's very important. It is evident that majority of respondents deem it important but not very important in appraisals.

Table 4.24 Use of supplier ranking methods

	Frequency	Valid Percent
Yes	3	20.0
No	12	80.0
Total	15	100.0

It was also necessary to ascertain from respondents whether they made use of supplying ranking methods as a scoring system for appraised suppliers. From Table 4.24, 3 representing 20% of the respondents indicated that they made use of supplying ranking methods while the remaining 12 representing 80% indicated that they did not because they did not appraise suppliers at all.

Table 4.25 Supplier ranking methods, categorical method

Level of importance	Frequency	Valid Percent
Very important	3	100.0
Total	3	

From the respondents who answered “Yes’ to having made use of ranking methods all 3 representing 100% indicated that the categorical method of ranking involving just a scoring of (good, very good or poor) was very important according to Table 4.25.

Table 4.26 Supplier ranking methods, weighted point method

Level of importance	Frequency	Valid Percent
Neutral	1	33.3
Important	2	66.7
Total	3	100.0

According to Table 4.26 respondents who made use of ranking methods indicated importance of weighted point method as follows; 1 representing 33.3% indicated that it was neutral whiles the remaining 2 representing 66.7% indicated that it was important.

4.27 Supplier ranking methods, vendor performance index

Level of importance	Frequency	Valid Percent
Less important	3	100.0
Total	3	

All 3 respondents who practiced supplier ranking indicated that the vendor performance index method was less important to them probably due to the unavailability of such indices.

4.28 Supplier selection process, based on supplier performance

Level of importance	Frequency	Valid Percent
Important	4	26.7
Very important	11	73.3
Total	15	100.0

It was also ascertained from respondents the importance of supplier selection processes by the buying organization prior to future supplier appraisals. According to Table 4.28, 4 representing 26.7% indicated that supplier selection based on supplier performance was important while 11 representing 73.3% indicated that it was very important since a supplier's performance could attract recognition for selection.

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Table 4.29 Supplier selection process, preliminary review of suppliers

Level of importance	Frequency	Valid Percent
Neutral	4	26.7
Important	11	73.3
Total	15	100.0

In terms of preliminary review of suppliers, respondents indicated important levels as follows; 4 representing 26.7% indicated that it was neutral, 11 representing 73.3% also indicated that it was important hence Preliminary review of suppliers needed important consideration in selection processes.

Table 4.30 Supplier selection process, supplying criteria

Level of importance	Frequency	Valid Percent
Neutral	1	6.7
Important	1	6.7
Very important	13	86.7
Total	15	100.0

Respondents were also inquired on opinions on important levels for supplying criteria as consideration for supplier selection process, from Table 4.30, respondents indicated as follows; 1 representing 6.7% was neutral, another 1 representing 6.7 was also neutral while 13 representing 86.7% indicated that it was very important, evidently criteria for supplying needs important consideration for supplier selection processes.

Table 4.31 Supplier selection process, supplier visits for capability checks

Level of importance	Frequency	Valid Percent
Important	4	26.7
Very important	11	73.3
Total	15	100.0

Visiting a supplier's site or production facility to check capability deemed important for selection processes of suppliers, from Table 4.31 respondents indicated level of importance as follows; 4 representing 26.7% indicated that it was important while the remaining 11 representing 73.3% indicated that it was very important.

Table 4.32 Who should appraise, head of procurement

Level of importance	Frequency	Valid Percent
Neutral	1	6.7
Very important	14	93.3
Total	15	100.0

It was also inquired from respondents the importance of individuals and departments responsible for an appraisal processes. Respondents indicated as follows; 1 representing 6.7% indicated that Head of procurement was neutral, 14 representing 93.3% indicated that it was a very important consideration for a head of procurement to take part in an appraisal process.

Table 4.33 Who should appraise, user department

Level of importance	Frequency	Valid Percent
Important	5	33.3
Very important	10	66.7
Total	15	100.0

Are user departments important in an appraisal process on suppliers? Respondents indicate level of importance according to Table 4.33 as; 5 representing 33.3% indicated that they were important whiles 10 representing 66.7% indicated that they were very important owing to the view that they actually were end users of the goods and could be best to give opinions on how goods faired or performed its life span quality etc.

Table 4.34 Who should appraise, procurement team

Level of importance	Frequency	Valid Percent
Very important	15	100.0

All respondents representing 100% however confidently indicated strongly that the procurement team involvement in the appraisal of suppliers was very important, Table 4.34

Table 4.35 Who should appraise, stores department

Level of importance	Frequency	Valid Percent
Neutral	2	13.3
Important	13	86.7
Total	15	100.0

Respondents also indicated importance of stores department in appraisals; 2 representing 13.3% indicated that they were neutral whiles 13 indicated that they were important, none had an indication as being very important. They could be important in the process purely for surety of stocks of goods supplied.

4.36 Variables for supplier rating, price

Level of importance	Frequency	Valid Percent
Important	2	13.3
Very important	13	86.7
Total	15	100.0

It was inquired from respondents their view of importance of rating variables for suppliers. For price respondents indicated as; 2 representing 13.3% indicated that it was important while 13 representing 86.7% indicated strongly that price was a very important variable to consider when rating.

