

EFFECTS OF INDIRECT PURCHASING ON ORGANIZATIONAL PERFORMANCE IN SELECTED COMPANIES OF KENYAN ENERGY SECTOR

Koskei Joyce Chepkirui

Master of Science in Procurement and Logistics, Jomo Kenyatta University of Agriculture and Technology, Kenya

Kagiri A. Wairimu

Lecturer, Jomo Kenyatta University of Agriculture and Technology, Kenya

©2015

International Academic Journals

Received: 30th October 2015

Accepted: 6th November 2015

Full Length Research

Available Online at: http://www.iajournals.org/articles/iajpscm_v1_i5_27_49.pdf

Citation: Koskei, J. C. & Kagiri, A. W. (2015). Effects of indirect purchasing on organizational performance in selected companies of Kenyan energy sector. *International Academic Journal of Procurement and Supply Chain Management*, 1 (5), 27-49

International Academic Journals

www.iajournals.org | Open Access | Peer Review | Online Journal Publishers

ABSTRACT

The key objective of this study was to establish the effects of strategic sourcing of indirect items, market knowledge, stakeholder management and technological innovation on organizational performance of key players in the energy sector in Kenya. The research study applied a descriptive research design. The target population of this study was the staff working in Kengen, Kenya Power, Iber Africa and Wärtsilä Eastern Africa Limited offices in Nairobi. There were approximately 228 top and middle level management staffs currently serving in the offices of selected firms in Nairobi and designated in the thermal production departments as well as maintenance departments in these institutions. A sample of 30% was selected from within each group in proportions that each group bears to the study population. This generated a sample of 68 selected for observation. The study collected both primary and secondary data for the purpose of analysing the comparative effects of indirect purchasing on organizational performance of players in the energy sector in Kenya. Primary data was collected using a questionnaire while secondary data was obtained from annual reports of the companies. The researcher dropped the questionnaires physically at the respondents' place of work. The structured questions were used in an effort to conserve time and money as well as to facilitate in easier analysis as they are in immediate usable form; while the unstructured questions were used so as to encourage the respondent to

give an in-depth and felt response without feeling held back in revealing of any information. Each questionnaire was coded and only the researcher knew which person responded. The coding technique was only used for the purpose of matching returned, completed questionnaires with those delivered to the respondents. The study concludes that indirect purchasing has a significant effect on the organizational performance of key players in the energy sector. The study deduces that category/market knowledge, shareholder management and technological innovation affect the organizational performance of the firms in the energy sector in Kenya. The study recommends that the firms in the energy sector in Kenya should endeavor to fully understand the risks involved in indirect purchasing as a means of enabling them to come up with sourcing strategies aimed at improving the overall performance. For the purchasing function to achieve its maximum level of effectiveness and efficiency, material flows, money flows and information flow throughout the entire chain must be managed in an integrated and holistic manner, driven by the overall service and cost objectives. The management of the firms should carry out a benchmarking activity against the best players in the market as a way of improving their category/market knowledge in the indirect purchasing practices. The energy sector firms should enhance the use technological innovations and information technologies that are compatible with their purchasing activities.

[International Academic Journals](#)

Key Words: *indirect purchasing, Kenyan energy sector, organizational performance, companies of*

INTRODUCTION

Purchasing is a term that is often used interchangeably with procurement, but usually it refers more to the daily transactional procedures within procurement, such as the ordering of goods and services, (Cadenas, 2012). Buying and ordering can be read as synonyms to purchasing. Accordingly, indirect purchasing refers to the cost of being in business. Tactical activities such as buying and expediting are critical for running your day to day business but strategic activities, like spend analysis and category management, are critical to the long term competitiveness of a company. Indirect purchasing is the procurement of materials and services which are all the materials and services not related to the actual end-product of an organization. These are all the goods that initiate the operation of a company, such as office supplies, working clothes, consultancy services and business process services, (Benton, 2010).

Purchasing of indirect materials is gaining more interest from companies, because of its potential impacts on corporate-wide savings and productivity, (Puschmann & Alt 2005), and that is why this thesis only concentrates on purchasing of indirect materials. In an industrial company today, the whole ensemble of procured resources comprises over 80% of the total annual costs; indirect materials and services dominating over half of this spend. As this is a notable amount of cost, its efficient management is a vital asset in maintaining a company's profitability. According to Lysons & Farrington (2012), effectively re-engineering the indirect purchasing function can make a company operationally efficient. Today, far more people recognize the importance of indirect purchasing, as it now includes purchasing complex goods and services such as IT, marketing and advertising, facilities management, professional services, and maintenance, repair and operations supplies.

Direct materials are those involved in the manufacturing process and related to the production of finished goods, whereas indirect materials relate to the materials that do not result directly in finished goods. Typical indirect purchases involve office supplies and furniture, computer hardware and software, insurances, telecommunications, traveling and cleaning materials, (De Boer et al. 2003). Indirect materials are also widely referred in the literature as maintenance, repair and operation and non-product related materials. Nevertheless, the indirect purchasing is still badly organized, reported and managed in most organizations. The indirect purchasing is mostly seen as a supporting function in organizations. Indirect purchasing is made up of hundreds of areas of spend, each requiring deep expertise to effectively manage the costs, (Proxima, 2012). The reason for indirect purchasing moderate role is that the indirect spend is not simple to detect; in income statements it is mainly hidden under other expenses, and in

internal spending reports it is spread between different departments and units. Typically in an organization the employees purchase indirect materials themselves based on their personal preferences, without the contribution or coordination of procurement professionals. This unregulated purchasing environment leads to considerable operational transaction costs, as the purchasing transactions are made in scattered and over-lapping manner, (Van Weele, 2010).

A highly effective and successful indirect purchasing function not only focuses on achieving a great deal with the supplier base, but also focuses inwardly onto the organisation itself; onto the behaviours of the people within the business; onto the business rules that underpin the activity; onto what is fuelling the demand; onto policies and procedures; and onto the approach to risk, (Proxima, 2012). Yet most businesses fail to understand this and take a short term view, targeting the purchasing function in the wrong way – focusing them mostly on like-for-like in year savings, (Karjalainen, 2009). Taking all of this into account, it becomes apparent that businesses face a seemingly insurmountable challenge with regards to their ability to manage indirect purchasing effectively in-house, (Proxima, 2012). It explains why many businesses have failed to drive the greatest benefit and ROI from their indirect expenditure to date.

