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EFFECTS OF SUPPLIER DEVELOPMENT ON ORGANIZATIONAL PERFORMANCE AT KENYA POWER AND LIGHTING COMPANY LIMITED

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ABSTRACT

Kenya Power's recent corporate performance has been strongly influenced by challenges arising from deficiencies in the performance and capabilities of its bulk power suppliers. The general objective of the study was to determine the effects of supplier development on organizational performance at Kenya Power. The study adopted a descriptive research design. The study's target population was 474 members. The researcher employed the cluster sampling procedure and a sample size of 142 respondents. The researcher used a structured questionnaire administered in three mailings. The researcher processed and analyzed the field data collected using descriptive analysis and inferential analysis using IBM SPSS Statistics Version 22. The descriptive statistics used were mean and standard deviation. Multiple regression analysis was used to model the relationship between organizational performance and the 3 independent variables. The descriptive statistics revealed that the study's respondents agreed that supplier evaluation, supplier incentives and supplier partnership positively affected organizational performance at Kenya Power. Correlation analysis indicated strong positive correlation between each of the study's independent variables and organizational performance with the respective r values all being high (range +0.281 to +0.366). The computed r^2 value was 0.147 indicating that 14.7% variation in organizational performance at Kenya Power could be explained by the combined variations in the study's 3 independent variables. The study's regression model showed that all the three independent variables had a positive relationship with the dependent variable. ANOVA, at a 95 % confidence level, yielded a computed p-value of 0.007 (which was less than the alpha (α) value of 0.05) and a high computed F-Test ratio value of 0.875. The regression model was thus determined to be statistically significant in predicting how supplier development affects organizational performance at Kenya Power. The study recommends that: Kenya Power intensifies and broadens the supplier evaluation and supplier incentivization aspects of its supplier development practices; and that the GoK, through ERC and MoEP, pursue policies that promote competitiveness amongst Kenya Power's IPP supply base.

Key Words: *Supplier Evaluation, Supplier Incentives, Supplier Partnership, Supplier Development, Performance*

INTRODUCTION

In recent years, many organizations have come to realize the crucial role key suppliers play in determining overall corporate performance. Consequently greater emphasis has been accorded to activities aimed at increasing the performance and capabilities of key suppliers as a strategy of improving the buying firm`s overall cost position, innovative capabilities and customer service (Weele, 2010). Wagner (2010) describes supplier development as a practice, reactively to deal with poor supplier performance, or strategically to enhance the long-term capability of the supply base. In addition, according to Krause (2008), supplier development can also broadly refer to any effort by a buying firm to improve a supplier's performance and/or capabilities to meet the buying firm's short- and/or long-term supply needs.

The supplier development philosophy originated from the Japanese automotive industry after the World War Two. According to Sako (2013), lectures, seminars and training courses for Toyota Motor Corporation employees were made available to core supplier employees as early as the 1950s. Supplier development later spread and gained root in the European and North American automotive industries in the 1980s (Handfield, Krause, Scannell & Monczka, 2009). The practice was subsequently embraced by North American manufacturing firms outside the automotive industry such as John Deere, Motorola, Harley-Davidson, Digital Equipment Corporation and Marks and Spencer (Wagner, 2008).

In the present day, supplier development is widely practiced in Japanese, North American and European companies. Honda and Nissan, for example, have established supplier development programs and teams (Handfield, Krause, Scannell & Monczka, 2009). The uptake of supplier development varies markedly across different industries. In Europe, as confirmed by a large-scale survey of industrial firms from Germany, Switzerland and Austria, it is more prevalent in assembly industries such automotive, machinery, construction, and metal/fabricated metal industries than it is in the process and primary industries (Wagner, 2008). In Africa, supplier development has begun to receive increased attention only recently and even then mostly within the manufacturing sector subsidiaries of multi-national firms such as Kenyan building materials manufacturer Bamburi Cement Ltd (Lafarge) and East Africa Breweries Ltd (Diageo PLC) (Wachiuri, Waiganjo & Oballah, 2015).

Organizational performance refers to how well an organization achieves its objectives. Common organizational objectives include shareholder wealth maximization, profit maximization, increased market share and customer satisfaction (Brigham & Houston, 2014; Armstrong, 2009). Any organizational initiative, including supplier development, should ultimately lead to enhanced organizational performance. Instructively, numerous empirical studies carried out mostly in manufacturing contexts have found the nature and intensity of a buyer firm's supplier development efforts on its key suppliers to be a key determinant of overall buyer-firm performance. The study sought to determine the supplier development practices employed by Kenya Power on its bulk power producers i.e. IPPs and the effects, if any, on the electric utility's organizational performance.

The study's target population is comprised of 225 KP top managers, 241 KP supply chain division staff and 8 IPP operation managers making a total of 474 members.

Profile of Kenya Power

According to KPLC (2013), the NSE - listed Kenya Power was incorporated in Nairobi, Kenya on 6

January 1922 as East Africa Power & Lighting Limited. The company changed its name to Kenya Power and Lighting Company Limited on 11 October 1983 and later rebranded to become Kenya Power on 22 June 2011. According to KPLC (2014), the GoK, holding a 50.1% equity interest, is the company's principal shareholder. Its mission statement is "Powering people for better lives". Its core business is the transmission, distribution and retail of electricity purchased in bulk from KenGen, IPPs, UETCL and TANESCO. In 2014, the following eight IPPs contributed 30.52 % of Kenya's Power bulk power purchases: Iberafrica, Tsavo Power, Thika Power, Mumias (Cogeneration), Orpower 4, Rabai Power, Imenti Tea Factory and Gikira Hydro. Aggreko, the sole Emergency Power Producer's (EPP) contribution was 1.06%. The GoK REP's contribution was 0.35%. Finally, imports from UETCL, TANESCO and EEPCO constituted 0.98% of total power during the period (KPLC, 2014).

The company head office is located in Stima Plaza off Kolobot Road in Parklands, Nairobi Kenya. Further, its business is structured under 11 functional divisions and six administrative regions for optimal operation and management. The divisions include the following: network management; supply chain; finance; corporate affairs & company secretary; business strategy; customer service; regional coordination; information and communications technology; infrastructure development; human resource and administration; and managing director's office.

The six business regions are: Nairobi North, Nairobi South, Nairobi West, Coast, West and Mt. Kenya. As at 30th June 2014, the company had a total workforce of 10,590 comprising of 8,532 and 2,058 male and female employees respectively, representing a male-female ratio of 4.1. The company is led by an 11-member executive management team comprising of 10 general managers who head divisions and the managing director. The company's markets are divided into the following regions: Nairobi, Coast, West and Mt. Kenya. The company's customer segments, each served by a specific tariff, are as follows: Domestic; Small Commercial; Commercial (medium) and Industrial (medium); Commercial (large) and Industrial (large); Commercial and Industrial; Off-Peak; and Street Lighting. As of 30th June 2014, the customer base stood at 2,766,441.

The performance and capability levels of Kenya Power's IPPs, whose combined electricity production as at 30th June 2014 accounted for 30.52% of total bulk power purchases (KPLC, 2014), are critical to KP's organizational performance. Ideally, the performance and capabilities of these key suppliers should be positively impacting Kenya Power`s performance in terms of increasing KP's profitability, productivity and market share growth. This, however, is not the case due to several key challenges arising from deficiencies in the performance and capabilities of the IPPs. Firstly, IPP power plants are unreliable and inefficient (Eberhard & Gratwick, 2010). Their power plant systems are subjected to random failures due to poor design, wrong manufacturing techniques, lack of operative skills, poor maintenance, overload, delay in starting maintenance and human error (Kuria, 2013). Secondly, the power produced by IPPs, more so the thermal power plants, is costly (Eberhard & Gratwick, 2010).

