WJMS Vol. 1, Issue 6, Page: 11-25, June 2019, ISSN: 2676-2811 Impact Factor (SJIF): 8.232 Journal DOI: 10.15373/22501991 International Peer Reviewed & Refereed Journal with Indexed Journal Platforms

web: <u>www.damaacademia.com</u> email: <u>editor@damaacademia.com</u> <u>Download from Journal site</u> <u>https://damaacademia.com/wjms/</u>

Author(s) Lord Emmanuel Yamoah

School of finance & Financial Mgt. Business University of Costa Rica Email: emmalordy@yahoo.com

Isaac Kofi Yornu

Procurement Department School of Business Accra Technical University Email: <u>ikyornu2000@gmail.com</u>

Correspondence Lord Emmanuel Yamoah National Health Insurance Tarkwa Municipality Western Region, Ghana Email: <u>emmalordy@yahoo.com</u>

2.0 LITERATURE REVIEW

Challenges on Strategic Sourcing as an Expenditure on Procurement

¹Lord Emmanuel Yamoah | ²Isaac Kofi Yornu

Abstract

Strategic sourcing is an activity which every organization performs irrespective of it being a private public organization. Every organization one way or other needs somebody to supply them their material to enable them carry on with their activities. However, the question before us is not whether the organization should undertake strategic sourcing or not but rather what method should be used during strategic sourcing within a given situation, who should be involved in the sourcing process and what procedure to follow during sourcing in order to achieve cost effectiveness and not cost efficiency. An assumption to why this happening indicates the following; Untrained and unskilled purchasing professionals are always involved in the strategic sourcing process. Inability of purchasing professionals to identify suppliers from where ever they are located within the globe and rely solely on the local suppliers without even considering the technicalities involve in the supply of the materials. The procurement professionals do not consider the threshold involve in the supply when awarding contracts. The purchasing professionals do not plan for their purchases at the beginning of the year making all their purchases to be of urgent with limited time to source. It is in the light of these problems that the researcher wants to evaluate the impact of effective sourcing on organizations with particular reference to Goldfields Ghana Limited, Tarkwa.

Keywords: Strategic Sourcing Challenges, Procurement Sourcing Challenges, International Sourcing Challenges

1.0 INTRODUCTION

Strategic Sourcing is a disciplined process aimed at reducing total cost and improving product quality and service levels from suppliers by fully leveraging the organisation enormous buying power in the marketplace. To achieve maximum results, the focus of strategic sourcing has been the transformation of traditional purchasing practices towards more strategic and value-add practices. This has involved significant organizational changes in three key areas, Best-in-class procurement environment was developed to enable end users to buy from strategic suppliers, experienced strategic sourcing professionals have been hired to upgrade internal capabilities of organization purchasing departments to become more analytical and value-adding organizations, and Strategic Sourcing organization was established to lead organisation Strategic Sourcing Initiative.

Strategic sourcing is an institutional procurement process that continuously improves and re-evaluates the purchasing activities of a company or organization. In a production environment, it is often considered one component of supply chain management. By A.T. Kearney, Booz Allen Hamilton, KPMG, PricewaterhouseCoopers, and PRTM in the late 80s and early 90s. The sourcing plan is the result of all planning efforts on strategic sourcing. Into this planning all sourcing events are organized and detailed with all tactical and operational information such as, the sourcing team responsible for each event, when is supposed to begin and end each RFX steps (RFI, RFP, RFQ), the requirement, specifications of all services or materials and negotiations/cost goals. The objective of sourcing plan is to manage time and quality of the all sourcing events in the strategic sourcing program. According to a survey conducted by Greenspan Robyn (1994) organizations' reason for sourcing were mostly to benefit customers, as more than two-thirds cited "to improve services offered to customers": as their target objective for sourcing. More than

three-quarters of the small businesses that were surveyed reported the same customer-related objective, compared to only 58% of medium-sized businesses. Nearly 80% of Asian businesses and 70% of North American organizations indicated service improvements for customers as the primary sourcing objective, while more than two-thirds of European respondents were using sourcing as a way to lower purchasing costs. The steps in a strategic sourcing process are: Assessment of a company's current spending (what is bought, where, at what prices?), Assessment of the supply market (who offers what?), Total cost analyses (how much does it cost to provide those goods or services?), Identification of suitable suppliers, Development of a sourcing strategy (where to purchase, considering demand and supply situations, while minimizing risk and costs), Negotiation with suppliers (products, service levels, prices, geographical coverage, etc.), Implementation of new supply structure, Track results and restart assessment (continuous cycle), Negotiate payment terms with vendors.

2.1 Definition of Strategic Sourcing

Strategic sourcing is an approach to supply chain management that formalizes the way information is gathered and used so that an organization can leverage its consolidated purchasing power to find the best possible values in the marketplace. Strategic sourcing requires analysis of what an organization buys, from whom, at what price and at what volume. Strategic sourcing differs from conventional purchasing because it places emphasis on the entire life-cycle of a product, not just its initial purchase price. Ref Margaret Rouse in April 2012. Strategic sourcing is a systematic and fact-based approach for consolidating an organization's spending with high-quality vendors to achieve pricing efficiencies. What it is, focused on the Total Cost of Ownership (TCO) incorporating customer needs, organizational goals, and market conditions, getting the best product/service at the best value, driven by a rigorous and collaborative approach, addresses all levers for savings, based on fact based analysis and market intelligence, and a continuous process. What is not? Focused ONLY on cost, Getting the cheapest product/service, ad-hoc activities involving only purchasing, focused on "beating up suppliers", decisions on opinion preference based opinion, unjustified preference, or complacency and a one-time project or decision

2.2. The Seven Stages of a Sourcing Strategy.

Step One - Fully Understand the Spend Category: This step, along with the next two, is conducted by the sourcing team. At this stage, the team needs to ensure it understands everything about the spend category itself. For example, if the category is corrugated packaging at a consumer products company, the team will need to understand the definition of the category, usage patterns and why the particular types and grades were specified. Stakeholders at all operating units and physical locations would need to be identified. For example, logistics, which may need to know about shipping specifications, or marketing, which may need to understand certain quality or environmental characteristics, where applicable. The five key areas of analysis are: total historic expenditure and volumes; expenditure categorized by commodity and sub-commodity; expenditure by division, department or user; expenditure by supplier; and future demand projections or budgets.