According to Proxima (2012), there are five overarching, common challenges facing firms and their ability to manage indirect expenditure effectively for their organisation, which are lack of capacity, lack of political clout, lack of mandate, lack of awareness and low visibility of indirect purchasing and organisations lack the skills required for effective stakeholder management. As such, over the past decade indirect purchasing has failed to rise up the list of business leaders' priorities and herein lies the opportunity. Bringing all of these factors into the equation usually results in selection of the best supplier, and discovery of other hidden costs that can be eliminated in the sourcing process. This study focuses on key energy players in Kenya, i.e. Kengen, Iber africa and Wärtsilä Eastern Africa Limited to investigate the effects of indirect purchasing costs on organizational performance.

The changing role of purchasing coincides with the growing acceptance of supply chain management. According to Kinyanjui (2014), several purchasing functions can be outsourced whereby the firm could outsource specification compliance services, negotiation services, and all paperwork and accounting services. Due to the varying characteristics of purchasing indirect materials, buyers often have to spend a lot of time dealing with individual transactions. This means negotiating with suppliers, converting purchase requests to purchase orders, handling queries and ensuring the correct allocation of invoices received. This huge operational workload is time consuming and derives buyers to neglect more strategic tasks. Indirect purchasing, Web-based information systems enable several purchasing related activities to be managed electronically. Indirect purchasing, which is business-to-business (B2B) at online marketplaces, and reverse auctions provide possibilities for e-procurement applications. This has enabled

purchasing to shift its focus from day-to-day activities to strategic tasks, which can help organizations attain success in the face of turbulent environment.

Mose (2012) carried out an assessment of the extent of compliance with Public Procurement and Disposal Act 2005 In Level 5 Hospitals in Kenya: A Study of Kisii Level 5 Hospital. In the study, Mose (2012) indicated that to avoid the problems of stock-out, the procurement units and suppliers should work as partners to enhance their relationship and that quality should be the centre in all purchasing activities since. Meeting the user's specification makes the work of inspection and acceptance committee easier, and reduces returned supplies and re-works of works and service which lengthens lead-time. The role of purchasing in corporate success has changed considerably due to the advances in information technologies and information systems. In order to achieve substantial savings and / or added value, business managers need to be paying more attention to the indirect purchasing process. Wambui (2010) who researched on the analysis of logistics outsourcing at Kenya Armed forces found out that the concept of outsourcing in the Kenyan armed forces is so much limited due to the secretive nature of their work such that adoption of the strategy is on supply of non essential services such as stationery. Kangaru (2011) while researching on challenges of business outsourcing at the Kenya Power found out that third party logistics providers are ahead of manufacturing companies that operate logistics departments on quality implementation and improvement issues in logistics services.

In addition, Chanzu (2002) concluded that outsourcing is most prevalent in departments like human resource, finance, and information technology. On his part Kamuri (2010) undertook a research on challenges facing the implementation of logistics outsourcing strategy at the Kenyatta National Hospital and found out among others for an organization to realize the competitiveness resulting from logistics outsourcing, then it should be able to develop a cordial relationship with all the supplier of goods and services which will facilitate efficient and effective delivery of services. Kangaru (2011) while researching on challenges of business outsourcing at the Kenya Power found out that third party logistics providers are ahead of manufacturing companies that operate logistics departments on quality implementation and improvement issues in logistics services.

STATEMENT OF THE PROBLEM

Heavy-industrial companies, such as energy generating, face different types of challenges in today's global economy. Van Weele (2010) argues that most companies are dealing with the downward turn in the business cycle. Others are coping with ongoing consolidation and trying to achieve projected efficiencies and synergies as they merge organizations. But a common theme runs through all these various challenges: The ability to control costs is vital to long-term success and to achieving high performance. Accordingly, many companies are taking a lot of control at their overall indirect spend which includes such categories as IT, office supplies, telecom and

maintenance, repair and operations costs- the expenses involved in managing spare parts, procuring supplies and supporting production, (Proxima, 2012).

The key to a sustainable reduction in indirect spend is to strike the right balance of focus between supply and demand activities in an organisation. In general, purchases of indirect materials and services account for some 10 percent of a company's cost of goods sold—not to mention the costs of high inventories and lost opportunities due to equipment and plant downtime, (Cadenas, 2012). While most businesses have strong financial control of direct expenditure, dealing with indirect purchasing is often costly and inefficient. According to Lysons & Farrington (2012), indirect purchasing also encounter challenges of lack of priority within the business, lack of enough resources, lack of clear strategy, spending are not high enough, lack of category knowledge and presence of too many stakeholders. Whether investments in power generation projects are ultimately realised depends not only on factors like an enabling political and regulatory framework, underlying commodity prices, exchange rates and cost of capital. Yet there had been lack of a local study analyzing the effects of indirect purchasing cost on organizational performance. It was against this backdrop that the study sought to close the existing gap by investigating the effects of indirect purchasing on organizational performance of key players in the energy sector in Kenya, i.e. Kengen, Iber Africa and Wärtsilä Eastern Africa Limited.

GENERAL OBJECTIVE

To analyse of the effects of indirect purchasing on organizational performance in selected companies in energy sector companies in Kenya.

SPECIFIC OBJECTIVES

1. To establish the effects of strategic sourcing on organizational performance of key players in the energy sector in Kenya.
2. To determine the effects of market knowledge on organizational performance of key players in the energy sector in Kenya.
3. To explore the effect of stakeholder management on organizational performance of key players in the energy sector in Kenya.
4. To establish how technological innovation affect organizational performance of key players in the energy sector in Kenya.

THEORETICAL FRAMEWORK

Recently, organizations have started to develop their indirect purchasing enthusiastically. An area that used to be perceived only as a sub-functional 'office task' in the past, has increasingly started to reveal its potential in affecting organizations' profitability during the evermore fastening competition. The potential profits that can be gained from indirect purchasing are

significant, but as the area is quite unknown for most organizations, its development is not of an obvious matter. Hence, more and more organizations acquire external consultancy and business process services with the aim of leveraging the benefits of their indirect purchasing. This study on comparative effects of indirect purchasing on organizational performance of key players in the energy sector in Kenya is grounded on various theories which include management theory, resource base view theory, institutional theory and technology acceptance model.