According to KPLC (2014), in the FY 2013/2014, power purchase costs (excluding fuel costs and foreign exchange recoveries) increased from Shs.24,761 million to Shs.30,659 million during the year, representing a 23.8% growth. Fuel cost on its part rose by 20% from Shs.32, 297 million to Shs.38, 973 million. The high electricity tariffs occasioned by the costly power generated by IPPs has, albeit in conjunction with a rise in other non-power-purchase related costs, resulted in low connectivity rates by way of locking out financially challenged

electricity consumers (Eberhard & Gratwick, 2010). Instructively, the sustainability of the various Kenya Power strategies, intended to mitigate the low connectivity challenge e.g. clustering potential customers into viable groups to reduce the cost of connecting individuals (KPLC, 2014), are predicated on the availability of affordable electricity. Improving the cost performance of the bulk power producers (IPPs) is therefore of vital importance.

Thirdly, IPPs exhibit inadequate electricity generation capacity to meet rising electricity demand. Total IPPs' installed and effective capacity as at 30th June 2013 was 391MW and 387MW respectively (KPLC, 2013). As at 30th June 2014, the total installed and effective capacity marginally improved to stand at 497 MW and 492 MW respectively (KPLC, 2014) yet demand for electricity has shown a steep upward trend since the year 2004 due to accelerated economic growth. For example, peak demand increased from 899 MW in FY 2004/05 to 1,468 MW in FY 2013/14, while the number of electricity consumers increased by 276%, from 735,144 in FY 2004/05 to 2,766,441 by 30th June 2014 (KPLC, 2014; KPLC, 2013). Furthermore, the peak demand is projected to grow from 1,468MW as at June 2014 to 5,359MW by 2017, while electricity consumption is expected to increase by 271%, from 8,840 GWh to 32,862 GWh by the end of 2017.

To meet this demand, an additional 5,000 MW of new generation is to be developed by 2016 to bring the total installed capacity to at least 6,600MW (MoEP, 2014). The most effective means of scaling up of the IPPs' long-term power generation capabilities is thus of great concern. Fourthly, IPPs are uncompetitive and not sufficiently incentivized to embrace more efficient and environmentally sustainable electricity generation technologies. This is due to their PPAs' long duration (up to 25 years) and restrictive nature (particularly with regard to the fixed pricing and amount of power to be purchased by the KP (Bayliss & Hall, 2010). In addition, as much as the PPAs are reviewed for cost effectiveness by KP's PPA Board Committee prior to their approval by the ERC (KPLC, 2014), the only competition comes in the contract negotiating stage (and not always then). This is a disincentive for new IPPs as, even if they can produce power more cheaply, the electricity utility is unable to switch to alternative sources for the duration of the PPAs (Bayliss & Hall, 2010). IPPs therefore have no incentive to respond to market conditions or to compete with other producers. The various options of incentivizing IPPs and promoting effective competition within KP's bulk power suppliers supply base are thus a key concern. It is against this background that the researcher proposes this study that seeks to determine the effects of supplier development practices, as applied on IPPs, on organizational performance at Kenya Power Limited.

Research Questions

- How does supplier evaluation affect organizational performance at Kenya Power Ltd?
- How do supplier incentives affect organizational performance at Kenya Power Ltd?
- How does supplier partnership affect organizational performance at Kenya Power Ltd?

Scope of the Study

The study sought to determine the effects of supplier development, as applied on IPPs, on the organizational performance of Kenya Power. It specifically sought to determine the effects of supplier evaluation, supplier incentives and supplier partnership on Kenya Power's organizational performance. The study's population had a total of 474 members comprised of 225 KP top managers, 241 KP supply chain division staff and 8 IPP operation managers. The rationale for the inclusion

of the respective groups in the population was as follows. KP's top managers formulate supplier development strategies and are also involved in other strategic activities relevant to the study e.g. corporate performance appraisal and negotiation of PPAs. They were thus well placed to avail data on the effects of supplier development on Kenya Power's organizational performance. KP supply chain division staffs are involved in the actual day to day supplier development operations and therefore provided valuable data on the various supplier development practices applied by Kenya Power. Finally, the IPP operation managers provided a vital supplier-firm perspective. The study's duration was 6 months (see Appendix V) and was conducted in Nairobi this being the location of the IPPs' corporate offices and Kenya Power's Stima Plaza headquarters (from where the supplier development activities relevant to the study are coordinated).

RELATED LITERATURE

Theoretical Framework

Supplier development, described by Wagner (2010) as a either a reactive practice aimed at dealing with poor supplier performance or a strategic practice aimed at enhancing the long-term capability of the supply base, is an important step toward improving a buying firm's performance, defined as the effectiveness with which it meets its overall objectives e.g. increased market share growth, profitability, customer satisfaction etc. (Li, Nathan, Nathan & Rao, 2010). A number of theories, related to the concept of supplier development and its influence on procurement effectiveness have been advanced. They include the Transaction Cost Theory, Resource Dependency Theory and Goal-setting Theory. A majority of them are drawn from different disciplines such as economics and organizational psychology reflecting the inter-disciplinary origin of purchasing and supplies management.

Transaction Cost Theory (TCT)

According to Wagner (2010), a firm can employ three strategies to address a supplier's performance deficiencies. The first one is to switch the supplier and source the product concerned from a more capable supplier. This strategy is however contingent on the existence of capable alternative suppliers and reasonably low supplier-switching costs. The second strategy is to bring the needed product in-house i.e. by acquiring the supplier or setting up capacities to make the product internally. Wagner (2010) however observes that vertical integration may require substantial investments and may be contradictory to a firm's intention to focus on its core competencies and outsource non-core activities. The third strategy is to assist the deficient supplier so that the supplier's performance or the supplier's capabilities are upgraded to the desired level. It is against this background that the Transaction Cost Theory (TCT) can be best understood.

The Transaction Cost Theory was advanced by Ronald H. Coase and Oliver E. Williamson. According to Coase (2008), the theory delineates the actual cost of outsourcing production of products or services including transaction costs, contracting costs, coordination costs, and search costs; and inspects how business partners who collaborate with each other shield one another from harmful subsidiary with differing relationships (Wachiuri, Waiganjo & Oballah, 2015; Williamson, 2009). The theory, in its advocacy for the inclusion of all costs and not just the market prices when making a sourcing decision, illustrates the make versus buy decisions for firms.

Lysons and Farrington (2010), further elucidate the theory, referring to it as the idea of the cost of providing for some good or service if it was

purchased in the marketplace rather than from within the firm and elaborate the three concepts that underpin the theory i.e. transaction costs, asset specificity and asymmetrical information distribution. Transaction costs are comprised of search and bargain costs; bargaining and decision costs; and policing and enforcement costs. Asset specificity refers to relative lack of transferability of assets, e.g. sites, physical assets, human assets, brand names, dedicated assets etc., intended for use in a given transaction to other uses. Asymmetrical information distribution means that the parties to a transaction have uneven access to relevant information, one consequence of which is that, within contractual relationships, either party may engage in post-contractual opportunism if the chance of switching to more advantageous partnerships arises (Lysons & Farrington, 2010). Thus, according to Cox (2010), the Transaction Cost Theory validates contractual collaborative relationships between buyer firms and suppliers such as preferred suppliers; network sourcing and partnerships; and strategic supplier alliances (joint ventures). Notably, all of these setups involve various supplier development practices, ranging from supplier rating and accreditation (in the case of the preferred suppliers arrangement) to knowledge-sharing (in the case of the network sourcing and partnerships arrangements). Thus, according to the Transaction Cost Theory, supplier development entails a buying firm making specific investments - in terms its human and/or capital resources - in a buyer-supplier relationship on behalf of the supplier; a necessary condition for carrying out such relationship-specific investments being that these investments add value or reduce costs above what could have been achieved with the other two alternative strategies that may be utilized to address deficient suppliers i.e. supplier switching, vertical integration (Wagner, 2010; Wagner, 2008).