Step Two - Supplier Market Assessment: Concurrently run supplier market assessment for seeking alternative suppliers to existing incumbents. Understand the key supplier marketplace dynamics and current trends. Prepare 'should-cost' information from the major components of the key products. Take a view on the key suppliers' sub-tier marketplace, and analyze for any risks as well as opportunities. Should-cost analysis is not appropriate for every item. In many cases, traditional strategic sourcing techniques work well. But in those cases where strategic sourcing cannot be applied, should-cost analysis provides a valuable tool that can drive cost reductions and supplier continuous improvement efforts.

Step Three - Prepare a supplier survey: Next, develop a supplier survey for both incumbent and potential alternative suppliers. This survey will help evaluate the supplier capabilities. At this point, consider verifying spend information using data that incumbent suppliers have from their sales systems. The survey is to assess the capability and capacity of the market to meet your requirements. It enables you to assess at an early stage whether your proposed project is feasible and can be delivered by the identified supply base. It also provides an early warning of your requirements to the market, and enables suppliers to think about how they will respond. The key aim here is to encourage the right suppliers with the right structure to respond to you. Look to gather knowledge in these key areas: Feasibility, capability, maturity and capacity

Step Four – Building the Strategy: This step involves developing the sourcing strategy. The combination of the first three steps provides the essential ingredients for the sourcing strategy. However, for each area or category it will depend on: *How competitive the supplier marketplace* is armed with the supplier information, you can build the competitive landscape in the supply marketplace. This can help demonstrate the 'size of the prize' to alternative suppliers, and communicates the seriousness of a potential sourcing exercise to incumbent suppliers. *How supportive your organization's users are to testing incumbent supplier relationships:* a sourcing team has two sets of internal

stakeholders: the people who use the things that are bought, and the executives who manage overall costs. The people who consume the spend category will accept cost reductions as long as the process is: started in another department; doesn't mean a change in suppliers; and doesn't jeopardize a good relationship with the supply base, generate complaints or affect issues such as delivery reliability, service or payments. For executives, cost and service competitiveness is a key objective, but they too are users of various corporate services, so are often caught between the pursuit of cost improvement and a user mentality of resisting change. To mobilize users' and executives' support for the category sourcing strategy, it is vital to communicate all the benefits and overcome any potential risks. What alternatives exist to competitive assessment? If the supply base is competitive, you can harness those forces to leverage better pricing or terms owing to increased volume of a streamlined product specification. Once the result of the competitive sourcing effort is determined, it will be useful to set up a collaborative programme that will run until the next competitive sourcing event takes place. If a competitive approach to sourcing isn't a viable option, it's worth considering what the alternatives are, such as collaborating with suppliers: to reduce complexity and in turn increase productivity; to create corroborative process improvements that reduce the cost of doing business; and to change the way the relationship is structured. For example, firms may invest in supplier operations to guarantee access to supply, new technology or process improvements. These alternatives are pursued typically when a buying company has little leverage over its supply base. They will be relying on good faith that suppliers will share the benefits of a new approach. The sourcing strategy is an accumulation of all the drivers thus far mentioned.

Step Five - Competitive Approach: Where a competitive approach is used, which is the general case for most spend categories, a request for proposal or bid will need to be prepared (RFP, RFQs, eRFQs, ITTs). This will define and make clear the requirements to all prequalified suppliers. It should include product or service specifications, delivery and service requirements, evaluation criteria, pricing structure, and financial terms and conditions. A communication plan should also be implemented at this stage to attract maximum supplier interest. Ensure that every supplier is aware they are competing on a level playing field. Once the RFP is sent out to all suppliers, make sure they are given enough time to respond. Follow-up messages should also be sent out to encourage a greater response.

Step Six - Selection: This is about selecting and negotiating with suppliers. The sourcing team should apply its evaluation criteria to the supplier responses. If extra information beyond the RFP response is required, don't be afraid to ask for it. If carried out manually, the negotiation process is conducted first with a larger set of suppliers, then narrowed to a few finalists. If the sourcing team uses an electronic negotiation tool, a greater number of suppliers may be kept in the process for longer, giving more diverse suppliers a better chance at winning the business. Compare outcomes in terms of total value or implementation cost differences. Departments directly affected can be brought into the final selection process. Senior executives should be briefed on the final selection, to gain their approval and also be given the rationale behind the decision, to prepare them for any calls they receive from disappointed suppliers.

Step Seven - Communicate with your new Suppliers: Once the winning supplier(s) are notified they should be invited to participate in implementing recommendations. Implementation plans vary depending on the degree of supplier switches. For incumbents, there will be a communication plan that will include any changes in specifications, improvements in delivery, and service or pricing models. These ought to be communicated to users as well. Since the company may have significantly benefited from this entire process, it's important that this be recognized by both company and supplier. For new suppliers, a communication plan has to be developed that manages the transition from old to new at every point in the process that is touched by the spend category. Department, finance and customer service are affected by this change, and their risk antennae will be particularly sensitive during this period. It is particularly important to measure closely the new supplier's performance during the first weeks of performance. Being able to demonstrate that performance matches, or is superior to, that of the former supplier will be vital during this sensitive time. It is also important to capture the intellectual capital your sourcing team has developed during the seven-step process so it can be used the next time that category is sourced.

2.3 Categories of Sourcing

There are basically three categories of sourcing outlined below by the Institute of Purchasing and Supply;

Reactive Sourcing: CIPS defines reactive sourcing as being the procurement approach where no proactive sourcing strategies have been put in place and so the purchasing and supply management function has an entirely reactive role, example, responding to requisitions or other unexpected requirement from the business.

Tactical Sourcing: Tactical sourcing is to some extent reactive as it covers those business requirements that cannot be planned in advance, but are provided within a framework of strategic sourcing. It is however, proactively managed and so resources and processes are set aside to manage it within the purchasing and supply management strategy. An example of tactical sourcing is working with colleagues in marketing and sales providing a bid support activity within fast-moving technology areas. Notwithstanding the above, CIPS suggests that there should be no

unplanned or unexpected capital expenditure as all organizations have capital investment plans which purchasing and supply management professionals should obtain and incorporate in the strategic sourcing strategy.

Strategic Sourcing: Strategic sourcing is a core activity in purchasing and supply management. It is a complex commercial process requiring extensive knowledge and competence. It can be defined as "satisfying business needs from markets via the proactive and selection of suppliers with the objective of delivering solutions to meet predetermined and agreed business needs".