Resource Base View Theory

Resource based view has its roots in the work of Penrose in the late 1950s but was introduced in the in the field of strategic management and became dominant framework in the 1990s. The RBV developed as a complement to the industrial organization (IO) view with Bain (1968) and Porter (1985) as some of its main proponents. Resource Based View addresses why firms are different and how firms achieve and sustain competitive advantage. The RBV framework combines the internal (core competence) and external (industry structure) perspectives on strategy, (Barney, 1991). Like the frameworks of core competence and capabilities, firms have very different collections of physical and intangible assets and capabilities, which RBV calls resources. As from the theory it is habitual to consider that those resources are in internal and external factors of the enterprises. The entrepreneur, by means of the strategy combines these factors establishing his distinctive competencies. The investments in supply chain do not always provide an attractive return but are in many cases required to keep the refinery operating. How well suppliers harness these forces or respond to market demands may be accessed through the Resource Based View (RBV) of the firm, (Porter, 1985). While the resource- based view is not empirically superior to others (e.g., transaction cost, principal agent, network- based) in explaining SCM, it nonetheless presents itself as the most appropriate of existing theories of SCM for analyzing the capabilities—both manifest and latent—of firms and suppliers in managing knowledge; linking/interacting with other actors in the supply chain, and in responding to external pressures and mandates to be environmentally responsible.

Furthermore, the interrelatedness of these capabilities within the supply chain need to be realized by management and coordinated to reach the full potential of their resources, (Wu et al., 2006). How well firms and suppliers mobilize and manage resources, including managing knowledge, dealing with internal and external networks, and responding to the challenges of “greenness,” are of no less importance—in fact, perhaps even more so— than government policies, exchange rates, labour laws, and external competition from the Far East, (Soler & Lopez, 2005; Power, Sohal & Rahman, 2001). The performance of a firm depends not only on how efficiently it cooperates with its direct partners, but also on how well these partners cooperate with their own business partners. Here, the firm’s continuous interaction with other players becomes an important factor in the development of new resources, (Haakansson & Ford, 2002).

In Kenya, due to the same cause, indirect procurement system can also significantly reduce the transactional costs related to indirect purchasing. This is because the electronic ordering is far more efficient than spending time on old-fashioned ordering maneuvers, such as paper-forms, making phone calls or sending faxes, (Van Weele, 2010; Benton, 2010). Indirect procurement systems enable users within organizations to order directly from an electronic catalogue without interference of a purchasing department. Orders are acknowledged automatically by the supplier, (Van Weele, 2010). When a sound administrative system connects these two business functions, the suppliers' invoices can be matched electronically with corresponding purchase orders, delivery notes and goods receipts.

Institutional Theory

The institutional theory is the traditional approach that is used to examine elements of public procurement, (Obanda, 2010). Scott (2004) identifies three pillars of institutions as regulatory, normative and cultural cognitive. The regulatory pillar emphasizes the use of rules, laws and sanctions as enforcement mechanism, with expedience as basis for compliance. According to Scott (2004), institutions are composed of cultural-cognitive and regulative elements that, together with associated activities and resources give meaning to life. The author explains the three pillars of institutions as regulatory, normative and cultural cognitive. The regulatory pillar emphasizes the use of rules, laws and sanctions as enforcement mechanism, with expedience as basis for compliance. The normative pillar refers to norms (how things should be done) and values (the preferred or desirable), social obligation being the basis of compliance. The cultural-cognitive pillar rests on shared understanding (common beliefs, symbols, shared understanding).

In Kenya, due to the same cause, indirect procurement system can also significantly reduce the transactional costs related to indirect purchasing. This is because the electronic ordering is far more efficient than spending time on old-fashioned ordering maneuvers, such as paper-forms, making phone calls or sending faxes (Van Weele, 2010; Benton, 2010). Indirect procurement systems enable users within organizations to order directly from an electronic catalogue without interference of a purchasing department, (Van Weele, 2010). When a sound administrative system connects these two business functions, the suppliers' invoices can be matched electronically with corresponding purchase orders, delivery notes and goods receipts. Though the potential benefits of using indirect procurement might seem admirable, the implementation of it is far from an obvious matter. This kind of order-to-pay solution can decrease the errors made in the payment of invoices and fasten up the whole transactional process. It demands excessive indirect procurement expertise, clearly communicated purchasing procedures and a sound integration with other administrative systems of an organization, (Van Weele, 2010). The implementation of a new indirect procurement system comes along with the normal change management dilemmas. The problem is how to get the stakeholders to change their way of operating and conducting their business.

[International Academic Journals](#)

[www.iajournals.org](#) | Open Access | Peer Review | Online Journal Publishers

Technology Acceptance Model

Davis (1993) developed and validated the Technology Acceptance Model (TAM) to explain the mechanisms that influence and shape users' acceptance of new information technology. According to TAM, there are two specific variables that are fundamental determinants of users' attitude toward using information technology and actual use of the system: perceived usefulness and perceived ease of use relatively to new information system design features. Usefulness is defined as the degree to which someone believes that using a system will enhance his performance and ease of use is defined as the degree to which user believes that benefits of systems' use are outweighed the efforts for using it. Before indirect procurement adoption, administrators have to assess employees' attitude across to this new information technology, in order to prevent a failure in implementation and waste of resources.

TAM, proposed by Davis in 1986, has become a widely cited model for predicting and explaining user behaviour and IT usage. The origins of TAM can be traced back to the theory of reasoned action (TRA). The TRA requires that salient beliefs about attitudes towards a particular behaviour can be elicited every time the behaviour being studied is displayed. As a simplification of TRA, the TAM suggests that users' decisions to accept a new information technology are based on two rational assessments of its expected outcomes: (i) perceived usefulness (PU), defined as user expectation that using a new information technology could result in improved job performance and (ii) perceived ease of use (PEOU), defined as the degree to which a person believes that using a particular system would be effortless, (Lingyun & Dong, 2008; Yuanquan et al., 2008). In the past decades, PEOU and PU constructs have been considered important in determining an individual's acceptance and use of information technology (IT).