Resource Dependence Theory (RDT)

The Resource Dependency Theory (RDT) was advanced by Jeffery Pfeffer and Gerald R. Salancik in 1978 with the publication of their seminal work: "The external control of organizations: A resource dependence perspective". The theory is concerned with how organizational behavior is affected by external resources that the firm utilizes (Pfeffer & Salancik, 2013). Specifically, the theory explains how external resources of organizations - and therefore effective procurement of these resources as well - affects the performance of the organization (Wachiuri, Waiganjo & Oballah, 2015). It argues that a firm's ability to gather, transform and exploit resources e.g. raw materials faster than competitors bears significant strategic implications i.e. due to its influence on the firm's competitiveness.

Notably, resources are often controlled by organizations, e.g. key suppliers, not in the control of the firm needing them, meaning that strategies, including supplier development in the purchasing and supply management context, must be carefully considered in order to maintain open access to resources (Wachiuri, Waiganjo & Oballah, 2015). Dyer and Nobeoka (2010) further elucidate the relevance of Resource Dependency Theory in supplier development through their recognition of knowledge as a strategically significant resource of the firm and the root of competitive advantage. In their analysis of inter-firm knowledge sharing literature, they argue that scholars have recognized that inter-organizational learning is critical to competitive success and noted that organizations learn by collaborating with other firms as well as by observing and importing their practices.

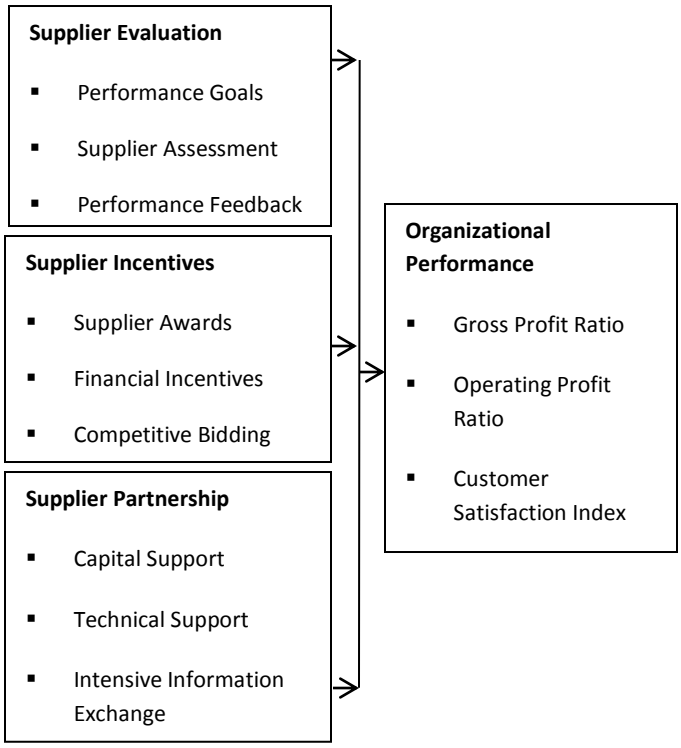
Resource Dependency Theory thus validates supplier development practices such as supplier partnership that are aimed at leveraging suppliers' specialized competencies for greater innovativeness and the ability to offer high quality products

through greater collaboration between the buyer firm and its key suppliers (Ukalkar, 2010).

Goal-Setting Theory (GST)

According to Robbins and Judge (2013), the goal-setting theory is a contemporary theory of motivation that was first advanced by American psychologist Edwin Locke in his journal article "Toward a theory of task motivation and incentives" published in the Organizational Behavior and Human Performance journal in 1968. According to Locke (2008), specific and difficult goals, with feedback, lead to higher performance. This is because goals tell an employee what needs to be done and how much effort is needed thus making intentions to work toward a goal, a major source of motivation. Instructively, two independent examinations of empirical evidence indicate that specific goals increase performance; that difficult goals, when accepted, result in higher performance than do easy goals; and that feedback leads to higher performance than does non-feedback (Tubbs, 2007; Locke and Latham, 2010).Further, according to Robbins and Judge (2013), argue that specific goals tend to produce a higher level of output than the generalized goal because specificity itself seems to act as an internal stimulus. Notably, in addition to its original application at the individual level, goal-setting theory can also be used on an aggregated level of analysis e.g., groups, teams or inter-organizational relationships (Linderman, Schroeder & Choo, 2009). Thus, according to Wagner (2010), the theory underpins the supplier development practice that calls for setting of targets (goals), measurement of goal attainment, as well as feedback of goal attainment to the suppliers.

Conceptual Framework



Independent Variables **Dependent Variable**

Figure 1: Conceptual Framework

Organizational Performance

There exists a positive correlation between supplier development and organizational performance. Organizational performance refers to how well an organization achieves its objectives. According to Brigham and Houston (2014), common organizational objectives include shareholder wealth maximization, profit maximization, increased market share and customer satisfaction. Thus, any organizational initiative, including supplier development, should ultimately lead to enhanced organizational performance. Ideally, organizational performance is evaluated on the basis of the market's valuation of the firm's securities. This is because the market price per share represents the focal judgment of all financial

market participants as to the value of a particular firm (Brigham & Houston, 2014). However, since future cash flows of the business entity cannot be observed, business performance is typically evaluated using accounting data (Tan, Kannan, Handfield, & Ghosh, 2009).

A number of prior studies have measured organizational performance using the following metrics: market share; ROI; average annual market share growth; average annual sales growth; average annual growth in ROI; average production cost; overall customer service levels; overall product quality; profit margin on sales; and overall competitive position (Li, Nathan, Nathan & Rao, 2010; Tan, Kannan, Handfield & Ghosh, 2009). Supplier development can enable the buyer firm leverage suppliers' specialized competencies for greater innovativeness and the ability to offer high quality products which in turn have a positive effect on revenues and market share growth (Bessant, 2004; Dyer & Nobeoka, 2010).

Instructively, Azadegan (2011) in his study of benefiting from supplier operational innovativeness with the influence of supplier evaluations and absorptive capacity within manufacturing industries established that the supplier evaluation programme was an effective means of increasing the operational innovativeness of a supplier. In his study, operational innovation was operationalized as process improvement, new tool with higher speed, new product development and new concept. He concluded that a supplier evaluation programme by a buyer firm with good direction helps to encourage operational innovativeness of supplier which in turn helps the buyer firm to remain competitive. The evaluation parameters used by Azadegan (2011) included the following: product development and quality; manufacturing design and capability; and manufacturing and design capacity.

Supplier Evaluation

Supplier assessment; communication of supplier evaluation results and performance goals; and increasing suppliers' performance goals, positively influence the buying firm's overall performance through their improvement of supplier performance and/or capabilities. Supplier evaluation is a conscious tactic or process which aims at establishing the value of or the contribution made by the supplier in meeting the buying firm's needs. It can also relate to the determination of the supplier's worth in the company's supply base structure (Baily, Farmer, Jessop & Jones, 2014; Ukalkar, 2010). According to Bozarth and Handfield (2013), in order to effectively evaluate supplier performance, the buyer should understand not only what he is evaluating but also the norms and criteria of the factors being measured or assessed and how measurement will help his company to improve competitive advantage.

