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EFFECT OF BID CHALLENGE STRUCTURE ON SUPPLY CHAIN MANAGEMENT SCHEME IN KENYA.

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Abstract

Purpose: To establish the influence of bid challenge structure on supply chain management in Kenya.

Methodology: The study embraced descriptive research design in order to provide a framework to examine current conditions, trends and status of events. The respondents of the study were all published bid challenges cases decisions in PPARB website for a period of three years. The period covered 2011- 2013. The number of bid challenge decided cases was 173 for the study period. Primary data was collected using semi structured questionnaires. These questionnaires were constructed with both open and closed ended questions to enable for quantitative and qualitative analysis respectively. Data was analysed using both descriptive and inferential statistics. Quantitative data was computed descriptively using frequencies and percentages while for inferential statistics regression analysis was conducted at a 5% (0.05) test significance level.

Results: Procurement Review coefficient of 0.865 was found to be positive at significant level of 0.0012 and this indicates that Procurement Review has a positive influence on Supply chain projects, (X_2) Administrative Review coefficient of 0.868 was found to be positive at significant level of 0.0022 and this indicates that Administrative Review has a positive influence on Supply chain projects, (X3) Judicial Review coefficient of 0.810 was found to be positive at significant level of 0.0019 and this indicates that Judicial Review has a positive influence on Supply chain projects. (X_4) Independence of Review Authority coefficient of 0.741 was found to be positive at significant level of 0.001 and this indicates that Independence of Review Authority has a positive influence on Supply chain projects.

Unique contribution to policy and practice: The study prescribes that resources need to be more utilized to enable more development and less wastage in the company. The study also recommends the company stakeholders to be actively involved in Supply chain projects.

Keywords: *Supply chain management, procurement review, administrative review, warehousing bid structure and independence of review authority.*

1.0 INTRODUCTION

In Kenya, a considerable percentage of the annual budget is spent through public procurement. It is estimated that 60 percent of government revenue is spent on procurement (Aketch, 2005). According to Arrowsmith and Hartley (2002), public procurement serves a greater role in developing countries and economies in transition than it does in developed countries. Unlike private sector procurement, public procurement is a business process within a political system with distinct considerations of integrated accountability, national interest and effectiveness (Wittig, 1999). Whereas public procurement has great significance for the national economy, Geroski (1990) argues that as a policy instrument, it has its limitations and failures, and "it can be blunted or perverted by misuse." Preferences and discriminatory public purchasing might be used as a disguise to favor individuals or constituencies associated with senior government officials rather than as a strategy to improve legitimately marginalized sectors

Besides the fiduciary obligation to deliver goods and services to the constituents of the particular government administration, public procurement addresses a wide range of objectives (Uyarra & Flanagan, 2009). It is used by governments to achieve socio-economic objectives such as stimulating economic activity; protecting national industries from foreign competition; improving the competitiveness of certain industrial sectors; and remedying national disparities (Bolton, 2006; Thai, 2006). The objectives of public procurement are achieved through various means, and legal and regulatory rules for conducting public procurement (Arrowsmith, 2010).

In Kenya, the procurement reviews are handled by the Public Procurement Administrative Review Board (PPARB) as established under Section 27 of the Public Procurement and Asset Disposal Act (PPADA), 2015 which is a continuation of the Public Procurement Complaints, Review and Appeals Board which was established under the Exchequer and Audit (Public Procurement) Regulations, 2001. It was established to help in reviewing, hearing and determining tendering and asset disposal disputes and to also perform any other function conferred to the Review Board by this Act, Regulations or any other written law. (PPADA, 2015).

The introduction of the concept of 'good governance' by international financial institutions resulted in assessments of national public procurement systems. Following thorough legislative reform processes, the majority of procurement systems today largely complies with international standards. Public procurement is regulated in a way that basic principles such as economy and efficiency, participation free of discrimination, competition, equality, fairness, integrity, transparency, and public confidence in the procurement process can be achieved. In order to ensure application of procurement rules to make the systems effective, appropriate enforcement mechanisms are needed (Engelbert, 2013). Therefore, procurement legislations provide for a range of monitoring tools such as audits, investigations and criminal prosecutions, as well as for administrative and judicial review systems.