Information system (IS) researchers have investigated and replicated these two factors and agreed that they are valid in predicting individual acceptance of various corporate information technologies. A well designed process and policy willing can be essential pre-conditions for indirect procurement implementation. However, there is a crucial variable which put at risk the success of the implementation. This variable tends to be users' acceptance of the new process. Indirect purchasing consists of change for the organization and specifically for the employees of the procurement unit, (Kaliannan, Awang, Raman & Dorasamy, 2008). Abolition of the traditional handwritten procedure and its replacement of new procedures based on the use of computer and information technology consist some of the major changes. Resistance to change is a barrier for indirect purchasing process construction and users' acceptance isn't considered given, (Rahim, 2008). The coverage of TAM has been extended and, in addition to the variables in the classical TAM approach, trust, social personality and perceived enjoyment have been added, (Lingyun & Dong, 2008). However, in addition to these factors, several other factors, including personal characteristics (age, sex, income, education and culture), internet experience, normative beliefs, shopping tendencies, online experience, safety, system quality, psychological

perception (the perception of risk and benefit), online shopping experience, availability, service quality and attitude, have been added to the TAM for better modelling.

CONCEPTUAL FRAMEWORK

An independent variable is that variable which is presumed to affect or determine a dependent variable. It can be changed as required, and its values do not represent a problem requiring explanation in an analysis, but are taken simply as given, (Dodge, 2003). As such the independent variables in this study were strategic sourcing, category/market knowledge, stakeholder/complexity management and technological innovation while the dependent variable is organizational performance.

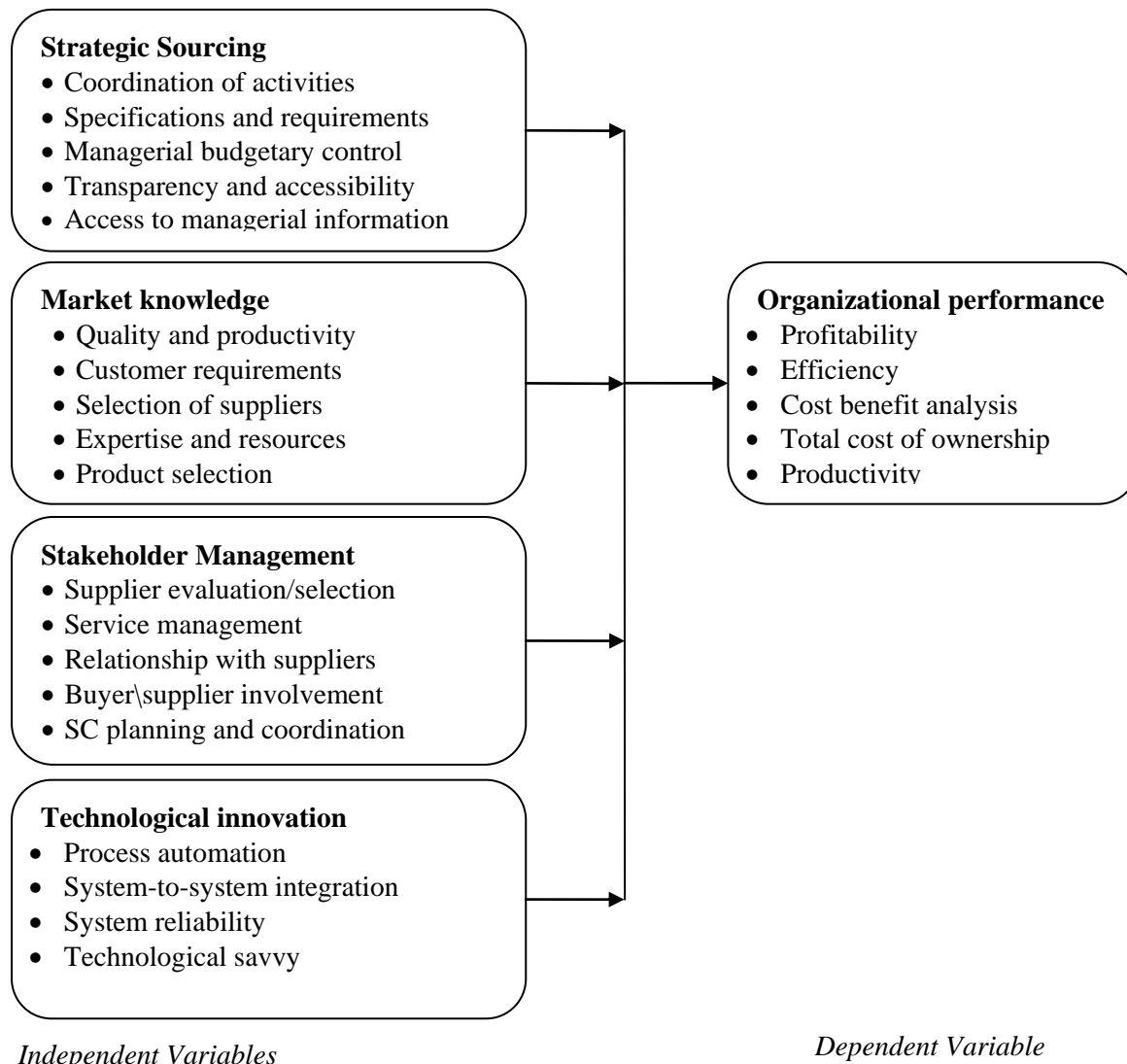


Figure 1: Conceptual Framework

EMPIRICAL REVIEW

Successfully managing indirect spend requires an understanding that the nature of indirect procurement is very different to direct procurement. As such, indirect procurement demands a dramatically different response. According to Van Weele (2010) in the study of purchasing and supply chain management: analysis, strategy, planning and practice, the reasons for poor purchasing of services by local authority entities have been the actual lack of understanding of the value of procurement, proper enforcement of rules relating to planning. It could also relate to lack of capacity due to limited procurement professionals and lack of commitment and support from management of those organizations. Benton (2010) while studying purchasing and supply chain management maintained that forms and procedures may be convenient and useful tools, but the planning effort will succeed only with the complete commitment and involvement of top management, along with appropriate personnel that have a stake. This implies that, without thorough procurement planning, the subsequent procurement processes will not yield substantial benefits. The consequences of poor or lack of procurement planning can never therefore be amusing.