Traditionally, the key performance indicators (KPIs) for the evaluation of supplier performance have been price, quality and delivery. While these are still basic supplier evaluation, such developments as Just-In-Time (JIT), lean manufacturing, integrated supply chains and e-procurement have made a fuller evaluation of supplier relationships, that includes such qualitative factors as intercompany communication and high trust levels, an important consideration (Lysons & Farrington, 2010).

A survey study in the USA by Simpson, Siguaw and White (2012) reported 142 evaluation items/aspects, which can be arranged under 19 categories of criteria, the first 10 being: quality and process control; continuous improvement; facility environment; delivery; inventory and warehousing; ordering; financial conditions; certifications; and price. Interestingly, of the 10 categories, "quality and process control" had the highest percentage mentioning i.e. 24.9% while price had the lowest

percentage mentioning i.e. 3.6%. Most of supplier appraisal aspects reported by Simpson, Siguaw and White (2012) survey are neatly summarized by Lysons and Farrington (2010) as the "seven Cs of supplier evaluation". They include the following aspects: competency of the supplier to undertake the tasks required; capacity of the supplier to meet the purchaser's total needs; commitment of the supplier to the customer in terms of quality, cost driving and service; control systems in relation to inventory, costs, budgets, people and information; cash resources and financial stability; cost commensurate with quality and service; and, consistency i.e. the ability of the supplier to deliver consistently and, where possible, improve levels of quality and service.

According to Lysons and Farrington (2010), common supplier rating methods buyer firms utilize include; subjective, survey, comparative, weighted point, percentage-based and cost-based methods. The subjective methods are generally designed as questionnaires with a numerical rating scale e.g. 1-5, completed by a number of reviewers. The survey method is a purchased service in which a research organization contacts a number of other customers and obtains their views on the performance of the supplier. In the comparative method, a supplier is evaluated independently by evaluators on agreed factors e.g. price, quality, delivery etc. after which individual ratings are tabulated and a final rating awarded by the value team. In the weighted point method a weighting factor - that indicates the value of a particular area in relation to each of the other factors - is established for each of the areas. Subsequently, a score is assigned to each factor that indicates the supplier's performance.

This score is then multiplied by the weight and then averaged. The percentage-based methods measure the percentage of quality defects or late deliveries. Finally, cost-based methods evaluate supplier performance on total non-productive costs associated with each supplier's performance. The term non-productive cost refers to estimated costs of non-compliance e.g. cost of rejection.

These are added to the actual cost i.e. the purchase order price and the resulting total divided by the purchase order price to come up with a performance index. According to Ukalkar (2010), there are 5 key success factors in achieving effective supplier evaluation. The first is careful planning which ensures that the purpose and objectives of the system are widely understood. The second is selection of the most appropriate method of evaluation. The third is setting targets which the buyer can influence but at a challenging level.

This view is consistent with the goal-setting theory. The fourth is adopting supplier participation that enables him to have a meaningful input to the system. The fifth is ensuring the data collected on hand do not become misleading. There are several empirical studies that have established supplier evaluation to be positively correlated to overall organizational performance. A recent case study by Wachiuri, Waiganjo and Oballah (2015) of the supplier development practices employed by East Africa Breweries Ltd (EABL) established a significant positive relationship between supplier evaluation and feedback and the firm's overall organization performance in terms of profitability. Azadegan (2011) in his study of benefiting from supplier operational innovativeness with the influence of supplier evaluations and absorptive capacity, within manufacturing industries, established that the supplier evaluation programme was an effective means of increasing the operational innovativeness of a supplier.

In his study, operational innovation was operationalized as process improvement, new tool with higher speed, new product development and new concept. Azadegan (2011) concluded that a supplier evaluation programme by a buyer firm,

with good direction, helps to encourage operational innovativeness of supplier which in turn helps the buyer firm to remain competitive. The evaluation parameters used by Azadegan (2011) included the following: product development and quality; manufacturing design and capability; and manufacturing and design capacity. Carr and Pearson (2009) in their cross-industry survey of 739 manufacturing firms reported a linkage between the implementation of supplier evaluation and a firm's financial performance.

Tan, Handfield and Ghosh (2009) survey of automotive, chemical, computer, construction, consumer products, defense, electronics, industrial products, medical device, packaging, pharmaceutical, paperboard, semiconductor, and telecommunications industries in the USA found supplier evaluation to be strongly positively related to firm growth and ROA. Notably, a survey of high performing buyer firms by Gupta and Margolis (2011) revealed the following key cross-cutting characteristics exhibited by firms they term as "procurement masters": the use of automated processes to track supplier performance and provide periodic dashboard reports for senior management review; and the existence of a feedback loop for suppliers to help encourage supplier development efforts.

Supplier Incentives

Supplier incentives positively influence the buying firm's overall performance by way of motivating suppliers to improve their performance and/or capabilities. Supplier incentives include recognition of the best suppliers in the form of ceremonial awards; the promise of current and future business to high-performing suppliers; and employing competitive bidding to promote competition within the supply base. Supplier incentives, when awarded based on supplier performance may incite competition among suppliers and motivate suppliers to improve (Lysons & Farrington, 2010). According to Krause, Scannell and Calantone (2012), employing competitive bidding involves the solicitation of competitive bids from alternative suppliers using fully developed bidding specifications and short-term contracts to achieve a low purchase price. Notably however, such competitive pressure is only applicable when a buying firm is willing and able to switch to an alternate supplier.

In this case the willingness of the buying firm to occasionally test the market may keep present suppliers more competitive in terms of quality, delivery, service, or any other relevant dimension of supplier performance with the increased supplier competitiveness ultimately improving the buyer firm's overall performance (Krause, Scannell & Calantone, 2012).

According to Wagner (2010), supplier incentives revolve around using the buyer firm's coercive and non-coercive power to influence key suppliers' performance/capabilities and consequently the buyer firm's overall performance. Further, as also advanced by Lysons and Farrington (2010), supplier incentives are used in tandem with supplier evaluation. Wagner (2010) views supplier incentives as encompassing two facets. The first is "promises" whereby the buyer firm offers a specified reward to the supplier if the supplier complies with the buying firm's stated desires/performance expectations. The second is "threats" whereby the buying firm informs the supplier that failure to comply will result in negative sanctions.

In line with both Wagner (2010) and Krause, Scannell and Calantone (2012) assertions, Frazier and Summers (2009) argue that supplier incentives alter a supplier's way of working so as to avoid adverse consequences such as losing the business with the customer. The new way of working leads to an improvement of the quality, cost, service, etc.

of the product or service delivered to the customer. Supplier incentives therefore compel the supplier to take additional efforts (time, labor, quality inspection, input material of higher quality, etc.) in order to improve the production and delivery of the product and it is such supplier performance/capability improvements that ultimately improve the buyer firm's overall performance.

Supplier Partnership

Supplier partnership, defined as the commitment of relationship-specific resources to key supplier relationships, supplier training and education, and non-adversarial collaboration with suppliers, positively influence the buying firm's overall performance through their improvement of supplier performance and/or capabilities. Supplier partnership or collaboration refers to a buyer firm's application of its capital, time and human resources toward the improvement of its suppliers' performance and capabilities. Thus, the buying firm for example finances the supplier's inputs, machines, tools, or castings. In addition, the buyer firm undertakes activities that transfer knowledge and qualifications into the supplier's organization. Examples of such activities comprise on-site consultation, education and training programs, temporary personnel transfer, and inviting supplier's personnel (Chavhan, Mahajan & Sarang, 2012; Wagner, 2010).