Table 4.37 Variables for supplier rating, quality

Level of importance	Frequency	Valid Percent
Very important	15	100.0

All respondents representing 100% according to Table 4.37 indicated strongly that quality was of highly significant importance for consideration in supplier rating.

Table 4.38 Variables for supplier rating, delivery

Level of importance	Frequency	Valid Percent
Important	9	60.0
Very important	6	40.0
Total	15	100.0

With the level of importance for delivery, respondents indicated that it was important owing to 9 representing 60% of valid percentage while 6 representing 40% indicated

very important. Evidently most of the respondents think it's just about important as compared to the other variables.

Table 4.39 Variables for supplier rating, time

Level of importance	Frequency	Valid Percent
Very important	15	100.0

All respondents representing 100% according to Table 4.39 indicated strongly that time was highly significant for consideration in supplier rating owing to the timeliness and urgency with which goods were needed by user departments in the buying organizations.

Table 4.40 Organization approaches towards supplier appraisals

	Frequency	Valid Percent
No	15	100.0

It was also inquired from respondents whether they had approaches towards appraisals in their organizations. According to Table 4.40 all respondents representing 100% indicated

that they did not have any approaches towards supplier appraisals. Owing to the fact that measures such as desktop appraisal and field research were not in place or practiced.

Table 4.41 Approaches towards supplier appraisal, desktop appraisal

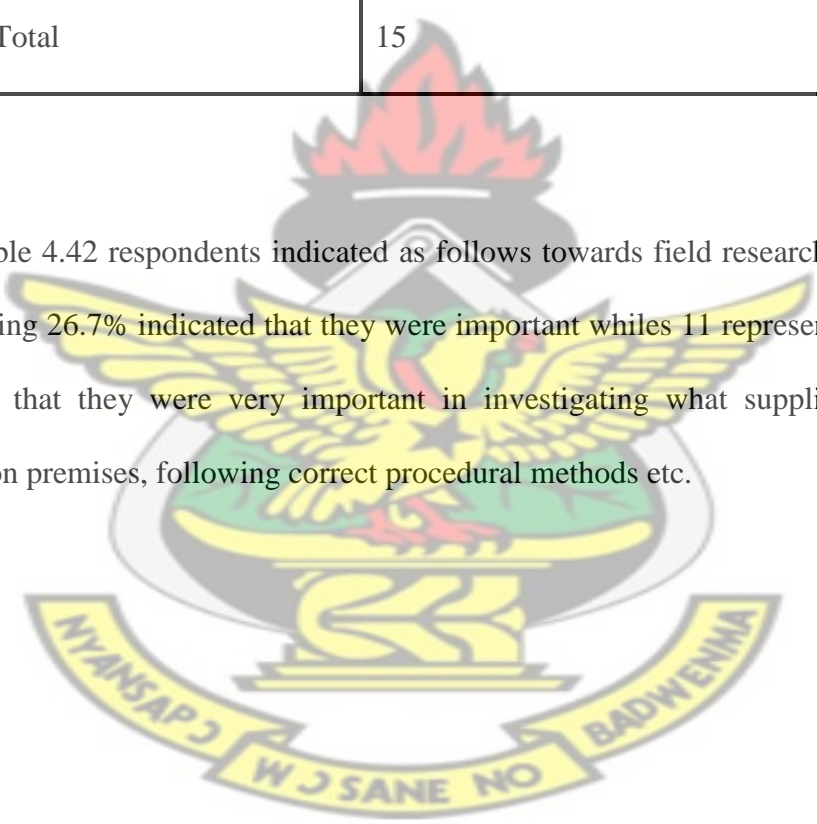
Level of importance	Frequency	Valid Percent
Important	5	33.3
Very important	10	66.7
Total	15	100.0

Even though respondents did not have any approaches towards supplier appraisals in their outfit it was ascertained on their take on how important they were. From Table 4.41, 5 respondents representing 33.3% indicated that desktop appraisals were important while 10 representing 66.7% indicated that they were very important to ascertain desktop information on suppliers regarding financial capabilities, statements, asset turnover etc.

Table 4.42 Approaches towards supplier appraisal, field research

Level of importance	Frequency	Valid Percent
Important	4	26.7
Very important	11	73.3
Total	15	100.0

From Table 4.42 respondents indicated as follows towards field research on suppliers; 4 representing 26.7% indicated that they were important while 11 representing 73.3% also indicated that they were very important in investigating what suppliers do on their production premises, following correct procedural methods etc.



4.2.3 PART THREE STRENGTHS & WEAKNESSES IN SUPPLIER APPRAISALS
AND REMEDIES

Table 4.43 Organizational difficulties in supplier appraisals

	Frequency	Valid Percent
Yes	3	20.0
No	12	80.0
Total	15	100.0

The research also deemed it necessary to ascertain whether organizations had difficulties in supplier appraisals, 3 representing 20% indicated that they did have problems because they appraised suppliers while 12 representing 80% indicated that they did not have any problems owing to the fact that they actually did not appraise suppliers.