According to Gordon and Quinot (2006), review systems have to balance two conflicting objectives: acquiring goods and services at the best quality and lowest price in a short time frame with minimum transaction costs. Requests for review interrupt the procurement procedure and by considerably delaying contract execution, undermine the efficiency of the process. It can therefore be argued that access to reviews should be restricted in order to ensure continuity. Review systems

vary in the degree of accessibility they grant to potential claimants, depending on the specific circumstances they operate in. In the context of development and corruption, a focus on efficiency seems a better short-term option for implementing procurement projects.

In Kenya, only candidates who have actually submitted an offer to the procuring entity are eligible to request a review. The definition of a claimant is stricter under Kenyan law than stipulated in the UNCITRAL Model Law 2011 that provides access to review for all parties or potential parties to the procurement proceedings, including suppliers and service providers merely interested in participating. The Kenyan provision discriminates against those parties unlawfully prevented from bidding. The Kenyan procurement laws, therefore clearly exclude from review procurement procedures that have resulted in a signed contract in order to secure the efficient and uninterrupted contract execution (Aketch, 2006).

The Kenyan procurement law also stipulates the most extensive possibilities to exclude certain matters from review; the choice of procurement method and the rejection of all tenders often used, however, to manipulate the tender process in order to award the contract to one preferred bidder and should therefore be contested. The time span between the outcome of tender evaluation and contract signature offering bidders the opportunity to lodge a request for review before the procurement contract has entered into force, are an important means to preserve the legal right to seek remedy (PPOA, 2005).

Administrative and judicial review processes provide the possibility for bidders to claim their subjective rights under the rule of law. Bidders have an information advantage on deviations from standard procurement procedures. Judicial review, in addition to the effects of the administrative review system, is crucial because it complies with the principles of checks and balances and creates an enduring process of establishing principles developed by the judiciary (Lewis, 2002).

Procurement refers to the "process of acquisition of goods and services by government or public sector organizations" (Uyarra & Flanagan, 2010) and is one of the key economic activities of government (Thai, 2001). Rege (2002) on the other hand argues that public procurement process is the means through which government meets development needs such as physical infrastructure and the supply of essential commodities. According to the Public Procurement and Disposal Act, 2005, public procurement process involve several stages and uses colossal amounts of public resources. The process can be summarized as figure 1 below. Prior research has differentiated between types of public procurement and argued that procurement represents an important policy tool that could help to achieve outcomes in the society that are consistent with broader policy goals.

Procurement encompasses the whole process of acquiring property and/or services. It begins when an agency has identified a need and decided on its procurement requirement. Procurement continues through the processes of risk assessment, seeking and evaluating alternative solutions, contract award, delivery of and payment for the property and/or services and, where relevant, the ongoing management of a contract and consideration of options related to the contract. Procurement also extends to the ultimate disposal of property at the end of its useful life (Waters, 2004). An effective procurement process ensures the availability of the right goods and services in the right quantities, available at the right time, for the right customers and at reasonable prices, and at recognizable standards of quality (WHO, 2007).

Sound public procurement policies and practices are among the essential elements of good governance. Otieno (2004) notes the irregular procurement activities in public institutions provide the biggest loophole through which public resources are misappropriated. According to Thai (2001), the basic principles of good procurement practice include accountability; where effective mechanisms must be in place in order to enable procuring entities spend the limited resources carefully. Knowing clearly that they are accountable to members of the public; competitive supply, which requires the procurement be carried out by competition unless there are convincing reasons for single sourcing; and consistency, which emphasizes the equal treatment of all bidders irrespective of race, nationality or political affiliation

Public procurement is a business process within a political system, with distinct considerations of integrated, accountability, national interest and effectiveness (Wittig, 1999). Wittig continues that the business operations of governments controlled by public procurement process, affect many different elements of society. First are the procuring entities that have needs for material support (e.g. roads, hospitals, desks, educational supplies and others), to fulfill their designated national missions. Then there is the business community of actual or potential suppliers to satisfy the government has identified requirements. But for the government agency's needs to be properly considered by a supplier, they must be expressed in clear terms, compatible with public policies involving such areas as competition, social and economic goals, and transparency of the basic rules and procedures.