2.4 Strategic Goals of Sourcing

Ask anyone in procurement "What is the goal of strategic sourcing?" and their reply is likely to include the phrase "to save money." And that is commonly the number one goal of strategic sourcing. But it's problematic when procurement departments treat it as the only goal. For sourcing to be truly strategic, it must accomplish more than just saving money. It must bring value to the organization in many other ways. Here are four goals commonly missing from strategic sourcing initiatives by Charles Dominick, purchasing certification blog (2011)

To reduce risk: The international news constantly reminds us that natural disaster, political upheavals, and other events make doing business exclusively in certain parts of the world a risky approach. Strategic sourcing should enable you to sustain continuity of supply in the face of unexpected disruption to the operations of one or more suppliers.

To improve supplier performance: Reducing the unit price you pay on purchase orders is nice, but it is meaningless if your organization has to deal with frequent late deliveries, an unacceptable number of quality defects, and poor supplier service. Strategic sourcing is only truly successful when you achieve both cost reduction and an improvement in supplier performance.

To bring in innovations from the supply base: in today's competitive business environment, organizations need a constant flow of innovative ideas in order to keep their competitors from stealing their market share. Suppliers can be a great source of innovative ideas and a good strategic sourcing process will ensure that the flow of such ideas is facilitated.

To support the organization's social responsibility goals: Today's organizations support diversity, environmental responsibility, and other philanthropic goals. Decisions made as part of strategic sourcing should consciously help move the organization towards those goals and not away from them. Saving money is therefore not the only goal of strategic sourcing. It is one of several important goals. (Charles Dominick: next level purchasing and supply 2011.)

2.5 Strategic Sourcing Strategies

According to the office of government commerce (OGC) strategic sourcing process is an iterative cycle, in which a number of distinct stages of maturity can be identified. Strategic teams will go through several stages of development. This is normal, as continual iteration is part of the strategic sourcing process. The level of maturity ranges from development of short-term tactical plans to long-term sourcing strategies. Each of these stages is described in more detail below. Depending on the nature of the category, it may never be necessary to develop a three-year strategy. However, categories with technical and strategic characteristics will need longer term development plans and strategies. Sourcing may not always involve a procurement activity e.g. if there are existing, effective contract vehicles in place

Quick Win Plans: A category that has not previously been managed by purchasing will start off the process with a quick win plan (i.e. easy opportunities can be delivered in a 4-6-month period) whilst gathering facts and data with which to create a longer term plan. Quick Win plans are actions, typically with existing sources of supply, e.g. negotiations, simple specifications changes, consolidation of volumes etc, and should be a one-sheet milestone summary-supported with a detailed action plan. Each owner of a milestone should have their own action plan. Quick wins may also arise in second and third cycles of Strategic Sourcing cycle.

2.6 Strategic Sourcing Process

Strategic Sourcing is a structured process which optimizes the organisation supply base while reducing Total Cost of Ownership (TCO) and improving mission delivery. Strategic Sourcing solutions are based on a robust analysis of spending patterns, the clear definition of business needs and requirements, and the alignment of government needs with supply market capabilities and commercial best practices. Strategic Sourcing solutions are developed and implemented collaboratively with stakeholders. Strategic Sourcing is a rigorous, analytic process. The first step is to identify the set of commodities that may benefit from a Strategic Sourcing implementation. This Opportunity Assessment Analysis can take many forms, but key elements include: Assessing the alignment between customer needs and market capabilities, analyzing how well current purchasing practice meets cost and performance criteria for

users and identifying savings potential, strategic alignment, implementation feasibility, and other criteria used to assess the commodity. Once those commodities are identified, three steps are taken to develop a Strategic Sourcing strategy:

Commodity Profile Analysis: The Commodity Profile analysis details spending patterns and trends for the commodity, usage patterns and high level business needs. The Commodity Profile is developed through stakeholder interviews and in-depth quantitative analysis using data from multiple sources.

Market Analysis: The Market Analysis defines supply market trends and commercial best practices for the commodity. Components of this step often include: Analysis of market share, trends, and projections (in both the commercial and government markets) Identification of cost drivers throughout the extended value stream Identification of practices used by commercial firms to lower acquisition costs and to reduce total cost of ownership.

Commodity Strategy Development: The Commodity Strategy builds and synthesizes the findings of the Commodity Profile and Market Analyses by explicitly defining a strategy and rationale that can be used to lower costs. The Commodity Strategy also includes cost savings estimates and implementation plans. Strategic Sourcing solutions are managed throughout their life-cycle through ongoing engagement with stakeholders, the collection and analysis of detailed usage/ spend data, and the identification of opportunities for improvement in subsequent solution that are developed in the future.

2.7 Benefits of Strategic Sourcing

Strategic Sourcing promotes an effective acquisition system that meets government needs and ensures the prudent use of taxpayer dollars. Specifically, Strategic Sourcing:

2.7.1 Drives Efficient Organizational Operations.

- Provides visibility into spending habits.
- Lowers Total Cost of Ownership through data analysis.
- Creates commodity expertise.
- Enables better and more informed decisions by employees.
- Minimizes complexity for end-users.

2.7.2 Improves Vendor Performance

- Increases clarity of requirements.
- Optimizes supplier relationships.
- Encourages new and innovative solutions.
- Improves competition & contract structures.
- Improves vendor ability to meet performance goals.

2.7.3 Supports Administration Goals

- Helps agencies and organization achieve savings.
- Enables right sizing of the acquisition workforce by minimizing redundant contracts & activities.
- Uses acquisitions to drive sustainable and socio-economic goals.
- Increases transparency & accountability.

When implemented government-wide through the Federal Strategic Sourcing Initiative (FSSI), Strategic Sourcing also encourages cross-agency collaboration and allows the government to aggregate requirements and reduce redundant contracting activities.

2.8 Developing a Strategic Sourcing Strategy

Developing a strategic sourcing strategy is a fundamental part of purchasing and supply management process. Strategic sourcing is a logical process involving the application of tools by skills, competent and knowledgeable people; however, developing and implementing strategic sourcing is a functional process. Since it is such a broad area, it is advisable to sub-divide the subject into a number of sections. Once the preferred strategic sourcing options are agreed, these are developed into 'sourcing plans' which should be innovative and creative solutions to the organization's requirements in support of the organization's mission and objectives.