According to Accenture (2003), indirect purchasing is a hot topic in corporate America. Companies have realized that the procurement initiatives of the 90s and early 2000s did not deliver the level of cost competitiveness promised, so they have begun to look at outsourcing to deliver on those promises. Over the last 10-15 years, companies have struggled with new technology adoptions, cycles of centralization and decentralization, employee empowerment, and a myriad of other tools, strategies and analyses, attempting to lower the costs associated with the purchase of these noncore materials and services. Through indirect procurement outsourcing, the corporate world can finally achieve substantial cost reductions while turning these low performing assets into a competitive advantage.

Lysons & Farrington (2012) argue that managing indirect spend is complex and labour intensive and includes the sourcing of complex goods and services such as IT, professional services, facilities management and marketing, among others. A highly effective and successful indirect purchasing function not only focuses on achieving a great deal with the supplier base, but also focuses inwardly onto the organisation itself; onto the behaviours of the people within the business; onto the business rules that underpin the activity; onto what is fuelling the demand; onto policies and procedures; and onto the approach to risk. purchasing professionals are responsible for aligning procurement's aims with those of key stakeholders. This is to maximize the financial, process and quality benefits and reduce the negative impact of the effect that buying decisions can have on company stakeholders. The alignment also smoothens the establishment of a strategy across the organization

Proxima (2012) posit that over the past decade indirect purchasing has failed to rise up the list of business leaders' priorities. Yet most businesses fail to understand this and take a short term view, targeting the purchasing function in the wrong way – focusing them mostly on like-for-like in year savings. Taking all of this into account, it becomes apparent that businesses face a seemingly insurmountable challenge with regards to their ability to manage indirect purchasing effectively in-house. It explains why many businesses have failed to drive the greatest benefit and ROI from their indirect expenditure to date. This study focuses on comparing the effects of indirect purchasing on organizational performance of key players in the energy sector in Kenya with a special focus on Kengen, Iber Africa and Wärtsilä Eastern Africa Limited.

RESEARCH METHODOLOGY

Research Design

Orodho (2003) defines a research design as the scheme, outline or plan that is used to generate answers to research problems. Research design is an understanding of conditions for collection and analysis of data in a way that combines their relationships with the research to the economy of procedures. The research study applied a descriptive research design in the process of determining the findings. Research design refers to the method used to carry out a research. Descriptive research design was chosen because it enables the researcher to generalise the findings to a larger population. In addition this design enabled the researcher describe the characteristics of the population being studied as they exist at present hence minimizing biases and maximizing the reliability of the evidence collected. Finally this design was chosen because it also provides a relatively complete picture of what is occurring at a given time and allows the development of questions for further study. The intention of descriptive research is to gather data at a particular point in time and use it to describe the nature of existing conditions. This study therefore was able to generalise the findings on the effects of indirect purchasing on organizational performance to all the players in the energy sector in Kenya.

Target Population

The study focused more on the section and particularly on the top and middle level management staff who were directly dealing with the day to day management of the companies since they were the ones conversant with the effects of indirect purchasing on organizational performance of players in the energy sector in Kenya. So the researcher examined a sample of staff drawn from the population of 228 staff working in the Company of the top and middle level management ranks. Mugenda and Mugenda (2008) explain that the target population should have some observable characteristics, to which the researcher intends to generalize the results of the study. This definition assumes that the population is not homogeneous. The target population of this study was the staff working in Kengen, Iber Africa and Wärtsilä Eastern Africa Limited offices in Nairobi. There were approximately two hundred and twenty eight (228) top and middle

level management staffs currently serving in the offices of selected firms in Nairobi and designated in the geothermal production departments as well as maintenance departments in these institutions.

Sampling Technique

The ability to generalize from a sample to the population depends critically on the representativeness of the sample. A representative sample is one that shares a wide range of attributes found among the wider population and a careful selection of a research sample allows a researcher to generalize findings from the sample to the population, (Shaughnessy, 2006). According to Shaughnessy (2006), contacting everyone in a large population is often practically impossible and researchers usually select a subset of the population to represent the population. The sampling plan describes how the sampling unit, sampling frame, sampling procedures and the sample size for the study. The sampling frame describes the list of all population units from which the sample was selected (Cooper & Schindler, 2003). A sampling design refers to the part of the research plan that indicates how cases are to be selected for observation. This research used stratified random sampling. The technique was chosen because it produces estimates of overall population parameters with greater precision and ensures a more representative sample is derived from a relatively homogeneous population. Stratification aims to reduce standard error by providing some control over variance. In this technique, the population was divided into three mutually exclusive segments called strata. The next procedure was that simple random samples were then drawn from each stratum and then joined to form a complete stratified sample. Kotler (2001) argues that if well chosen, samples of about 10% of a population can often give good reliability. Other literatures have shown that sample size selection to a great extent is judgmentally decided. Stratified random sampling method was used to sample respondent top and middle level management staffs from the firm's offices in Kenya. From the above population of 228, a sample of 30% was selected from within each group in proportions that each group bears to the study population. This generated a sample of 68 selected for observation.

Sample Size

Sample of responding staff was drawn from 228 top and middle level managers from the staff working in the selected companies' offices in Kenya. Stratified random sampling technique is used to select the sample. The technique produce estimates of overall population parameters with greater precision and ensures a more representative sample is derived from a relatively homogeneous population. According to Mugenda & Mugenda (2003) stratified random sampling is unbiased sampling method of grouping heterogeneous population into homogenous subsets then making a selection within the individual subset to ensure representativeness. From the above population, a sample of 30% was selected from within each group in proportions that each group bears to the study population. This sample is appropriate because the population is not

homogeneous and the units are not uniformly distributed. This was because simple random sampling gives every subject of the population an equal chance of being picked. This generated a sample of 47 respondents which the study sought information from. This made it easier to get adequate and accurate information necessary for the research.