According to CIPS (2013), supplier partnership is characterized by openness, effective communication, trust, honesty, transparency, sharing, mutual benefit, and close co-operation between the buyer firm and selected suppliers. As discussed in the theoretical framework, the logic underpinning supplier partnership between a buyer firm and its key suppliers is drawn from the Resource Dependency Theory (Ukalkar, 2010). According to Bowersox, Closs, Cooper and Bowersox (2013), there are five basic forms of collaboration which are based on acknowledged dependency and information sharing between buyer firms and suppliers. The most elementary of these are contracting and outsourcing. In these relationships, acknowledged dependency is limited. Contracting with a supplier introduces a time dimension to traditional buying by framing price, service, and performance expectations over a specified period. In turn the supplier agrees to deliver the specified item(s) according to negotiated terms and delivery requirements.

According to Lysons and Farrington (2010), this form of collaboration is often called adversarial because the relationship is typically based on negotiation. As a result of negotiated settlement the terms of performance and associated payments are clearly specified. Failure of either party to perform will lead to sanctions, probable re-negotiation or possible termination. In outsourcing, the focus shifts from buying a product or material to performing a specific service or process such as manufacturing or warehousing. Contracting and outsourcing relationships involve a degree of information sharing, primarily operational information, but there is limited joint planning between the buyer firm and the supplier firm, and there are generally specific periods for rebidding or terminating the relationships. The outsourcing relationship is clearly based in the traditional command-and-control principle with the buyer as the leader. In administered relationships, a dominant buyer firm assumes leadership responsibility and seeks collaboration with suppliers.

In such relationships there is frequent sharing of operational information and to a limited degree, strategic information. Additionally, there is limited joint planning, to the extent that independent firms have an understanding that they will be better off if

they collaborate and follow the leader. Notable, is that administered relationships have an expectation that the collaboration will be continuous. However, such relationships are still basically administered by command and control, based on the leader's (i.e. the buyer firm's) power (Bowersox, Closs, Cooper & Bowersox, 2013). Alliance and enterprise extension relationships are the most advanced collaborative relationships. Both these relationships are governed by the participating firms' long-term desire and willingness to work together in an intellectual and operational manner.

The buyer firm and its chosen supplier voluntarily agree to integration of human, financial, operational, or technical resources to create greater efficiency and greater customer impact (Lysons & Farrington, 2010; Ukalkar, 2010). Ultimately, through collaboration, participating firms create joint policies and integrate operations. The relationship includes extensive joint planning and is expected to be continuous for at least the intermediate term and potentially the very long term (Ukalkar, 2010). Some examples of alliances include Walmart's arrangement with Procter & Gamble, and Dell's arrangement with its suppliers (Bowersox, Closs, Cooper & Bowersox, 2013).

Empirical Review

A study of high performing buyer firms by Gupta and Margolis (2011) revealed the following supplier development related characteristics: focus on key suppliers and establishment of long-term buyer-supplier partnering agreements based on risk-reward sharing and intensive cooperation through mutual knowledge sharing; existence of a formal supplier development program to manage the supply base; use of automated processes to track supplier performance and provide periodic dashboard reports for senior management review; existence of a feedback loop for suppliers to help encourage supplier development efforts; existence of supplier handbooks that describe the collaboration and requirements of the suppliers, tracked by service level agreements; and provision of customized training to key suppliers.

According to Ukalkar (2010), the primary objective of supplier evaluation is maximization of the buying firm's competitive advantage, by improving supplier performance in the supply chain.

The buyer firm should therefore link supplier performance its mission by: setting challenging goals; monitoring and giving positive feedback of performance; and identifying ways how suppliers can improve the value of current products and services and, over the long term, of the partnership as a whole. Lysons and Farrington (2010) advance the following benefits of evaluating supplier performance. The first is that evaluation can significantly improve supplier performance. They argue that effective supplier performance management can provide answers to questions such as the following: Who are the highest-quality suppliers? How can relationships with the best suppliers be enhanced? How can supplier performance be incorporated into total cost analysis? How can underperforming suppliers' problems be tracked and fixed?

The second is that evaluation assists decision making regarding when a supplier is retained or removed from an approved list. The third is that evaluation assists in deciding with which suppliers a specific order should be placed. The fourth is that evaluation provides suppliers with an incentive for continuous improvement and prevents performance "slippage". Finally, evaluation can assist in decisions regarding how to distribute the procurement spend for a given item among several suppliers in order to better manage supply risk. These benefits are demonstrated by Cormican and Cunningham (2011) who worked on performance

evaluation in a large multinational manufacturing organization where they evaluated suppliers based on parameters like on time delivery, quality and total cost. After evaluation, based on these parameters, they reduced the supply base size from 23,225 to 8,024 and helped the buyer to find the best performing suppliers and to eliminate underperformers.

Furthermore, several other empirical studies in manufacturing industries confirm that supplier development can have a positive impact on product, supplier and overall firm performance (De'Toni & Nassimbeni, 2010; Krause, Scannell & Calantone, 2012; Prahinski & Benton, 2014). For example Carr and Pearson (2009) reported a linkage between the implementation of supplier evaluation and a firm's financial performance. Also, in their empirical research, Carr and Smeltzer (2010) found evidence of the relationship between effective communication with suppliers and a buyer firm's financial performance. Equally notable is empirical evidence that shows both supplier evaluation and involvement of suppliers in the decision making process to be positively related to firm growth and ROA (Tan, Handfield & Ghosh, 2009).

Empirical research has also shown that the use of a supplier reward and recognition system improves supplier performance (Krause, Scannell & Calantone, 2012), as well as the overall buyer business performance (Carr & Pearson, 2009). A case study of East Africa Breweries Limited by Wachiuri, Waiganjo and Oballah (2015), also established a strong significant relationship between the brewer's organizational performance and certain supplier rewards. These aspects included promises of future business to high-performing suppliers; and recognition of supplier performance improvements in the form of awards. Further evidence is provided from a survey of 84 manufacturing firms from across the United States, the United Kingdom, Japan, and South Korea. This survey by Handfield, Krause, Scannell and Monczka (2009) found a strong positive relationship between financial supplier incentives and organizational performance. Hyundai Motor Company's profitability, even during the 1997 Asian financial crisis is attributed to its key suppliers' superior performance which is partly motivated by financial incentives.

The company rates supplier performance from 1 (highest) to 4 (lowest). Class 1 suppliers are paid in cash, Class 2 suppliers are paid net 30 days, Class 3 suppliers are paid net 60 days, and Class 4 suppliers are paid net 60 days and receive no new business. Thus, because suppliers know how Honda evaluates performance, they take steps to ensure high levels of performance.

Several empirical studies in the Japanese automotive industry (Sako, 2013) and in other Western manufacturing industries have established a positive relationship between the supplier partnership and the buying firm's overall performance i.e. based on the resultant improvements in the suppliers' product and delivery performance and in their capabilities (De'Toni & Nassimbeni, 2010; Krause, Scannell & Calantone, 2012). Tracey and Tan (2011) study also found that the involvement of suppliers in the buyer's product development process and continuous improvement programs increase customer satisfaction and the overall firm performance. Ana et al. (2011), in their study of competitive effects of buyer-supplier collaboration in the sawmill industry, also found that co-operation between buyer and supplier leads to increased productivity and organizational performance.