Strategic sourcing plans should generate work streams i.e. clear milestones to be achieved with resources e.g. project teams allocated appropriately. This is where the process of acquisition begins involving design teams, outcome-based specifications, market development, advertisements, and policy compliance for instance. Strategic sourcing plans include determining processes for tenderer's and supplier selection and performance criteria ensuring the supplier continues to meet customers' expectations. CIPS advocates the use of weighted evaluation criteria when

determining the preferred options, as this is one method of persuading internal colleagues that purchasing and supply management is not focused on price and cost alone, but considers issues such as speed to market and other appropriate and relevant criteria. Therefore, strategic sourcing plans include producing and managing the ITT process, conducting negotiations and everything up to the recommendation of contract award. <u>www.cips.org</u>

2.8.1 Sourcing Plans

Once the preferred strategic sourcing options are agreed on, these are developed into 'sourcing plans' which should be innovative and creative solutions to the organization's requirements in support of the organization's mission and objectives. Strategic sourcing plans should generate work streams i.e. clear milestones to be achieved with resources e.g. project teams allocated appropriately.

2.8.1 Short to Medium (Tactical) Sourcing Plans

After the first or partially complete cycle of Strategic Sourcing the resulting plan may be a tactical sourcing plan-stretching out twelve months' maximum. A tactical sourcing plan is a simple summary of which suppliers the team has opted for, the allocation of business to each supplier and the cost improvement plan associated with each supplier. The summary sheet is backed up with: - An executive summary and simple business case for the sponsor. A milestone plan and detailed action plan to deliver the source plan. Each owner of a milestone should have their own action plan. (OGC).

2.8.2 Long Term Source Plans

After the first or second cycle of Strategic Sourcing the resulting plan may be a long term source plan-stretching out twelve to twenty-four months' maximum. A simple strategy/series of tactics will have been agreed on with the businesses to recondition the market place e.g. Significant changes to specifications and volume consolidation, Reinvestment in new sources of supply, Response to policy changes, Response to organizational restructuring, Significant cost improvement targets-15-20%. A long term/advanced source plan comprises the following: An executive summary and business case for the sponsor-focusing on risks, forecast cost improvement plan-24 months, Summary of which suppliers the team have reviewed, the current allocation of business to each supplier and the potential cost improvement plan associated with each supplier over 24 months, A milestone plan and detailed action plan to deliver the source plan. In the collaborative model these are the category initiatives. Each owner of an initiative/milestone will have their own action plan, QCLDM milestone plan, Detailed appendices of the interpretation of facts, data and analysis conducted by the team, and excluding appendices, the long term source plan should be no more than 20 pages as a guide

2.8.3 Identifying New Suppliers

Traditionally, sourcing has been perceived as the identification of new or alternative suppliers e.g. sources of supply. Methods of identifying suppliers have included: Internet e.g. suppliers' own pages, Supplier exhibitions, Talking to specialist end users.

2.9 Types of Sourcing

According to the free encyclopedia from the Wikipedia, there are six (6) types of sourcing namely;

- **Global sourcing:** a procurement strategy aimed at exploiting global efficiencies in production.
- **Strategic sourcing:** a component of supply chain management, for improving and re-evaluating purchasing activities.
- Sourcing (personnel): the identification of job candidates through proactive recruiting technique
- **Low-cost country sourcing:** a procurement strategy for acquiring materials from countries with lower labour and production cost in order to cut operating expenses.
- Corporate sourcing, a supply chain, purchasing/procurement, and inventory function.
- **Multi-sourcing:** a strategy that treats a given function, such as IT, as portfolio of activities, some of which should be outsourced and others of which should be performed by internal staff.

2.9. 1 Sourcing Process

Strategic sourcing is a complicated process involving a number of interrelated tasks. Not surprising, a number of models of the strategic process have been devised. A typical model is that of Noack and Sipco, who present the following 11-stage sourcing process: Identification and evaluation of needs, define or evaluate user's requirements,

decide to make or buy, and identify type of purchase. The three types of purchases-from least amount of time and complexity to most amount of time and complexity are Straight re-buy or routine purchase, a modified re-buy, which requires a change to an existing supplier or input, and a new buy, which results from a new user need.

- Conduct market analysis
- Identify possible suppliers
- Prescreen possible suppliers
- Evaluate the remaining supply base.
- Choose suppliers.
- Deliver product perform service
- Post purchase/perform service

3.0 METHODOLOGY

The research methodology explains into detail the methods used in gathering and analyzing the data for the study.

3.1 Research Design

A descriptive case study was adopted for the research. This is because the researcher sought to evaluate the impact of effective strategic sourcing in an organization, specifically Goldfields Ghana Limited, Tarkwa.

3.2 Research Population and Sample Size

For the purpose of the study, I limited myself to the Goldfields Ghana Limited, Tarkwa site, with a population of about 30 employees. Due to the fact that I could not cover all the workers on the mine because of time limit I only concentrated on one department that is the supply chain department (Stores department, Contract department and the Procurement department) where I selected my sample size to be ten people from each section.

3.3 Sampling Technique

A convenient sample procedure was employed in gathering information for this report so as to ensure a convenient form of interviewing respondents and administering the questionnaire.

3.4 Research Instrument

For the purposes of this work the researcher relied heavily on personal interviews, questionnaires, observations and records from Goldfields Ghana Limited.

Questionnaires: This is a set of printed list of questions used in the research. The questions for this purpose were designed by the researcher in accordance with research objectives. Twenty-two questions were constructed and administered in the supply chain department of Goldfields Ghana Limited, Tarkwa. The questionnaires were designed to include both open-ended and close-ended questions.

Personal Interview: An interview is a conversation with the purpose of obtaining information from the interviewers. The target population which comprises of the stores, contract and procurement section were interviewed.

Field Observation: This method allows the researcher to undertake personal analysis on the subject matter either in the media or other relevant sources. The researcher visited the site of Goldfields Ghana Tarkwa where he was introduced to how things are done in the supply chain department, that is, the stores contract and procurement section.

3.5 Data Collection

Primary Data: This is the name given to data that are used for specific purpose for which they were collected. Such data contains known quantities in respect to the method of collection.

Secondary Data: This is the name given to data that is being used for some purpose other than that for which they were originally collected. This type of data is documentary sources out of which information relevant for the current research will be extracted from different types of data sources. This includes lecture notes, text books and internet.

3.6 Administrative Procedures

Thirty (30) questionnaires were personally distributed to the respondents by the researcher and collected later. In the case of top management, appointments were booked for interviews with the Head of Supply Chain Department and other management members. These interviews lasted for about twenty (20) minutes.

3.7 Method of Data Analysis

The researcher used specific analysis of data collected from primary sources by distributing the designed questionnaires to employees in the procurement and stores section. Structured interviews were also undertaken. Problems as identified were stated and interpreting of the data forms the basis of describing what actually happens on the field. The researcher examines the data to ascertain differences and the similarities. These were classified and counted to determine their frequencies before being presented in their appropriate frequency distribution tables, thus responses from respondents were coded and presented in simplified forms. Charts and tables were used in the analysis of data because it simplifies and makes it clear and understandable for a layman.