Data Collection Instrument

The study collected both primary and secondary data for the purpose of analysing the comparative effects of indirect purchasing on organizational performance of players in the energy sector in Kenya. Primary data was collected using a questionnaire while secondary data was obtained from annual reports of the companies. This study utilized a questionnaire comprising of two sections. The first part was designed to determine fundamental issues including the demographic characteristics of the respondents, while the second part consisted of questions where the four variables were focused.

Data Collection Procedure

This study collected quantitative data using a self-administered questionnaire. The researcher dropped the questionnaires physically at the respondents' place of work. Nevertheless, where it proves difficult for the respondents to complete the questionnaire immediately, the researcher left the questionnaires with the respondents and picked them up later. The structured questions were used in an effort to conserve time and money as well as to facilitate in easier analysis as they are in immediate usable form; while the unstructured questions were used so as to encourage the respondent to give an in-depth and felt response without feeling held back in revealing of any information. Each questionnaire was coded and only the researcher knew which person responded. The coding technique was only used for the purpose of matching returned, completed questionnaires with those delivered to the respondents.

Data Analysis and Presentation

Before processing the responses, the completed questionnaires were edited for completeness and consistency. The data was then coded to enable the responses to be grouped into various categories. Data collected was purely quantitative and it was analyzed by descriptive techniques. The descriptive statistical tools such as Statistical Package for Social Sciences (SPSS) helped the researcher to describe the data and determine the extent used. The findings were presented using tables and charts. The Likert scales were used to analyze the mean score and standard deviation, this helped in investigating the comparative effects of indirect purchasing on organizational performance of players in the energy sector in Kenya where the context of focus was Kengen, Iber Africa and Wärtsilä Eastern Africa Limited. Data analysis used frequencies, percentages, means and other central tendencies.

Tables were used to summarize responses for further analysis and facilitate comparison. This generated quantitative reports through tabulations, percentages, and measure of central tendency. Cooper & Schindler (2003) notes that the use of percentages is important for two reasons; first they simplify data by reducing all the numbers to range between 0 and 100. Second, they translate the data into standard form with a base of 100 for relative comparisons. This provided the generalization of the findings on the effects of indirect purchasing on organizational performance of key players in the energy sector in Kenya.

In addition, to quantify the strength of the relationship between the variables, the researcher conducted a multiple regression analysis so as to determine the effects of indirect purchasing on organizational performance of players in the energy sector in Kenya. Regression analysis is a statistical tool for the investigation of relationships between variables. Usually, the investigator seeks to ascertain the causal effect of one variable (independent variable) upon another (dependent variable). The researcher also typically assesses the statistical significance of the estimated relationships, that is, the degree of confidence that the true relationship is close to the estimated relationship. Regression analysis is also valuable for quantifying the impact of various simultaneous influences (independent variables) upon a single dependent variable.

Multiple regression analysis involves combining several predictor variables in a single regression equation. With multiple regression analysis, the researcher can assess the effects of multiple predictor variables (rather than a single predictor variable) on the dependent measure. As such, the data was broken down into the different aspects on effects of indirect purchasing on organizational performance of players in the energy sector in Kenya. The regression equation was:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$
 Whereby

Y = Organizational performance

X₁ = Strategic sourcing

X₂ = Market knowledge

X₃ = Stakeholder Management and

X₄ = Technological innovation.

ε = Error term -normally distributed about a mean of 0 (i.e. ε is assumed to be 0)

Further, β₁, β₂, β₃ and β₄ = Regression Coefficients and. The equation was solved by the use of statistical model where SPSS was applied. This offered a quantitative and qualitative description of the objectives of the study.

RESEARCH RESULTS

The study found that indirect purchasing is the procurement of materials and services which are all the materials and services not related to the actual end-product of an organization. According to the results, the indirect purchasing in the firms is much effective compared to other firms in the energy sector. The study established that indirect purchasing affects the organizational performance of key players in the energy sector to a great extent. Accordingly, indirect purchasing affects efficiency, cost benefit analysis, profitability and productivity of the firms to great extents, while it affects total cost of ownership to a moderate extent. There was agreement that indirect purchasing is valuable since it frees management time so that they can concentrate on core business operations and that indirect purchasing helps firms gain service quality from the ability to gain access to new technologies and innovation. In addition, there was neutrality on that through indirect purchasing, a firm obtains advanced expertise and that indirect purchasing is important since the firm ensures capability improvement.

Strategic Sourcing

The study found that that strategic sourcing affects the organizational performance of key players in the energy sector in Kenya to a great extent. There was agreement with the statement that strategic sourcing is satisfying business needs from markets via the proactive and planned analysis of supply markets and the selection of suppliers with the objective of delivering solutions to meet pre-determined and agreed business needs. The study established that that transparency and accessibility, managerial budgetary control and specifications and requirements affect the organizational performance of the firms in the energy sector to great extents whereas access to managerial information and coordination of activities affect the organizational performance of the firms in the energy sector to moderate extents. The respondents agreed that strategic sourcing improves the access to managerial information, strategic sourcing reduces data entering failures, strategic sourcing improves system reliability strategic sourcing supports managerial budgetary control while they remained neutral on that strategic sourcing offers greater transparency and accessibility to corporate wide spending.

Category/Market Knowledge

The study further found that the firms in the energy sector are regarded as knowledgeable in regard to the market of the indirect purchases made and the category/market knowledge affects the organizational performance of players in the energy sector in Kenya to a great extent. It was clear from the responses that quality and productivity and customer requirements affect the organizational performance of players in the energy sector in Kenya to a great extent. On the other hand, selection of suppliers, category/market knowledge, expertise and resources and product selection affect the organizational performance of players in the energy sector in Kenya to moderate extents.