Table 4.44 Challenges towards successful appraisals, errors in appraisals

Level of effect	Frequency	Valid Percent
Moderate effect	1	6.7
High effect	14	93.3
Total	15	100.0

A few challenges towards supplier appraisals were outlined and respondents were asked to indicate the level of severity or effect of each in their opinion. From Table 4.44, 1 representing 6.7% indicated that errors in appraisal had a moderate effect while 14 representing 93.3% indicated that errors in appraisals will surely have a high effect towards successful appraisals thereby posing a problem for the buying organization because due to errors competent suppliers might not be chosen to be performing or non-competent once could be chosen as performing.

Table 4. 45 Challenges towards successful appraisals, bias or favoritism

Level of effect	Frequency	Valid Percent
High effect	15	100.0

From Table 4.45 all respondents representing 100% indicated that bias or favoritism could have a high effect on the success of an appraisal process and pose a problem to the buying organization since a non-performing supplier may be favored as being a higher performer making the whole appraisal process non-transparent because other suppliers being appraised were not treated fairly.

Table 4.46 Challenges towards successful appraisals, lack of competence of appraisers

Level of effect	Frequency	Valid Percent
Moderate effect	1	6.7
High effect	14	93.3
Total	15	100.0

From Table 4.46, 1 representing 6.7% of the respondents indicated that the lack of competence of appraisers may have a moderate effect on a successful appraisal while the other 14 representing 93.3% indicated that it will have a significantly high effect owing to the fact that people without the requisite qualification who take part in the process may end up not exercising due diligence or employing required techniques in the process thereby ending up in a manner which is not ethical.

Table 4.47 Challenges towards successful appraisals, non-selection of proper appraisal criteria

Level of effect	Frequency	Valid Percent
High effect	15	100.0
Total	15	100.0

From Table 4.47 all 15 respondents representing 100% indicated that non-selection of proper appraisal criteria for the appraisal process can pose a high effect towards the success of the appraisal, implying that if careful criteria are not identified suppliers will not be properly appraised and at the end of the day the goal of the performance measurement as a whole may not be met leading to total waste of time and resources.

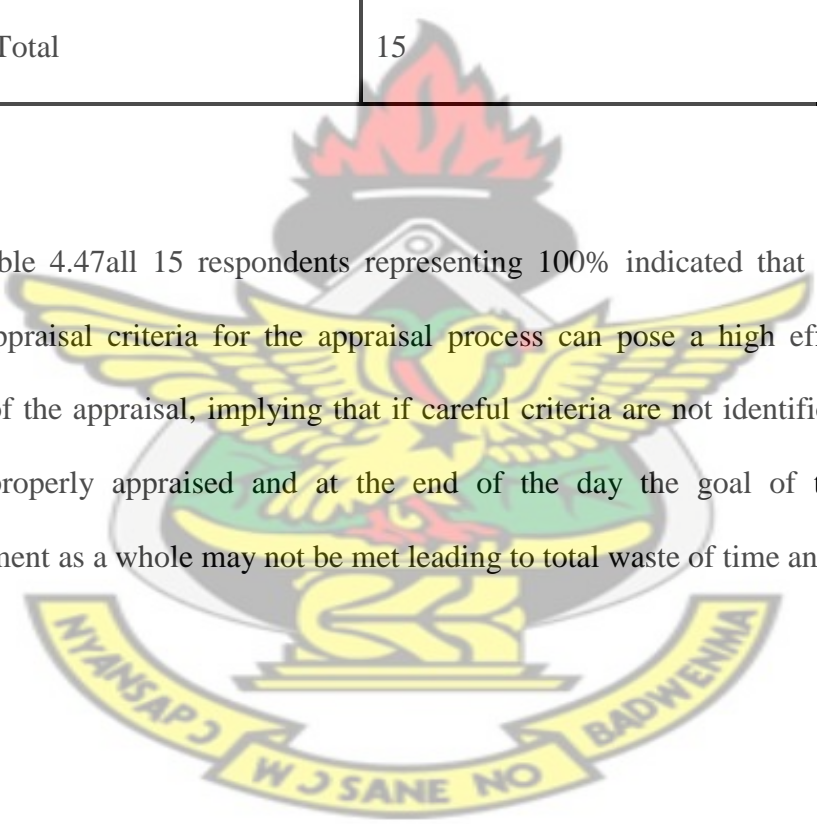


Table 4.48 Challenges towards successful appraisals, cost implications

Level of effect	Frequency	Valid Percent
Less effect	7	46.7
Moderate effect	7	46.7
High effect	1	6.7
Total	15	100.0

It was ascertained from respondents also how cost implications affected successful appraisals. From Table 4.48, 7 representing 46.7% indicated that cost implications will have less effect, another 7 representing 46.7% also indicated that it will have moderate effect while just 1 representing 6.7% indicated that it will have high effect. From the analysis it could be noted that cost implications on the process would be minimal.