Consistent with the afore-mentioned studies is another by Power, Sohal and Rahman (2011) which found that buyer-supplier collaboration can

increase the level of customer responsiveness and satisfaction. With regard to the commitment of relationship-specific resources to key supplier relationships, a case study of supplier development practices at East Africa Breweries Ltd (EABL) by Wachiuri, Waiganjo and Oballah (2015) established a significant positive relationship between financial and technical support and the firm's overall profitability. Interestingly, the same study found no significant relationship between supplier training and development and organization performance.

METHODLOGY

The study adopted a descriptive research design. Descriptive research design was a valid method since the study sought to describe the effects of supplier development, as applied on IPPs, on organizational performance at Kenya Power.

The study's target population was 474 members (KPLC, 2014) with the composition shown in table 1. This target population explicitly covered all the members of each of the three clusters.

Table 1: Target Population

Category	Number of Staff
KP Top Managers	225
KP Supply Chain Division Staff	241
IPP Operation Managers	8
Total	**474**

Source: KPLC, 2014

The target population was therefore valid since it was defined as consistently as possible with the purpose of the study i.e. to determine the effects of supplier development on organizational performance at Kenya Power.

The study used the two-stage cluster sampling technique whereby a subset of elements within the 3 clusters was selected from the sampling frame using simple random sampling for inclusion in the cluster random sample. The cluster sampling technique was chosen due to the study population's wide geographical distribution and the technique's economy. The study used a sample size of 142 respondents i.e. of 30% of the 474 population members, in line with Mugenda and Mugenda (2013) sample size recommendation for descriptive studies. Each cluster was equally represented in the sample as shown in table 2.

Table 2: Sample Size

Clusters	Cluster Size in the Population	Cluster Allocation	Cluster Sample Size
KP Top Managers	225	30%	68
KP Supply Chain Division Staff	241	30%	72
IPP Operation Managers.	8	30%	2

Total Sample Size	**474**	**30%**	**142**

RESEARCH FINDINGS

Form of Entity

The study sought to know what form of entity Kenya Power is. The study revealed that Kenya Power is a public limited company.

Business Branches

The study sought to know the number of business branches that Kenya Power has. The study revealed that Kenya Power has more than 50 branches.

Number of Employees

The study sought to know the number of employees currently employed by Kenya Power. The study revealed that there are between 7,900 and 11,799 employees at Kenya Power.

Effects of Supplier Development on Organizational Performance at Kenya Power

In the research analysis the researcher used a 5 Likert type rating scale where 5 was the highest and 1 the lowest. Opinions given by the respondents were rated as follows, 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree and 1 = Strongly Disagree. The analysis for mean and standard deviation were based on this rating scale.

Supplier Evaluation

Table 3: Supplier Evaluation

Supplier Evaluation	**Descriptive Statistics**		
Supplier Evaluation	N	Mean	Std. Deviation
The purpose and objectives of Kenya Power's supplier evaluation system are widely understood	102	3.51	1.032
Kenya Power sets and communicates challenging performance goals for Independent Power Producers	102	3.97	.906
Kenya Power regularly assesses the performance of Independent Power Producers in terms of quality, delivery and costs	102	3.64	1.296
Kenya Power regularly communicates supplier evaluation results to Independent Power Producers.	102	3.75	1.287
Valid N (listwise)	102		

The first objective of the study was to determine the effects of supplier evaluation on organizational performance at Kenya Power. Respondents were required to respond to a set questions related to

supplier evaluation and give their opinions. The opinion that the purpose and objectives of Kenya Power's supplier evaluation system are widely understood had a mean score of 3.51 and a standard deviation 1.032 of signifying agreement. This finding is consistent with Ukalkar (2010) finding that a wide understanding of a buyer firm's supplier evaluation system is critical to the firm's overall organizational performance. The finding is also consistent with the study's theoretical framework which postulates a positive correlation between supplier evaluation and organizational performance. The opinion that Kenya Power sets and communicates challenging performance goals for Independent Power Producers had a mean score of 3.97 with a standard deviation of 0.906. This signifies a high level of agreement which is consistent with Ukalkar (2010) finding, as well as the Goal-Setting Theory (GST), both of which show the setting of challenging goals by buyer firms to be essential to overall buyer firm performance. The opinion that Kenya Power regularly assesses the performance of Independent Power Producers in terms of quality, delivery and costs had a mean score of 3.64 and a standard deviation of 1.296 signifying agreement. The opinion that Kenya Power regularly communicates supplier evaluation results to Independent Power Producers had a mean score of 3.75 with a standard deviation of 1.287 signifying agreement. This finding is consistent with Wachiuri, Waiganjo and Oballah (2015) case study at EABL which established a significant positive relationship between feedback of supplier evaluation results and the brewer's overall profitability.

Supplier Incentive

Table 4: Supplier Incentive

Supplier Incentive	**Descriptive Statistics**		
Supplier Incentive	N	Mean	Std. Deviation
Kenya Power recognizes high-performing Independent Power Producers through periodic supplier awards etc.	102	3.46	1.208
Kenya Power provides high-performing Independent Power Producers with financial incentives such as promises of a greater share of current and future bulk power purchases.	102	3.59	1.180
Kenya Power employs effective competitive bidding in the procurement of bulk power from Independent Power Producers.	102	3.12	1.504
The power purchase agreements (PPAs) signed between Kenya Power and Independent Power Producers (IPPs) encourage efficiency amongst IPPs	102	3.76	1.244
Valid N (listwise)	102		

The second objective of the study was to find out the effects of supplier incentives on organizational performance at Kenya Power.

Respondents were required to respond to set questions related to supplier incentives and give their opinions. The opinion that Kenya Power recognizes high-performing Independent Power Producers through periodic supplier awards had a mean score of 3.46 with a standard deviation of 1.208 signifying agreement. This finding is consistent with empirical studies by Krause, Scannell and Calantone (2012); and Carr and Pearson (2009), both of which have found the use of a supplier recognition system to be critical to overall buyer-firm business performance. The finding is also consistent with Wachiuri, Waiganjo and Oballah (2015) case study at EABL which established a significant positive relationship between recognition of supplier performance improvements in the form of awards and the brewer's overall profitability. The opinion that Kenya Power provides high-performing Independent Power Producers with financial incentives such as promises of a greater share of current and future bulk power purchases had a mean score of 3.59 and a standard deviation of 1.108 signifying agreement.

This finding is consistent with Wachiuri, Waiganjo and Oballah (2015) case study at EABL which established a significant positive relationship between promises of future business to high-performing suppliers and the brewer's overall profitability. The finding is also consistent with Handfield, Krause, Scannell and Monczka (2009) survey of the automotive industry which found a strong positive relationship between financial supplier incentives and organizational performance. The opinion that Kenya Power employs effective competitive bidding in the procurement of bulk power from Independent Power Producers had a mean score of 3.12 and a standard deviation of 1.504 signifying neither agreement nor disagreement.

This finding is inconsistent with Krause, Scannell and Calantone (2012) study which found that the solicitation of competitive bids from alternative suppliers, using fully developed bidding specifications and short-term contracts, achieves greater competitiveness amongst suppliers with the increased supplier competitiveness ultimately improving the buyer-firm's overall performance. The contradiction may be possibly caused by differences in the populations studied; Krause, Scannell and Calantone (2012) study focused on manufacturing firms whereas our study focused on firms in the Electricity Supply Industry where the need to recoup and safeguard the high initial capital outlays involved in setting up IPPs has been erroneously used as a rationale for the signing of long term and uncompetitive PPA between electric utilities and the IPPs (Bayliss & Hall, 2010). The opinion that the power purchase agreements (PPAs) signed between Kenya Power and Independent Power Producers (IPPs) encourage efficiency amongst IPPs had a mean score of 3.76 with a standard deviation of 1.244 signifying agreement.