4.0 DATA ANALYSIS

The data collected from the questionnaires and interviews are presented and analyzed using descriptive statistics. Goldfields Ghana Limited, Tarkwa is one of the Goldfields Group Companies which is one of the world's best precious metal producers, with annual attributable gold production of 4.1 million ounces. The group has operations in South Africa, Australia, Europe, North America and South America. The company employs approximately 49, 499 people across its operations. Goldfields is one of the world's largest unheeded gold companies providing direct exposure to both the gold price and the underlying value and performance of the company. Its shareholders are based all over the world and increasingly in the United State. The company has grown from strength to strength since it's foundation through the combination of gold assets of Goldfields South Africa Limited and GenCorp Limited. The principal trading market for the company's ordinary shares are listed on the New York stock exchange. The company's ordinary shares are also listed on the London stock exchange in Europe next in Paris and Brussels, as well as the Swiss exchange.

4.1 Gender of Respondents

Table 1: Distribution showing the gender of respondents

	FREQUENCY	PERCENTAGE
Male	20	60
Female	10	40
TOTAL	30	100 ULTI-DISCIPL N

Out of a total number of thirty (30) employees sampled from the research population, twenty constituting sixty percent 60% were male while the remaining ten representing forty percent (40%) were female. This goes to show that the views presented in this study has the full representation of the genders and does not have any bias in it.

4.2 Age Group Of Respondents Table 2: Distribution showing the age group of respondents

AGE	FREQUENCY	PERCENTAGE (%)
21 - 30	6	20
31 - 40	12	40
41 - 50	9	30
Above 50	3	10
TOTAL	30	100

Source: Field Survey: 2012.

The table above reveals that three (6) respondents representing twenty percent (20%) are between the ages of twenty-one (21) to thirty (30) years. Seven (12) respondents representing forty percent (40%) of the total respondents are between the ages of thirty-one (31) to forty (40) years. Six (9) respondents constituting thirty percent (30%) are between the ages of forty-one (41) to fifty (50) years whereas four (3) respondents out of the twenty respondents are above fifty (50) years of age representing 10%. This implies that majority of the workers of Goldfields Ghana Limited, Tarkwa falls between the ages of thirty-one (31) to forty (40) years. The pie chart below illustrates the distribution per the respondents of this research.

RESPONSE	FREQUENCY	PERCENTAGE		
Under 5 years	6	20		
5-10 years	12	40		
11 - 15 years	9	30		
Above 15 years	3	10		
Total	30	100		

4.3	Number of	Years Spent	with Goldfields	Ghana Limited
-----	-----------	--------------------	-----------------	---------------

Table 3: Distribution showing the number of year's employees had work in Goldfields Ghana Limited, Tarkwa.

Source: Field Survey; 2012

Out of twenty (30) respondents, six (6) spent below five years, twelve (12) spent 5 to 10 years, nine (9) spent between 11 to 15 years and the remaining three (3) respondents spent above fifteen years working with Goldfields Ghana Limited. These represent 20%, 40%, 30% and 10% respectively. It was realized that there is relatively low labour turn-over at Tarkwa mines. The pie chart below illustrates this distribution.

4.4 Level of Education

Table 4: Distribution showing the level of education of employees

RESPONSE	FREQUENCY	PERCENTAGE (%)
'O' or 'A' Levels	0	0
Polytechnic Graduate	12	40
University Graduate	18	60
TOTAL	30	100

Source: Field Survey, 2012.

Goldfields Ghana Limited believes in the acquisition, utilization, improvement and retention of employees in order to become the market leader in the sustainable gold mining industries. This is reflected in the caliber of people employed. Table 4 above shows that none of the respondents have 'O' or 'A' Level certificate. However, Twelve respondents representing Forty (40%) percent of the total respondents are Polytechnic graduates whilst the remaining Eighteen respondents representing sixty percent (60%) are products from various universities in and out of Ghana. This is represented on the pie chart above.

4.5 Criteria's Used an Awarding Contracts

Respondents revealed that Goldfields Ghana Limited, as a matter of corporate policy always award contract to well qualified and certified suppliers based on the following criteria's:

- 1. Tender for suppliers to bid
- 2. Contract administrators open the bids on the closing date
- 3. Evaluate and present the final report to the tender committee to approve of the best bidder or advice otherwise and
- 4. Award contract as per condition of the contract

4.6 Officer in Charge of Strategic Sourcing

Sourcing is an important subject area which needs not to be taken for granted since it can make or break the organization. At Goldfields Ghana Limited, the sourcing of materials is the sole responsibilities of the members of the Supply Chain Management or Purchasing and Supply department the team of expertise who have acquire both academic and professional qualification in Supply Chain Management.

4.7 Objectives of the Procurement Department

The procurement section is like a heart of Goldfields Ghana Limited. The company relies so much on its activities in order to run and achieve a higher degree of production. Since the various departments and units in the company look on to the procurement section for all their needs in terms of goods, spares services among others to enable them run an uninterrupted production flow, the procurement section has got various goals to help achieve this. The research revealed the following main objectives of the procurement department of Goldfields Ghana Limited, Tarkwa: To liaise with all service department to ensure that procurement function positively impact on operations, timely acquisition of cost – effective and appropriate quality materials and services to minimize the impact of production, and to ensure vendor compliance to the safety and environmental policies.

4.8 Priority of Sourcing

All thirty respondents representing one hundred percent (100%) revealed that, the main concern of Goldfields Ghana Limited in the selection of suppliers is the one with the ability and capability of providing high quality products or services, timely delivery and in the right quantity. They also made mention of the following:

- 1. Credibility
- 2. Previous work handled
- 3. Experience in relevant field of business
- 4. Staff expertise
- 5. Cost

4.9 Functions of the Procurement Department

The followings are some of the functions carried out in the procurement department of Goldfields Ghana Limited. The department is responsible for receiving request to purchase items needed for production. Responsible for replenishing the stock item. Work hand in hand with the inventory department to set up the minimum, maximum and the re-order level in the system based on the users request so that they can monitor stock level for every item in the stores. Responsible for buying all goods and services requested for production. Responsible for sourcing for those items needed. Responsible for putting items on contract through tendering. Responsible for processing purchase orders both foreign and local. Liaise with shipping lines, freight forwarders and the clearing agent to ensure foreign orders are shipped, cleared and delivered to site on time. Liaise with stores and account to ensure goods delivered are received into the stock and account process payment for the suppliers. The procurement department also plays a major role in tender committee to evaluate contracts or suppliers who have bid for contracts. It also responsible for supplier's performance appraiser.