Table 4.49 Organizational encouragement on short courses/ training for professionals involved in supplier appraisals

	Frequency	Valid Percent
No	9	60.0
Not sure	6	40.0
Total	15	100.0

It was inquired as to whether respondents had any idea on their organizations encouraging short courses/training for professionals who conducted appraisals. From Table 4.49, 9 representing 60% indicated that no courses or training were encouraged, 6 representing 40% also indicated that they were not sure. It could be noticed that courses or training were not at all encouraged to train professionals. This will pose a weakness to the buyer as professionals will still be less versed to carry out these processes.

Table4.50 Supplier development encouragement in organizations

	Frequency	Valid Percent
No	15	100.0

From Table 4.50, all respondents representing 100% indicated that supplier development were not encouraged in their organizations, this may pose a weakness as there will not be a strong buyer supplier relationship.

Table 4.51 Benefits of supplier appraisals, buyer-seller relationship improvement

Level of importance	Frequency	Valid Percent
Important	2	13.3
Very important	13	86.7
Total	15	100.0

Few benefits of supplier appraisals were outlined which respondents were asked to indicate their opinions on the level of importance. From Table 4.51, 2 representing 13.3% indicated that buyer-supplier relationship was important whiles 13 representing 86.7% indicated that it was very important to the buying organization in the long term.

Table 4.52 Benefits of supplier appraisals, tracking supplier performance

Level of importance	Frequency	Valid Percent
Important	5	33.3
Very important	10	66.7
Total	15	100.0

From Table 4.52, 5 representing 33.3% indicated that tracking supplier performance was important while 10 representing 66.7% indicated that it was very important as buyers get to know which of their suppliers is performing and which is not and based on that buyers supplier base could be revised either to develop on non-performing suppliers or remove them.

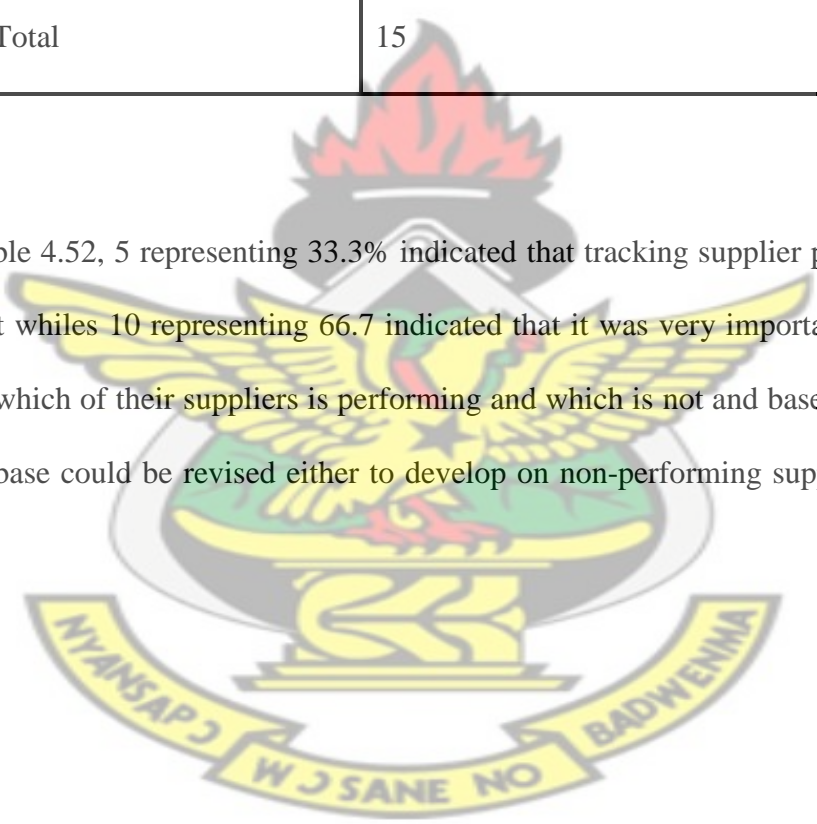


Table 4.53 Benefits of supplier appraisals, identifies supplier improvement opportunities

Level of importance	Frequency	Valid Percent
Important	6	40.0
Very important	9	60.0
Total	15	100.0

6 respondents representing 40% indicated that identifying supplier improvement opportunities was important while 9 representing 60% indicated that it was very important as seen on Table 4.53

Table 4.54 Benefits of supplier appraisals, supplier development

Level of importance	Frequency	Valid Percent
Neutral	1	6.7
Important	1	6.7
Very important	13	86.7
Total	15	100.0

From Table 4.54, 1 person representing 6.7% indicated that supplier development was neutral, another 1 representing 6.7% also indicated that it was important while 13 representing 86.7% indicated that it was very important for the benefit of both supplier and buyer.