[International Academic Journals](#)

www.iajournals.org | Open Access | Peer Review | Online Journal Publishers

Stakeholder Management

The study found that the firms in the energy sector have an effective shareholder management function to facilitate indirect purchasing in the energy sector. The study revealed that shareholder management affects the organizational performance of the firms in the energy sector in Kenya to great extent. The study established that supplier evaluation/selection flexible capacity, relationship with suppliers and service management affect the organizational performance of the firms in the energy sector in Kenya to great extents. In addition, SC planning and coordination and buyer\supplier involvement affect the organizational performance of the firms in the energy sector in Kenya to moderate extents. It was also clear that through commitment, partners dedicate resources to sustain and further the goals of the collaboration, shareholder compatibility or systems interfacing and stability, are technical issues which have become barriers to indirect purchasing implementation, shareholder management results in a certain mode of interaction between the environment and the firm and that shareholder management builds the structural basis for the cooperation of persons, material resources and information between the corporation and its environment.

Technological Innovation

The study also established that the level of innovativeness in indirect purchasing in the firms is highly effective in relation to other firms in the energy sector. Accordingly, technological innovation affects the organizational performance of key players in the energy sector in Kenya to a moderate extent. The results reveal that technological savvy, system-to-system integration affect the organizational performance of key players in the energy sector in Kenya to a great extent. On the other hand, process automation, system reliability and ICT/technical issues affect the organizational performance of key players in the energy sector in Kenya to moderate extents.

From the inferential analysis, the four independent variables that were studied, explain 69.2% of the organizational performance of key players in the energy sector as represented by the R². Further, if strategic sourcing, technological innovation, market knowledge and stakeholder/complexity management were kept constant at zero, the organizational performance of key players in the energy sector will be 2.466. According to the regression equation, technological innovation contributes more to organizational performance of key players in the energy sector, followed by strategic sourcing, then stakeholder/complexity management, while market knowledge contributes the least to organizational performance of key players in the energy sector.

Inferential Analysis

Inferential analysis was utilized in this study to determine if there was a relationship between an intervention and an outcome, as well as the strength of that relationship. The inferential statistics

analysis aimed to reach conclusions that extend beyond the immediate data and between the independent variables in this study. This study needed to establish relationship between; the sub variable (indicators) of each of the four factors of indirect purchasing, as well the relationship with the dependent variable organizational performance. The regression was used to obtain an equation which described the dependent variable in terms of the independent variable based on the regression model, (regression is used to determine the type of relationship).

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.832	.692	.600	.0378

a. Predictors: (Constant), strategic sourcing, technological innovation, market knowledge and stakeholder/complexity management

Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (organizational performance of key players in the energy sector) that is explained by all the four independent variables (strategic sourcing, technological innovation, market knowledge and stakeholder/complexity management). The four independent variables that were studied, explain only 69.2% of the organizational performance of key players in the energy sector as represented by the R². This therefore means the four independent variables only contribute about 69.2% to the organizational performance of key players in the energy sector while other factors not studied in this research contribute 30.8% of the organizational performance of key players in the energy sector.

Table 2: Multiple Regression Analysis

Variables	Unstandardized (β)	Coefficients Std. Error	Standardized Coefficients (β)	T	Sig.
(Constant)	2.466	0.515		0.917	0
Strategic sourcing	0.189	0.144	0.165	1.081	0.019
Market knowledge	0.123	0.113	0.02	1.967	0.018
Technological innovation	0.420	0.12	0.224	1.922	0.015
Stakeholder/complexity management	0.157	0.05	0.048	1.956	.0167

The researcher conducted a multiple regression analysis so as to determine the relationship between the performance and the four variables. Regression model is used here to describe how the mean of the dependent variable changes with changing conditions. The regression equation ($Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$) will be:

$$Y = 2.466 + 0.189 X_1 + 0.123 X_2 + 0.420 X_3 + 0.157 X_4$$

According to the regression equation established, taking all factors (strategic sourcing, technological innovation, market knowledge and stakeholder/complexity management) constant at zero, the organizational performance of key players in the energy sector will be 2.466. These results infer that technological innovation contributes more to organizational performance of key players in the energy sector, followed by strategic sourcing, then stakeholder/complexity management, while market knowledge contributes the least to organizational performance of key players in the energy sector.

CONCLUSIONS

The study concludes that indirect purchasing has a significant effect on the organizational performance of key players in the energy sector. From the findings the study established that indirect purchasing affects efficiency, cost benefit analysis, profitability and productivity as well as total cost of ownership of the firms.

Strategic Sourcing

The study deduces that the essential elements of strategic sourcing include coordination of activities, specifications and requirements, managerial budgetary control, transparency and accessibility and access to managerial information: they affect the organizational performance. From the study, transparency and accessibility, managerial budgetary control and specifications and requirements affect the organizational performance of the firms in the energy sector. The study clearly revealed that strategic sourcing improves the access to managerial information, strategic sourcing reduces data entering failures, strategic sourcing improves system reliability strategic sourcing supports managerial budgetary control.

Category/Market Knowledge

The study deduces that category/market knowledge affects the organizational performance of players in the energy sector in Kenya. From the findings, the study deduces that possessing market knowledge such as quality and productivity, customer requirements, selection of suppliers, expertise and resources and product selection can increase a firm's ability to discover and exploit opportunities because the firm will find it easier to determine the market value of new scientific discoveries, technological change

Shareholder Management

The study also concludes that the firms in the energy sector have an effective shareholder management function to facilitate indirect purchasing in the energy sector and shareholder management affects the organizational performance of the firms in the energy sector in Kenya. In modern organizations, complexity as a characteristic feature occurs and grows when

[International Academic Journals](#)

interdependence of the elements within the system becomes relevant. Despite the complexities/difficulties associated with these stakeholders, there are several strategies and tools available to mitigate these stakeholders' concerns in purchasing. They include supplier evaluation/selection, service management, relationship with suppliers, buyer\supplier involvement and SC planning and coordination.

Technological Innovations

The study further concludes that technological innovations offer many benefits to individuals and organizations; one of the main benefits is the potential for substantial improvement of performance of individuals and organizations as a whole. Finding sources of innovation supply requires knowledge of markets and technology. The study concludes that supplier evaluation/selection flexible capacity, relationship with suppliers and service management affect the organizational performance of the firms in the energy sector in Kenya. Besides being able to find the right supplier, the buying company needs to.