Supplier Partnership

Table 5: Supplier Partnership

Supplier Partnership Descriptive Statistics

Supplier Partnership	N	Mean	Std. Deviation
Kenya Power makes mutually beneficial joint investments with Independent Power Producers.	102	3.40	1.229
Kenya Power provides technical training for IPP operational staff	102	3.33	1.102
Kenya Power's supply chain division has access to Independent Power Producers' internal information (production costs, quality levels).	102	3.99	.949
Kenya Power includes Independent Power Producers in its business planning and goal-setting activities.	102	3.75	1.019
Valid N (listwise)	102		

The third objective of the study was to describe the effects of supplier partnership on organizational performance at Kenya Power. Respondents were required to respond to set questions related to supplier partnership and give their opinions. The opinion that Kenya Power makes mutually beneficial joint investments with Independent Power Producers had a mean score of 3.40 and a standard deviation of 1.229 signifying neither agreement nor disagreement. This finding is inconsistent with Wachiuri, Waiganjo and Oballah (2015) case study at EABL which established a positive relationship between joint buyer-supplier investments and the brewer's overall profitability. The contradiction may be possibly caused by differences in the populations studied.

The Electricity Supply Industry is different from the manufacturing industry in that the buyer firms (electric utilities) found in the former are predominantly financially challenged. In addition the general strategic direction in the ESI sector is that of unbundling power distribution from electricity generation activities. The opinion that Kenya Power provides technical training for IPP operational staff had a mean of 3.33 and a standard deviation of 1.102 signifying neither agreement nor disagreement.

This finding is consistent with Wachiuri, Waiganjo and Oballah (2015) case study at EABL which found no significant relationship between supplier training and development and the firm's corporate performance. The opinion that Kenya Power's supply chain division has access to Independent Power Producers' internal information (production costs, quality levels) had a mean score of 3.99 and a standard deviation of 0.949 signifying a high level of agreement. This finding is consistent with Ana et al. (2011) study of competitive effects of buyer-supplier collaboration in the sawmill industry. The study found that cooperation and extensive information sharing between buyer and supplier firms leads to increased productivity and

organizational performance. The opinion that Kenya Power includes Independent Power Producers in its business planning and goal setting activities had a mean score of 3.75 with a standard deviation of 1.019 signifying agreement. This finding is consistent with Power, Sohal and Rahman (2011) study which found that such buyer-supplier collaboration leads to increased levels of customer responsiveness and satisfaction.

Effects of Supplier Development on Organizational Performance

Table 6: Effects of Supplier Development on Organizational Performance

Supplier Development	**Descriptive Statistics**		
Supplier Development	N	Mean	Std. Deviation
Supplier development increases market share growth	102	3.76	.892
Supplier development increases Return on Capital Employed (ROCE)	102	3.49	1.069
Supplier development increases gross profit ratio	102	3.41	1.222
Supplier development increases operating profit ratio	102	3.37	1.319
Supplier development increases customer satisfaction index	102	3.74	1.160
Valid N (listwise)	102		

The opinion that supplier development increases market share growth had a mean of 3.76 with standard deviation of 0.892 signifying a high level of agreement. This finding is consistent with studies by Bessant (2004) as well as Dyer and Nobeoka (2010). These studies found that supplier development enables the buyer firm leverage suppliers' specialized competencies for greater innovativeness and the ability to offer high quality products which in turn have a positive effect on revenues and market share growth. The opinion that supplier development increases Return on Capital Employed (ROCE) had a mean score of 3.49 with a standard deviation of 1.069 signifying agreement.

This finding is consistent with existing literature which shows a significant relationship between supplier development and the buyer firm's ROCE; average annual sales growth; overall product quality; profit margin on sales; and overall competitive position (Li, Nathan, Nathan & Rao, 2010; Tan, Kannan, Handfield & Ghosh, 2009). The opinion that supplier development increases gross profit ratio had a mean of 3.41 with a standard deviation of 1.222 signifying neither agreement nor disagreement. The opinion that supplier development increases operating profit ratio had a mean of 3.37 and a standard deviation of 1.319 signifying neither agreement nor disagreement. The opinion that supplier development increases customer satisfaction index had a mean score of 3.74 and standard deviation of 1.160 signifying agreement.

This finding is consistent with Li, Nathan, Nathan and Rao (2010) study which found a significant

relationship between supplier development and a buyer firm's overall customer service levels.

Correlation Analysis

To establish the relationship between the independent variables and the dependent variable the study conducted correlation analysis which involved computation of the coefficient of correlation and coefficient of determination.

Coefficient of Correlation (R)

In trying to show the relationship between the study variables and their findings, the study used the Karl Pearson's coefficient of correlation (r). This is as shown in Table 7 below. The findings show strong positive correlation between supplier evaluation and supplier development as shown by a correlation figure of 0.366. Supplier incentive and supplier development are also strongly positively correlated as shown by a correlation figure of 0.355. Supplier partnership and supplier development are similarly strongly positively correlated as shown by a correlation figure of 0.281.

Table 7: Karl Pearson Coefficient of Correlation (R)

	Supplier Development	Supplier Evaluation	Supplier Incentives	Supplier Partnership
Supplier Development	1			
Supplier Evaluation	.366	1		
Supplier Incentives	.355	.365	1	
Supplier Partnership	.281	.294	.341	1

Coefficient of Determination (R^2)

As shown in Table 8 below, the computed coefficient of determination value was 0.147. 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 that is explained by all independent variables (Kothari & Garg, 2014). The findings thus indicate that 14.7% variation in organizational performance can be explained by the combined variations in the three independent variables investigated in the study. The difference i.e. 85.3 % variation is caused/explained by other factors other than changes in supplier evaluation, supplier incentives and supplier partnership.

Table 8: Coefficient of Determination (R^2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.383[a]	.147	.143	.110

Regression Analysis

ANOVA

The study used ANOVA to establish the overall significance of the study's regression model at a 95% confidence level (5% significance level). As shown in Table 9, the computed p-value was 0.007 which was less than the alpha (α) value of 0.05. In addition, the high computed F-Test ratio value of 0.875 indicated that 87.5% of the variation within the study's regression model could be explained/attributed to regression, with the remainder i.e. 12.5% being unexplained/due to residual. On the basis of the foregoing, the study's regression model was determined to be statistically significant in predicting how supplier evaluation, supplier incentive and supplier partnership affect organizational performance at Kenya Power.

Table 9: Anova

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	P-Value
1	Regression	19.702	3	3.284	.875	.007[b]
	Residual	728.061	98	3.753		
	Total	747.763	101			

a. Dependent Variable: Supplier Development

b. Predictors: (Constant), Supplier Partnership, Supplier Evaluation, Supplier Incentive

Multiple Regression Analysis

The researcher conducted a multiple regression analysis as shown in Table 10 so as to describe and mathematically model the relationship between organizational performance and the 3 independent variables investigated in the study.