Table 4.55 Benefits of supplier appraisals, benchmark suppliers against best practices

Level of importance	Frequency	Valid Percent
Important	4	26.7
Very important	11	73.3
Total	15	100.0

From Table 4.55, 4 representing 26.7% indicated that benchmarking of suppliers against best practices was important while 11 representing 73.3% indicated that it was very important as appraisers could check suppliers to conforming to standards and correct practices.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The previous chapters presented have explained the theoretical, fictitious, procedural, and practical approaches for addressing the research agenda. This research ends here as this chapter summarizes the issues raised in the study. In addition, a summary of how the main objectives were achieved is explained and thereafter the main conclusions of this research.

5.2 ATTAINING THE RESEARCH OBJECTIVES

This research was initiated with the primary aim of assessing how entities evaluate the performance of their suppliers with the view of identifying its strengths and weaknesses and suggest ways in which they can be improved. Also to propose a supplier appraisal matrix that could be used by procurement entities in appraising their suppliers. In order to attain the specified aim, three research objectives were customary. Amidst, the key research questions articulated to facilitate the inquiry are:

1. What are the key common criteria in appraising suppliers?
2. What are the areas to be appraised?
3. What are the approaches to supplier appraisals?
4. Who should appraise?

5. What are the challenges in supplier appraisals?

5.3 REVIEW OF OBJECTIVES

The main aim of this research, as noted earlier, was to assess how entities evaluate the performance of their suppliers with the view of identifying its strengths and weaknesses and suggest ways in which they can be improved. Secondly to propose a supplier appraisal matrix that could be used by procurement entities in appraising their suppliers. Subsequently a number of research objectives were developed in order to collectively satisfy this aim. Here, the research objectives reconsidered to highlight the extent to which they were accomplished through the various phases of the research.

5.3.1 OBJECTIVE 1 To identify existing or current supplier appraisal techniques used in appraising suppliers;

From the research it was found out that buying organization's procurement units appraised their existing suppliers using a simple technique of identifying the criteria or key performance indicators for the process. A number of suppliers are all appraised transparently based on the same criteria. From the results the suppliers are ranked as good, very good or poor according to the categorical method.

5.3.2 OBJECTIVE 2 To identify the performance appraisal criteria used in the appraisal of suppliers;

A major contribution of this study is the identification of criteria, dimension or categories that served as bases for supplier appraisals. Results of this study found that currently used criteria were cost, quality and time and have been found to be inadequate. Factors such as production capacity, production facilities, quality of service, human resources, past performance, environmental and ethical factors, performance, IT compliance etc warrant consideration as also important dimensions in the supplier appraisal process.

5.3.3 OBJECTIVE 3 To identify the strengths and weaknesses in supplier appraisals and suggest recommendations;

During the research few strengths and weaknesses were identified;

5.3.3.1 Weaknesses in supplier appraisals

Transparency: -it was realized that there was no transparency in the tendering procedures in so doing one particular supplier was selected every time and on that basis supplier could not be compared to others for performance. During the performance measurement some suppliers were favored.

No short courses or training: -findings also revealed that Organizations did not encourage their staff to go on short courses/ training in supplier appraisal hence they were not well versed in the process.

Poor institutional structures: -it was also found out that institutional structures were not strong enough in the delivery of their functions in so doing correct measures and procedures were not being followed leading to non-transparency in appraisal processes.

Infrequency of Assessment: -the study also revealed that Supplier evaluation methods were usually known to be time consuming, so they are not performed frequently. In practice, many firms reported supplier performance on a monthly or quarterly basis. In fact, it was found that some firms evaluated suppliers only once a year. Others too didn't perform it at all. This prevented firms from knowing the performance of their suppliers or worse whether they were achieving value for money or not. Infrequent appraisals did not facilitate the prevention of inefficient practices at an early stage and did not encourage continuous improvement of suppliers.

Approaches towards appraisals:-it was found out that firms did not have approaches to appraisals such as; Desktop research which used published or unpublished information already in existence and was particularly applicable to product and financial appraisals, it included financials of the company, reports, references, strikes etc. They also did not undertake field research especially when appraising suppliers of high risk/high value products and when long-term, collaborative relationships were under consideration.

Ranking methods: -the study revealed that some firms only made use of categorical methods in ranking which just ranked a supplier as being poor, good or very good which was only subjective and insufficient, suppliers must be equally ranked by weightings to evidently pass appraisals.

Courses and training: - it was also found out that organizations didn't train professionals involved in appraisals in order for them to be well versed in the process. This may have led to lack of competence on their part to carry out appraisal processes in an ethical manner and might not exercise due diligence in the process.

Criteria category used: - it was also evident that the criteria used could be subjective or objective. It has been known in practice that significant numbers of criteria are subjective. The subjective criteria were found to be the ones that we cannot represent in a quantitative way. Such as the decision desire of business expressed by a supplier is a subjective criterion.

It was also found that both subjective and objective criteria were not considered in some cases. In addition to the subjective criteria, the objective criterions which we can measure are to be considered. An objective criterion is a criterion which we can measure by concrete quantitative dimension like cost. Assessing only objective or only subjective criteria could lead to skewed results. It is necessary to take account of both which in some cases were not.