4.10 Benefits of Effective Strategic Sourcing

Respondents revealed the following benefits of sourcing to Goldfields Ghana Limited, Tarkwa: Its offers the buyers the opportunity to get good deals for the company (best prices), Best quality goods are procured to enhance production, It helps buyers to know more alternatives to the products they procure, It helps establish good relationship between buying company and the suppliers (win-win relationship), and It helps identify reliable and credible suppliers who can meet the company needs at any time.

4.11 Suppliers of Goldfields Ghana Limited

The major suppliers of Goldfields Ghana Limited include the following: Ghacem, Richbay chemicals, Citland international, Unatrac/Mantrac, Dreggh Company, Barbex Company, Wisdan Company, Direct Material Supplies

5.0 CONCLUSION

This chapter entails summary of findings drawn from the data presentation, conclusion and recommendations made on the basis of these findings. It has been found from the research that: There is low labour turn-over at Goldfields Ghana Limited, Tarkwa – Mine. 85% of respondents are University graduates while the remaining 15% are Polytechnic graduates. None of the employees holds 'O' or 'A' level certificates. Goldfields Ghana Limited as a matter of corporate policy award contract to well qualified and certified suppliers.

5.1 Types of Products and Services Purchased by Goldfields Ghana Limited

The categories of procurements can include capital equipment; production materials such as raw materials, components and semi-finished items used in manufacturing; consumables and maintenance, repair and operating (MRO) supplies; resale goods; and services.

Capital equipment: Capital equipment is sometimes referred to as capital goods or capital assets. Capital equipment provides utility or benefit to the organization over a long period. Lysons and Farrington (2006) identify three important characteristics of capital equipment: It can be physically touched or handled, It is used to produce further goods or services, and it has a lifetime of more than one year. Marrian (1965: 10–23), distinguished six types of industrial equipment:

Buildings: permanent construction on a site to house or enclose equipment and personnel employed in industrial, institutional or commercial activities.

Installation equipment: essential plant, machinery or other major equipment used directly to produce the organization's goods and services, for example, aircraft purchased by an airline.

Accessory equipment: durable major equipment used to facilitate the production of goods and services or to enhance the operations of organizations, for example, aircraft purchased by a manufacturing organization to facilitate the movement of executive personnel.

Operating equipment, semi-durable minor equipment which is movable and used in, but not generally essential to, the production of goods and services – for example, special footwear, goggles, brooms.

Tools and instruments: semi-durable or durable portable minor equipment and instruments, required for producing, measuring or calculating associated with the production of goods or services, for example, ICT equipment, all tools, surgical instruments, timing devices, cash registers.

Furnishings and fittings: all goods and materials employed to fit buildings for their organizational purposes, but not equipment used specifically in production, for example, carpets, floor coverings, draperies, furniture, shelving, counters, benches.

5.2 Production Materials Used in Manufacturing

The production inputs required in the manufacturing processes are usually raw materials, parts, components, sub-assemblies or assemblies. Risley (1972: 24—25) classified materials and parts used in manufacturing under three headings:

Raw materials: primarily from agriculture and the various extractive industries: minerals, ores, timber, petroleum and scrap as well as dairy products, fruits and vegetables sold to a processor. Many of these raw materials are internationally traded commodities. Generally, there are in an unprocessed state although they can enter into trade in a processed form rather than having just been mined or harvested, for example ores are extracted from rock and coffee and tea will be dried and processed before they reach a market.

Semi-finished goods and processed materials: materials to which some work has been applied or some value added. Such items are finished only in part or may have been formed into shapes and specifications to make them readily usable by the buyer. These products lose their identity when incorporated into other products. Examples include: metal sections, rods, sheets, tubing, wires, castings, chemicals, cloth, leather, sugar and paper.

Component parts and assemblies: completely finished products of one manufacturer, which can be used as part of a more complex product by another manufacturer. These do not lose their original identity when incorporated into other products. Examples include bearings, controls, gauges, gears, wheels, transistors, car engines and windscreens. In recent years there has been a trend in manufacturing to buy in more assemblies and fewer components. Assemblies are groups of components that have been assembled prior to purchase, such as car steering assemblies or Gearboxes. In the past, many car manufacturers bought all the component parts for these items and actually put them together in the factory. Of course, this meant many more suppliers and low-value orders. Nowadays, most car manufacturers buy in larger assemblies from suppliers who, effectively, make whole sections of the car. Most large car manufacturers make less than 50% of the items that are actually in the final automobile product that the consumer buys from a dealer. Indeed, the fact that most car factories are now called "assembly plants" is evidence of this trend.

5.4 Consumables and Mro Supplies

A wide range of items is required in order to keep the infrastructure (buildings, administration and production facilities) of the organization running. These are divided into consumable supplies and MRO items. Consumable supplies are defined as 'consumable items used in the operation of the business enterprise', such as stationery and office supplies, machine oil, fasteners, uniforms, safety apparel, insecticides, fuels, small tools, packaging and wrapping materials. Maintenance, repair and operating supplies(MRO) are defined as 'items which are needed repeatedly or recurrently to maintain the operational efficiency of the business', such as fire and safety equipment, electrical supplies, caretaking requirements, and a wide variety of repair parts or spares for plant and equipment.

Resale goods: Unlike manufacturing organizations which transform purchased inputs into finished products, some merchandising organizations (wholesalers or retailers) buy completed products for resale. Wholesalers usually sell to other wholesalers, retailers or to individuals but not usually to the ultimate consumer, whereas retailers provide products and services to the ultimate consumers.

Services: Services involve supply where the main element is a task rather than the provision of tangible goods or materials. The provision of services is becoming more important with the increase in outsourcing. In recent years there has been a large increase in the range of services available to organizations such as catering, payroll, recruitment, and training, building management, security, warehousing, transportation, maintenance, IT services, design, printing and management consultancy. Sometimes the service provider's staff will provide the service at the purchasing organization's premises (a 'provider present' service) such as catering, cleaning or security. In other situations, the

service will be provided away from the purchasing organization's premises ('provider not present' service) such as banking or insurance. Services such as transport will involve the service provider being present at the purchasing organization's premises for only a short time. Sometimes, goods and services are provided by subcontractors and in some procurement situations, such as with organizations in the construction industry, this is common.