Table 10: Multiple Regression Analysis

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	P-Value
		B	Std. Error	Beta		
1	(Constant)	.251	.214		1.169	.247
	Supplier Evaluation	.465	.132	.474	3.530	.001
	Supplier Incentive	.144	.155	.172	.934	.354
	Supplier Partnership	.062	.097	.070	.645	.522

a. Dependent Variable: Supplier Development

The regression equation was: $Y = 0.251 + 0.465X_1 + 0.144X_2 + 0.062X_3$

Where:-
Y = dependent variable (organizational performance),
α = constant
$\beta_1, \beta_2 \; and \; \beta_3$ represent the regression coefficients,
x_1 = supplier evaluation,
x_2 = supplier incentive,
x_3 = supplier partnership

The regression equation established that taking all factors into account (supplier development as a result of supplier evaluation, supplier incentive and supplier partnership) constant at zero, supplier development's effect on organizational performance at Kenya Power will be 0.251. The findings presented also show that taking all other independent variables at zero: a unit increase in supplier evaluation will lead to a 0.465 increase in the scores of supplier development's effect on organizational performance at Kenya Power; a unit increase in supplier incentive will lead to a 0.144 increase in the scores of supplier development's effect on organizational performance at Kenya Power; a unit increase in supplier partnership will lead to a 0.062 increase in the scores of supplier development's effect on organizational performance at Kenya Power. This therefore implies that all the three independent variables have a positive relationship with the dependent variable. Further, supplier evaluation can be seen to be contributing the most to organizational performance. In addition, as shown in the Table 10, the study's regression model's predictor variables (supplier evaluation, supplier incentives and supplier partnership) are seen to have regression coefficients that are statistically significantly. This is because their p-values are less than the common alpha level of 0.05.

Summary

The general objective of the study was to determine the effects of supplier development on organizational performance at Kenya Power. Specifically, this study investigated the effects of supplier evaluation, supplier incentives, and supplier partnership on organizational performance at Kenya Power. The study adopted a descriptive research design. The researcher administered the study's self-administered questionnaire in three mailings. The researcher processed and analyzed the data collected using descriptive analysis and inferential analysis using IBM SPSS Statistics Version 22. To ensure data validity, the questionnaire's scales' content validity was assessed using two panels, each composed of 2 faculty members drawn from the JKUAT Mombasa CBD Campus' Department of Entrepreneurship and Procurement. A pilot study was conducted and Cronbach's Coefficient Alpha computed to establish the reliability of the study's structured questionnaire. The descriptive statistics used were mean and standard deviation. Inferential analysis began with correlation analysis. The Karl Pearson's product moment correlation coefficient (r) was computed to determine the extent of association and direction of the relationship between the study's independent variables and the dependent variable.

Multiple regression analysis was used to describe and mathematically model the relationship between organizational performance and the study's 3 independent variables. The extent of the regression model's goodness of fit was evaluated through the computation of the coefficient of determination (r^2). The significance of the regression model, at a 95% confidence level, was established using analysis of variance (ANOVA). The findings of the pilot study showed that all the four scales of the study's research instrument had an acceptable internal consistency level and were

therefore reliable; the coefficients of Cronbach's alpha of the constructs were all higher than 0.7 (range from 0.723 to 0.809). The descriptive statistics revealed that the study's respondents agreed that supplier evaluation, supplier incentives and supplier partnership positively affect organizational performance at Kenya Power. Correlation analysis, using Karl Pearson's coefficient of correlation (r), indicated strong positive correlation between each of the study's 3 independent variables and Kenya Power's organizational performance; the r values were all high (range +0.281 to +0.366).

The computed coefficient of determination (R^2) value was 0.147. This indicated that 14.7% variation in organizational performance at Kenya Power can be explained by the combined variations in the three independent variables investigated in the study. The difference, 85.3 % variation, is caused / explained by other factors other than changes in supplier evaluation, supplier incentives and supplier partnership. Multiple regression analysis came up with the following regression equation: Y = 0.251 + 0.465X1 + 0.144X2 + 0.062X3, where: - Y = dependent variable (organizational performance); α = constant; $\beta_1, \beta_2 \; and \; \beta_3$ represent the regression coefficients; x_1 = supplier evaluation; x_2 = supplier incentive; and x_3 = supplier partnership.

The model showed that all the three independent variables have a positive relationship with the dependent variable. From the model, supplier evaluation is seen to contribute the most to Kenya Power's organizational performance followed by supplier incentives and finally supplier partnership. Analysis of Variance (ANOVA), at a 95 % confidence level, yielded a computed p-value of 0.007 (which was less than the alpha (α) value of 0.05) and a high computed F-Test ratio value of 0.875. The study's regression model was thus determined to be statistically significant in predicting how supplier evaluation, supplier incentive and supplier partnership affect organizational performance at Kenya Power. The study recommends that, in order to improve Kenya Power's organizational performance, its management team should intensify and broaden the supplier evaluation and supplier incentivization aspects of its supplier development practices. The study also recommends that the Energy Regulatory Commission and Ministry of Energy and Petroleum should pursue policies that promote competitiveness amongst Kenya Power's IPP supply base.

CONCLUSIONS

This study focused on supplier development (as applied on IPPs) within the Kenyan ESI and revealed the effects of these practices on Kenya Power's organizational performance. The correlation analysis results revealed that supplier evaluation, supplier incentives and supplier partnership have significant and positive effects on Kenya Power's organizational performance. Further, on the basis of the regression analysis results, supplier evaluation was determined to have the most significant effect on organizational performance (while supplier partnership was determined to have the least effect) hence justifying the placement of greater emphasis on supplier evaluation in future organizational-performance-improvement efforts at Kenya Power.

The study's findings call for the intensification and broadening of the supplier evaluation and supplier incentivization aspects of Kenya Power's supplier development. The study's practical application for other ESI stakeholders, specifically the Energy Regulatory Commission and the Ministry of Energy and Petroleum, are the pursuit of ESI policies that promote competitiveness amongst Kenya Power's IPP supply base e.g. those directed at increasing the clarity and transparency of the PPAs signed between Kenya Power and IPPs.

RECOMMENDATIONS

Based on the findings of this study and the conclusions drawn, the following recommendations were made:

- Kenya Power should expand its current price-focused IPP performance evaluation criteria to encompass the following aspects: cost commensurate with quality and service; IPP's commitment to Kenya Power in terms of quality, cost driving and service; and IPP's continuous improvement capabilities.
- Kenya Power should continue setting and communicating challenging goals for IPPs, and to this end, should include the targeted reduction of Kenya's electricity generation cost from US¢ 11.30 to US¢ 7.41 that is envisaged in the GoK LCPDP (MoEP, 2014), as a performance pillar in the PPAs it signs with IPPs.
- Kenya Power's Supply Chain Division's supplier development team should hold a monthly suppliers' meeting with IPPs representatives to communicate and discuss the electric utility's feedback on supplier evaluation results.
- Kenya Power should exclusively employ the open tender sourcing method to increase the transparency and competitiveness of the bidding process for contracting IPPs and in so doing gain lower prices and more sustainable PPAs.
- Kenya Power, through its PPA Board Committee, should promote the inclusion of sunset clauses into PPAs to ensure that the PPAs do not tie-in uncompetitive power prices for inordinate time periods.
- Kenya Power should recognize high performing IPPs through a well-publicized annual supplier award ceremony.
- Kenya Power should improve intercompany communication and collaboration between itself and IPPs by requiring IPPs to grant its Supply Chain Division increased access to IPPs' internal information (i.e. electricity generation costs, power quality levels, and installed capacity expansion plans).
- The Energy Regulatory Commission should within 14 days publish on its website all approved PPAs so as to increase the clarity and transparency of PPAs signed between Kenya Power and IPPs.
- The Ministry of Energy and Petroleum should consider replacing the existing Feed-In-Tariff Policy with a system of reverse auctions so that Kenya Power fully benefits from the power generation cost savings associated with the increased adoption of renewable energy sources that the Feed-In-Tariff Policy promotes.

SUGGESTIONS FOR FURTHER RESEARCH

Further research is therefore needed to corroborate the study's findings with larger and more representative samples and to investigate effects of supplier development on organizational performance in other industrial sectors and geographical contexts.

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