Bias or favoritism: - the thesis also found out that weightings and the actual scores given to suppliers could be influenced by a biased buyer. This raises the issue of transparency again since other suppliers on the appraisal list would not have been treated fairly.

Debriefing: -it was found out that after supplier appraisals those suppliers deemed to be non-performing were not briefed and in so doing suppliers could not know how they fared and work on developing themselves. The buying organization fails to feedback the results of the appraisal to the suppliers in order to allow them to implement changes in their operations.

Errors in appraisals: -the thesis also revealed that errors came up in the appraisal process by mistake or through the participation of a non-competent member of the appraisal board. This went a long way to give skewed results at the end of the process. Non-selection of proper appraisal criteria: -it was also found out that proper appraisal criteria were not selected. There were no careful selection of criteria relevant to the appraisal hence the ultimate goal of the appraisal was always defeated.

Lack of competence: -the study revealed also that there was incompetence of appraisers due to the fact that they were not well trained in the process or they were not of requisite qualification relevant to the appraisal. Such appraisers did not undertake the process in an ethical manner defeating the goal of the entire process.

5.3.3.2 Strengths in supplier appraisals;

Supplier weaknesses identification: -it was realized that any short comings or weaknesses in a particular supplier's performance could be identified. Hence for long

term relationship of both parties weaknesses could be addressed and developed upon for the benefit of both buyer and supplier.

Buyer supplier relationship improvement:- it was again found out that supplier appraisals improves buyer supplier relationship in the long term as it will build trust to engage in business with a well performing supplier for many years since the supplier will be on an approved list or supplier base categorized under high performance levels. It also helps to remove or reduce emotive issues such as personal relationships between buyer and supplier.

.Subjective and objective criteria: - The study also revealed that the use of both objective and subjective measurements will give an overall picture of the supplier's performance.

Encouragement for Local suppliers: - The study also pointed out that by measuring supplier performance, an organization can end up understanding if local suppliers are capable of performing well enough to outperform offshore or foreign suppliers. Findings strongly revealed that local supplier participation could be encouraged.

Mitigate risk: - Findings also point out that supplier appraisal can help reduce business risk, particularly organizations increasing dependence on its key suppliers. Risks can be financial and increase with geographic distance.

Tracks Supplier performance:- It was also found out from the study that supplier appraisals help track suppliers performance whether they are performing or

underperforming and could form a bases of an investigation why suppliers are not performing to required levels and thereby making strategic decisions to that effect.

Identifies supplier improvement opportunities:-Findings also pointed out that effective appraisals can be used as the basis for continuous improvement. The goal of supplier appraisal should be supplier performance improvement. While simply measuring performance has a positive effect, supplier appraisal can be most effective when it leads to continuous improvement activities and actual supplier performance improvement.

Develops supplier: -It was also found that supplier appraisals help suppliers to develop themselves knowing their weaknesses and their strengths in order to make improvements on them. It encourages them to work hard in order to get themselves enlisted on an approved supplier base of an organization.

Benchmarks suppliers against best practices: -Finally it was found out that organizations can use the appraisal to check whether suppliers are conforming to key benchmarks in terms of best practices required.

5.4 RECOMMENDATIONS

For a buying organization to perform effective supplier appraisals the following recommendations are suggested;

Proper review of weighting for criteria: - The buying organization must review properly the weightings which are to be applied to the performance appraisal criteria. It must

reflect the needs (and perhaps changing needs) of the organization. That is to say if the organization uses Just-In-Time techniques, then delivery will probably require a higher weighting than, say, price or other criteria.

Involvement of suppliers:-The buying organization may if necessary invite suppliers to make useful additions to the criteria list. As it will help the supplier to improve his/ her performance if he/she is aware of what criteria is being appraised and thus what is important to the purchaser.

Supplier rewards: - The buying organization should set up recognition and rewarding system. In this way, there is visual and loud acknowledgement of outstanding supplier performance. Recognition and reward can be in the form of annual supplier awards or letters of praise from the CEOs of the buying organization.

Short courses/Training: - Buying organizations should encourage professionals in their outfit responsible for appraisals to attend short courses or training in supplier appraisals. Consequently, the Public Procurement Board could organize workshops or seminars to educate professionals on the necessities of appraising suppliers in order for organizations to conduct appraisals in their outfit. This will build their confidence and gain competence in conducting appraisals in a professional and ethical manner. This will also help rid off little errors made in the processes.

Debriefing or Feedback: -Buying organizations must give feedback on the outcome of the appraisal process to suppliers to enable them to identify their shortcomings and mistakes so that they can develop on them which will go a long way to enable them to improve. In so doing a supplier who did not fair well in an appraisal will confidently attain high

performance level in the next appraisal. This will enable suppliers to have a good understanding of buyer's needs and can improve their performance on specific dimensions, especially those of most importance to the buyer. Increased performance on the part of the supplier will assist the firm in its overall business objectives (Howard 1998).

Bias/favoritism: - Outside investigators must be appointed to take part in appraisal processes to ensure that there is no bias or favoritism by any member of the appraisal team. There must also be an audit system to check the entire process to ensure that the whole process was transparent.