5.5 Challenges On Strategic Sourcing as an Expenditure on Procurement

Capital expenditure is defined by the Inland Revenue as an expenditure on acquisition of tangible productive assets which yield continuous service beyond the accounting period in which they are purchased. Various factors distinguish the purchase of capital goods from non-capital goods.

Total Costs Approach: One basic challenge to Goldfields Ghana Limited is purchase price of a capital asset, the elements of its total cost to the organization as there are various costs associated with the purchase and other costs, which can arise during the life of a capital asset. In order to assess the true cost of a capital asset to the organization, life-cycle costing was developed. Life-cycle costing has been defined by the Chartered Institute of Management Accountants as 'the practice of obtaining, over their lifetime, the best use of the physical assets at the lowest cost to the entity'. The life-cycle costs of a capital item can be considered fewer than three headings:

- Acquisition costs: these can include the initial costs of transportation, the costs of installation and commissioning, the cost of initial spares and the cost of training the operator/supervisor.
- **Operation costs:** these include the costs of supervisors, operators and employment costs, fuel and power expenditure, the cost of dealing with emissions or effluent, insurance, the costs of maintenance and downtime, and the cost of spares.
- **Disposal costs:** these include the costs of depreciation, the estimated value on disposal (if any) and the costs of disposal including the environmental costs.

High cost price: As the capital equipment may be of a high value there are various matters to be considered.

Should the item be purchased new or slightly used? A used item may have a lower price than if it is bought new and be available more quickly. The buyer can perhaps see the machinery in operation and there may be incentives from the manufacturer. As the purchase of capital equipment can be viewed as an investment, there are financial appraisal methods which can be used to compare the different options available as alternatives to not purchasing the capital asset and simply putting the money in the bank:

- Payback, which is the time required for the cash returns to equal the initial cash expenditure.
- Average rate of return, which aims to assess the average net profit after depreciation and other cash outlays as a percentage of original cost.
- **Discounting**, which shows the extent to which a sum of money invested will grow over a period of time of time at a given rate of compound interest.
- Net present value, which determines the minimum required return on the capital investment.

Organizations will usually decide to purchase capital equipment as, after the running costs, maintenance and depreciation are considered, they expect to gain some benefit, which is often financial. This financial benefit from either reducing their overall costs (by doing the work themselves with the new equipment instead of sending out to another organization to do it for them), or by gaining some additional earnings (by perhaps increasing their production capacity) is the net cash flow and it is this figure which is used to decide whether to purchase one particular capital item instead of another.

In addition, a decision needs to be made whether it would be better to lease, rent or hire the equipment instead of purchasing it outright.

- Lack of purchasing experience: There is usually a lack of experience with capital items as they are non-recurring, unlike non-capital items which can be bought periodically or on a regular basis.
- A team approach: This is usually needed for capital items, with other departments contributing expertise and the team being managed by the procurement specialist.
- **Negotiations**: The will usually be more extended and complex with capital purchases due to the nature of the equipment being purchased.
- **Specifications:** They are often more difficult to draft for capital purchases, which can often be technically complex.

The cost of doing business: What goes up does not always come down. With commodity prices surging to alltime highs, accelerated production has become the mantra of most mining companies and costs are going up across the board, the report offers some strategies for getting costs under control, understand cost drivers, improve capital project management, enhance energy efficiency, lock in supply, and spend to save. **Chaotic commodity prices**: The leading contributor to the multi-year boom, for withholding information that could enable Goldfields Ghana limited as well as the miners to better manage their production schedules. Have commodity prices been reset at a higher level or are we at the top of a bubble that's about to burst? Making informed decisions in this highly uncertain environment requires a level of forecasting many companies lack. Goldfields Ghana Limited choose to do business, noting that several resource-rich nations – including Australia, Chile and South Africa are boosting mining taxes and other fees, and even threatening to renegotiate existing tax deals. The demand for heightened corporate social responsibility, Industry stakeholders are finding themselves subject to higher levels of activism than ever before. To meet the demands of a broad stakeholder base, Goldfields Ghana limited needs to integrate risk-based corporate social responsibility strategies and develop and track key performance indicators with the same diligence they use to track production. Labour crunch there simply are not enough people to power projected mining company growth and each year skill gaps extend to a wider range of functions. "Steps companies can take to find willing workers include applying science to workforce planning, introducing industry-level cross-training, and building a global culture."

Capital project quandaries: As commodity prices fluctuate and the gap between supply and demand widens, points out the report, the number of capital projects across Goldfields Ghana Limited is mounting in its mining operations. Goldfields Ghana Limited must now focus on managing risks that could interfere with their ability to meet steady-production objectives.

The **non-traditional financing**, New sources of funding require new levels of knowledge, Despite the cash companies have on hand, finding sufficient capital to fuel growth remains difficult. The key to success in these efforts hinges on the mining companies' ability to build the relationships they require to gain access to foreign markets, while gaining better insight into those regions.

Lack of skilled Personnel: The typical workforce in any organization is primarily trained to focus on and manage tactical activities and not to manage procurement based on the understanding of business drivers and supply market capabilities. An everyday worker whose job is to keep the wheels rolling should not be and cannot be expected to master the procurement cycle. Dedicated resources need to be brought in for the same. Contract consultants are a good starting point to jump start the process and for knowledge transfer while allowing time for in house talent to blossom.

Senior management lack of commitment: The top leadership does not understand the value of strategic sourcing and hence does not buy in into the idea. This has to be one of the most crucial impediments to a program's success. Confidence trickles from top to bottom and not the other way around. It is an absolute must for the leadership to do their due diligence and once a decision is taken, back it with all their resources. Time and again, experts have said that change management is more about behavioral change than any process change. That was very true then and is still very true now

Insufficient data for effective decision making: This is another of the root causes of failure of procurement initiatives. If we start on the wrong footing, then negative results are all but guaranteed. Quite often, the data required to identify and analyze the saving opportunities and manage the overall performance of the program is either just not available or not easily available or of such poor quality that it cannot be relied on for accurate decision making. Management needs to spend the required time and effort in gathering the best data possible. That alone is a huge step forward.

Organization design and structure related obstacles: A complete absence of a shared sourcing vision and strategy among highly decentralized purchasing functions (read factions) and lack of alignment of spend categories make it difficult to develop and execute sourcing programs. As if unorganized and non-aligned sourcing initiatives were not enough, inter-business divisions' competition hampers the success of projects. It is not uncommon to come across vendors doing business with different company divisions of the same parent organization under different contract terms for the same product category at the same time. The warring factions need to be brought together to the table so as to effectively harness their collective buying provess.