RECOMMENDATIONS

Strategic Sourcing

The study recommends that strategic sourcing has a significant effect on the organizational performance of key players in the energy sector in Kenya the firms in the energy sector in Kenya should endeavor to fully understand the risks involved in indirect purchasing as a means of enabling them to come up with sourcing strategies aimed at improving the overall performance. This demands that the firms understand the aspects of transparency and accessibility, managerial budgetary control, specifications and requirements, managerial information and coordination of activities in the indirect purchasing function.

Category/Market Knowledge

The study also recommends that the management of the firms should carry out a benchmarking activity against the best players in the market as a way of improving their category/market knowledge in the indirect purchasing practices. As such the firms should emphasize on quality and productivity and customer requirements, selection of suppliers, category/market knowledge, expertise and resources and product selection. This would enable them to achieve undisputed performance of their performance.

Stakeholder Management

The study also recommends for the purchasing function to achieve its maximum level of effectiveness and efficiency, material flows, money flows and information flow throughout the entire chain must be managed in an integrated and holistic manner, driven by the overall service and cost objectives. The relevant stakeholders must support the information-sharing,

collaboration, and monitoring activities that are needed to effectively manage the relationship with other stakeholders in the supply chain. These will ensure that the supplier evaluation/selection flexible capacity, relationship with suppliers, service management, SC planning and coordination and buyer\supplier involvement are realized for commitment, dedication resources, shareholder compatibility, shareholder management and cooperation of persons, material resources and information between the corporation and its environment.

Technological Innovations

The study recommends that the energy sector firms should enhance the use technological innovations and information technologies that are compatible with their purchasing activities. As such, to reap full benefits firms in the energy sector have excelled in process automation, system-to-system integration, system reliability and technological savvy. In doing so, the firms will enable in dealing with processes, products and services and technological knowledge/skills, roadblocks to collaboration between departments which hinders organizational performance.

REFERENCES

- Ballou, R.H. (2003). *Business Logistics Management*, 5th Edition, Upper Saddle River, NJ: Pearson Prentice Hall.
- Benton, Jr. W.C. (2010). *Purchasing and supply chain management*. 2nd edition. New York: McGraw-Hill/Irwin
- Bill, H. & Tim, M. (2010). *Procurement outsourcing. Not an all or nothing value proposition*. Pearson-Prentice Hall, Englewood Cliffs, NJ
- Brewer, P. & Speh, T. (2000). Using the balanced scorecard to measure supply chain performance. *Journal of Business Logistics*, Vol. 21 (1), Pp. 112-130.
- Cadenas, P., (2012). *Terms of purchasing*. [Accessed 11 October 2015]. Available: <http://www.cadenas.de/purchineering/> Accessed 20th October, 2015.
- Cater, N. (2001), E-procurement in the aid business, *International Trade Forum*, Oct-Dec, 27-29.
- Cooper, D.R & Schindler, P.S. (2003) *Business Research Methods* (8th ed) McGraw-Hill: New York. 2003.
- Engel, J.R. (2004) Strategic Sourcing: A Step-By-Step Practical Model. 89th Annual *International Supply Management Conference*, April 2004

- Harland, C., Knight, L. (2005). Outsourcing: assessing the risks and benefits for organizations, sectors and nations. *International Journal of Operational and Production Management*, Vol. 25(9): pp 31- 50.
- Kangaru, M (2011), *Challenges of business outsourcing*. Unpublished MBA Project, University of Nairobi
- Karjalainen, K. (2009). *Challenges of Purchasing Centralization*. Helsinki: HSE print
- Kirsten, J. & Sartorius, K. (2002) Linking agribusiness and small-scale farmers in developing countries: is there a new role for contract farming? *Development Southern Africa*: 503-529.
- Lysons, K., & Farrington, B. (2012). *Purchasing and supply chain management*. 8th edition. Essex: Pearson Education Limited
- Monczka, R., Trent R., & Hanfield, R. (2002) *Purchasing and Supply Chain Management*, 2nd Ed. Cincinnati. South western,
- Mugenda, O.M & Mugenda, A.G. (2003) *Research Methods, Quantitative & Qualitative Approaches*, Acts Press, Nairobi.
- Ombaka, E.A. (2009). *Management of medicines procurement in Developing countries*. Accessed online at <<http://health-careprocurement.com/content/pdf/1689-2231-6-8.pdf>> Accessed 20th October, 2015.
- Otieno, B.O. (2004). Procurement activities in public institutions. *Unpublished thesis*. Jomo Kenyatta University of Science and Technology, Kenya
- Panayiotou N., Sotiris G. & Tatsiopoulou I. (2004). An E-Procurement System for Governmental Purchasing, *International Journal of Production Economics*, Vol. 90 (2004) 79-102.
- Parker, G. & Lawes, J. (2003), Benefits of e-procurement in government, in *12th International IPSERA Conference*. Budapest.
- Pearcy, D., Giuniperob, L. & Dandec, L., (2008), Reverse auction use and the impact of governance structure on supplier co-operation, in *12th International IPSERA Conference*. Budapest
- Pires, G. & Stanton, J. (2005). A Research Framework for the Electronic Procurement Adoption Process: Drawing from Australian Evidence. *Journal of Global Business and Technology*. Vol. 1, No. 2, pp. 12-20.

- Proxima (2012) Why do businesses struggle with effectively managing indirect purchasing?
White Paper 1.
- Reck, R. & Long, B., (1998) Purchasing a competitive weapon, *Journal of Purchasing and Materials Management*, Fall.
- Riggs, A. & Sharon, L. (2004) The Executive's Guide to Supply Management Strategies, *AMACOM- A division of American Management Association*, New York, New York 10019
- Shin, H., Collier, D. & Wilson, D. (2000) Supply management orientation and supplier/buyer performance, *Journal of Operations Management*, 18, pp. 317-333.
- Van Weele, A.J. (2010). *Purchasing and supply chain management: analysis, strategy, planning and practice*. 5th Edition. Andover: Cengage learning
- Van Wheel, A.J. (1994), Purchasing Performance Measurement and Evaluation, *International Journal of Purchasing and Material Management*, Fall, 18-19
- Wambui M. A. (2010), Analysis of Outsourcing at Kenya Armed Forces, *Unpublished MBA Project*, University of Nairobi
- Wärtsilä Corporation (2014) Wärtsilä Corporation Q1 Interim report January-March, 2014.