Consideration of Multi criteria:- Buying organizations instead of focusing mainly on cost, time and quality as performance appraisal criteria they must also consider a multi criteria involving various other important areas such as, production capacity, human resource, production facilities, past performance, previous experience etc. that is it is also necessary to consider the type and amount of input resources (i.e., practices relating to the technical, managerial, and operational capabilities) while also considering both objective and subjective measurements that will give an overall picture of the supplier's performance.

Frequency of assessment: - Organizations must also be encouraged to conduct appraisals frequently to keep track of supplier performance and identify suppliers who need to be developed to ensure continuous improvement of the supplier.

Appraisal team: -The buying Organization must set up team of competent personnel who are well versed in the performance measurement such as purchasing or procurement

officers. It is also very important to include the user department in the team as they play an important role in usage of goods procured and could really monitor such criteria as quality in the appraisal process.

Reinforcement of Institutional structures: - It is important to reinforce institutional structures to encourage transparency in appraisal processes to discourage bias, favoritism or corruption.

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QUESTIONNAIRE

RESEARCH TOPIC: ASSESSMENT OF SUPPLIER APPRAISAL AND RATING IN PUBLIC PROCUREMENT ENTITIES IN GHANA

The main objectives of this study are to identify existing or current supplier appraisal techniques used in appraising suppliers, identify the performance appraisal criteria and identify the strength and weaknesses of supplier appraisals and to make recommendation that would enhance the appraisal of suppliers by procurement entities.

This study is being undertaken by an Msc. Procurement Management student of Kwame Nkrumah University of Science and Technology, Kumasi. The survey is for academic purpose only and therefore response treated with paramount concealment.

Please, kindly respond to the questions by ticking the appropriate box for each item.

Please note that all information provided will be strictly treated as confidential.

PART ONE: GENERAL BACKGROUND INFORMATION ON REpondENT AND ORGANISATION

Q1. Please tick [✓] to indicate your status in the organization/agency

Director Procurement Manager Staff Stores manager

Any Other Specify.....

Q2. Please tick [✓] to indicate your experience in the procurement sector

Below 5 years 6 – 10 years 11 – 15 years More than 15 years

Q3. Please tick [✓] to indicate your experience in present organization/agency

Below 5 years 6 – 10 years 11 – 15 years More than 15 years

PART TWO: SUPPLIER APPRAISALS TECHNIQUES & PERFORMANCE CRITERIA.

Q4. Are suppliers appraisals conducted in the procurement unit of your organization?

(a) Yes

(b) No

Q5. The table below indicates criteria for appraising supplier’s performance by a buying organization. Please indicate the level of importance that each criterion has on supplier appraisal by ticking the respective boxes. Please use the scale: **1= Not Important; 2= Less important; 3= Neutral; 4= Important; 5= Very important.**

No.	Supplier appraisal criteria	1	2	3	4	5
1	Cost					
2	Delivery					
3	Previous Experience					
4	Quality					
5	Time					
6	Past performance					

Q6. The table gives Procurement areas relevant for appraisals. Please indicate the level of importance that each area has on supplier appraisal by ticking the respective boxes.

Please use the scale: **1= Not Important; 2= Less important; 3= Neutral; 4= Important; 5= Very important.**

No.	Procurement areas of appraisal	1	2	3	4	5
1	Goods					
2	Works					
3	Services					

Q7. How often are supplier appraisals conducted in your organization?

(a) Twice a year (b) quarterly (c) Once a year

(d) Other (please Specify).....

Q8. The table below indicates areas concerned with appraising supplier's performance by a buying organization. Please indicate the level of importance that each area has on supplier appraisal by ticking the respective boxes. Please use the scale: **1= Not Important; 2= Less important; 3= Neutral; 4= Important; 5= Very important.**

1= Not Important; 2= Less important; 3= Neutral; 4= Important; 5= Very important.

No.	Areas concerned with supplier appraisal	1	2	3	4	5
1	Finance					
2	Production Capacity of supplier					
3	Production facilities of supplier					
4	Quality of service supplier Provides					
5	Human resource					
6	Past performance					
7	Environmental and ethical factors					
8	Performance					
9	IT compliance					

Q9. Does your Organization use supplier ranking methods?

- (a) Yes (b) No

* If “No” ignore question 10

Q10. The table below indicates ranking methods linked with supplier appraisals. Please indicate the level of importance that each method has on supplier appraisal by ticking the respective boxes. Please use the scale: **1= Not Important; 2= Less important; 3= Neutral; 4= Important; 5= Very important.**