5.6 The Role of the Procurement Professional

There are basic issues to be considered in purchasing whatever the category of procurement, such as what does the organization need, who will supply it and how does the purchasing department get the best deal. As a result, some aspects of the purchasing professional's role can apply whatever the category of procurement. On closer examination however, the role does vary according to the type of goods/services being purchased, and different techniques are associated with buying in each of the procurement categories.

Capital equipment: In some organizations, the purchasing department has to persuade senior management and customers of the value-added contribution it can make in the purchase of capital equipment. In other organizations the procurement department buys centrally, often with participation by other specialists. The 'user', for example the production manager in cases where the equipment being purchased is manufacturing machinery, will often have a

major role, and the more technical the equipment, the greater the technical department's role will be in the purchase. Purchasing capital equipment tends to be non-repetitive and so it can be challenging for the purchasing professional who will usually need to develop skills in management accountancy, project management, and teamwork and communication skills. Generally, the purchasing role emphasizes commercial, negotiating and contractual expertise, but purchasers could find that their role requires them to address issues such as:

Questioning the need and deciding whether instead of purchasing the capital equipment to make a particular component the organization should just buy the components instead. The financial impact of different options including not purchasing the equipment. Investment appraisal should be used.

Considering whether it would be better to lease, rent, hire or purchase the equipment. If it is to be purchased, should new or used equipment be applied? If it is to be purchased and a decision is being made between different models, the total cost of acquisition should be considered by using life-cycle costing so the purchaser knows the true cost of the equipment over its lifetime.

Preparatory steps of researching the possible suppliers, requesting quotes and evaluating bids on their merits. With the latter, matters such as price, lead time, operating characteristics, performance criteria, operating costs, spares, maintenance schedules and payment terms could be considered. Selecting the supplier. Sometimes the purchasing professional will need to combat prejudice in favor of one supplier who may not offer equipment that is as innovative or competitive as other makes on the market.

Organizing discussions and negotiations with the suppliers and agreeing and finalizing terms and conditions. Once the contract is awarded the supplier's compliance will need to be checked, for example, that they have submitted drawings and met deadlines. Performance should also be monitored during and after installation

5.7 Recommendation

The procurement department is responsible for receiving request to purchase strategic items needed for production. The following benefits of strategic sourcing to Goldfields Ghana Limited, Tarkwa were identified: Its offers the buyers the opportunity to get good deals for the company (best prices), Best quality goods are procured in order to enhance production, It helps buyers to know more alternatives to the products they procure, It helps establish good relationship between buyer and the suppliers (win-win relationship), It helps identify reliable and credible suppliers who can meet the company needs at any time. The findings reveal the following as major suppliers of Gold fields Ghana Limited: Ghacem, Richbay chemicals, Citland international, Unatrac/Mantrac, Dreggh Company, Barbex Company, Wisdan Company and Direct Material Supplies

Strategic Sourcing is meaningless if its foundation is not put in place. These foundations are planning for what to buy and what time of the year and allocating resources for that purchases, identifying the method of procurement to be used and the procedures they will use during the procurement and finally the tendering procedures they will use also. Goldfields Ghana Ltd is one of the organizations which is well established and leading producer of Gold in Africa, and Strategic Sourcing within the mine makes all their purchases very effective and value-add practices.

The following recommendations are made for consideration by management of Goldfields Ghana Limited, Tarkwa: There should be fairness in the tendering process to avoid any form of conflict between bidders, if any. Inservice training should be organized for staff, more especially junior staff to sharpen their knowledge skills. Management should put adequate measures in place to establish cordial relationship between Goldfields Ghana Limited and its suppliers so as to minimize cost and maximize profit. Adequate monitoring mechanisms should be put in place to assess the performance of suppliers.

References

- 1. Ref: ast.umich.edu
- 2. Ref: supplymanagement.com/resources/how-to/guide-to-strategic-sourcing.
- 3. Dominick Charles: 2011. next level purchasing and supply
- 4. Lyons and Farrington, 2003
- 5. Compton and Jessop, 2001, Chartered Institute of Purchasing and Supply Terminology.
- 6. *Ref: www.cips.org*
- 7. By Kearney.A.T, Booz Allen Hamilton, in the late 80s and early 90s KPMG, PricewaterhouseCoopers, and PRTM.
- 8. Greenspan Robyn (1994) organizations' reason for sourcing.
- 9. Ref Rouse Margaret in April 2012.
- 10. Ref: ast.umich.edu
- 11. Ref: supplymanagement.com/resources/how-to/guide-to-strategic-sourcing.

- 12. Source: office of government commerce (OGC 2000)
- 13. www.cips.org
- 14. Lysons and Farrington (2006) identify three important characteristics of capital equipment:
- 15. Marrian (1965: 10-23), distinguished six types of industrial equipment
- 16. Risley (1972: 24—25)
- Trent Monckza, R.M. R. and Handfield R. (1998). Purchasing and Supply Chain Management. Cincinnatti, Ohio: International Thompson.
- Steel, Court R. and B. (1996). Profitable Purchasing Strategies. London McGraw Hill.
- Purchasing and Supply Management Magazine (published by CIPS, the forerunner of Supply Management)
- Pitts. Robert A and David Lei Strategic Management (Building and sustaining Competitive Advantage third Edition)
- Baily Peter, Farmer David, Jessop David and Jones David (1994).Purchasing Principles and Management. seventh edition).
- Compton, H.k and Jessop D.A (2001). The official Dictionary of Purchasing and Supply Terminology for Buyers and Suppliers. Cambridge: Liverpool Business Publishing.
- Crocker, Emmett B and S. (2006). Relationship Driven Supply Chain: Creating a Culture of Collaboration throughout the Chain. Aldershot: Ashigate Purchasing.
- Lyons Kenneth and Farrington Brian (2003) Purchasing and Supply chain Management 7th edition, Pearson's education ltd.
- Robyn Greenspan (1994) in a survey conducted.
- Institute of Supply Chain Management (CIPS) www.cips.com.org.
- Free encyclopedia (www.wikipedia.org).
- Dr. Lu Dawei (2011) Fundamentals of Supply Chain Management 1st edition.
- Ritson Neil (2009) Strategic Management, 2nd edition.
- Reference: /2009/03/30/strategic-sourcing,esourcingforum.com/archives
- www.Goldfields Ghana Limited.com