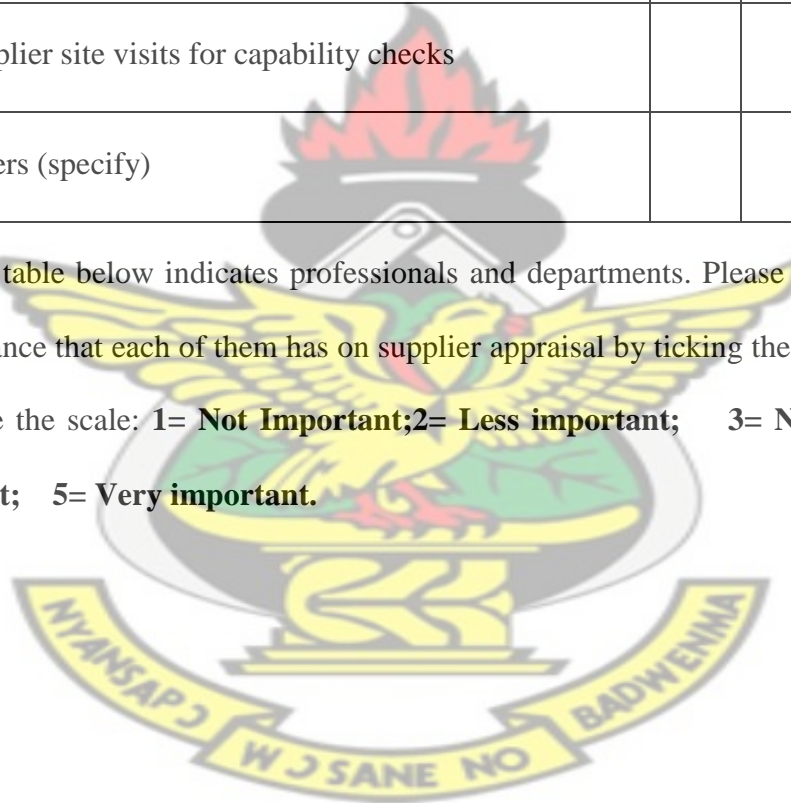
No.	Supplier ranking methods	1	2	3	4	5
1	Categorical method					
2	weighted point method					
3	Vendor performance index					
	Others (specify)					

Q11. The table below indicates supplier selection processes linked with supplier appraisals. Please indicate the level of importance that each process has on supplier appraisal by ticking the respective boxes. Please use the scale: **1= Not Important; 2= Less important; 3= Neutral; 4= Important; 5= Very important.**

No.	Supplier selection processes	1	2	3	4	5
1	Based on supplier performance					
2	Preliminary review of suppliers					
3	Supplying criteria					
4	Supplier site visits for capability checks					
	Others (specify)					

Q12. The table below indicates professionals and departments. Please indicate the level of importance that each of them has on supplier appraisal by ticking the respective boxes.

Please use the scale: 1= **Not Important**; 2= **Less important**; 3= **Neutral**; 4= **Important**; 5= **Very important**.



No.	Who should appraise	1	2	3	4	5
1	Head of Procurement					
2	User department					
3	Procurement team					
4	Stores department					
	Others (please specify)					

Q13. The table below indicates variables for supplier rating. Please indicate the level of importance that each variable has on supplier appraisal by ticking the respective boxes.

Please use the scale: **1= Not Important; 2= Less important; 3= Neutral; 4= Important; 5= Very important.**

No.	Variables for supplier rating	1	2	3	4	5
1	Price					
2	Quality					
3	Delivery					
4	time					
	Others (please specify)					

Q14. Does your organization have any approaches towards supplier appraisal?

- (a) Yes (b) No

Q15. The table below indicates approaches towards supplier appraisal. Please indicate the level of importance of each approach by ticking the respective boxes. Please use the scale: 1= Not Important;2= Less important; 3= Neutral; 4= Important; 5= Very important.

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No.	Approaches to supplier appraisal	1	2	3	4	5
1	Desktop appraisal (documented information on suppliers)					
2	Field research (supplier site visits)					
	Others (specify)					

PART THREE: STRENGTHS & WEAKNESSES IN SUPPLIER APPRAISALS AND REMEDIES

Q16. Does your organization encounter any difficulties in appraising suppliers?

- (a) Yes (b) No

Q17. The table below indicates challenges towards supplier appraisals. Please indicate the degree to which these affect supplier appraisal by ticking the respective boxes. Please use the scale: 1= No effect; 2= less effect 3= Moderate effect; 4= high effect.

No.	Challenges towards successful appraisals	1	2	3	4
1	Errors in appraisals				
2	Bias or favoritism				
3	Lack of competence of appraisers				
4	Non-selection of proper appraisal criteria				
5	Cost implications				
	Others (please specify)				

Q18. Does your organization encourage short courses/training for professionals involved in supplier appraisals?

- (a) Yes (b) No (c) Not sure

Q19. Is supplier development encouraged in your organization?

- (a) Yes (b) No

Q20. The table below indicates benefits of supplier appraisal to buying organizations. Please indicate the level of importance of that each benefit has on supplier appraisal by ticking the respective boxes. Please use the scale: **1= Not Important; 2= Less important; 3= Neutral; 4= Important; 5= Very important.**

No.	Benefits of Supplier appraisals	1	2	3	4	5
1	Buyer-supplier relationship improvement					
2	Tracking Supplier performance					
3	Identified supplier improvement opportunities					
4	develops supplier					
5	Benchmark suppliers against best practices					