1.1Statement of the problem

Bid protests emerge from disappointed bidders who may challenge a solicitation issued by a government contracting officer for failing to comply with a myriad of laws, regulations and processes governing government contracts. It also challenges the decision to award a contract to another bidder and in limited circumstances may challenge a modification to an existing contract person (Drabkin *et al*., 2004). Public procurement has important economic and political implications, and ensuring that the process is economical and efficient is crucial. Hence, the procurement process should be well understood by the actors: government, the procuring entities, the business community/suppliers, and other stakeholders, including professional associations, academic entities and the public (Odhiambo & Kamau, 2003).

Addressing the challenge of bid protests is one of the most difficult tasks of the buyer. It is expected to become more difficult across the globe as countries outside the U.S. adopt bid protest procedures for their public procurement systems (Drabkin *et al*., 2004). Accessibility is a major factor influencing the willingness of bidders to initiate procurement reviews. If entry requirements are few and low-threshold, more tenderers will request reviews and therewith exercise a corruption controlling function. Legal provisions stipulate whether or not access to review is granted, irrespective of the individual intention of bidders. Many features of legal frameworks regulate access to review systems, among them the amount of an administrative fee to be paid by bidders, the language in which documents are issued, the geographical distance between the bidder and the review body and the general level of professional capacity in public procurement (Uyarra & Flanagan, 2010).

The most important reason why procurement is carried out is to meet the desired outcome on social economic development in the country. The main procurement objectives are time, cost, and quality as spelt out in procurement laws. However, in recent times there have been concerns about the perceived long time it takes to procure development projects. Most of the blame goes to set up regulators such as the PPOA and the Review Board. Whereas there is perceived delay and loss of value in public procurement, no research has been done in East Africa to analyze the efficiency, competition levels, and comparative time taken to decide on bid protest (Sue *et al.,* 2000).

A number of researchers have conducted studies on different aspects of Bid challenges review systems. For instance, Engelbert and Reit (2013) did a research on effective corruption control: Implementing review mechanisms in public procurement in Kenya, Tanzania and Uganda. The study concluded that review mechanisms in public procurement provide bidders the opportunity to exercise a controlling function. Ambe and Badenhorst (2012) did a study on procurement challenges in the South African public sector. The study found out that Public procurement primarily aims to be fair, equitable, transparent, and cost-effective. Gordon (2006) researched on constructing a BID protest process and found that bid protests play a central essential role in protecting the integrity of the procurement system.

However, related studies that have been carried out are too general and do not focus specifically on impact of Bid challenge system on procurement process in Kenya. From the findings of the above studies, it is clear that, there are many areas about review systems in procurement Bids not yet been fully addressed. Therefore, this study sought to answer the following questions; what is the Effects of Bid Challenge Structure on Supply Chain Management Scheme in Kenya? What are the factors affecting the efficiency of review systems in Kenya? What is the Bid challenge decision time taken by the review authorities?

1.2 Objective of the study

To establish the influence of bid challenge structure on supply chain management in Kenya.

1.2.1 Specific objectives of the study

i. To determine how Procurement Review affects supply chain management in Kenya.
ii. To establish how Administrative Review affects supply chain management in Kenya.
iii. To find out the effect of Judicial Review on supply chain management in Kenya.
iv. To assess how Independence of Reviewing Authority affects supply chain management in Kenya.

2.0 LITERATURE REVIEW

2.1 Procurement review

The procurement and infrastructure focuses on operational and policy issues within administrative and infrastructure areas that affect logistics operation (Chopra & Meindle, 2007). Transport system is the most important economic activity among the components of business logistics systems. Procurement plays a connective role among the several steps that result in the conversion of resources into useful goods in the name of the ultimate consumer. It is the planning of all these

functions and sub-functions into a system of goods movement in order to minimize cost maximize service to the customers that constitutes the concept of business logistics (Chang, 2008).

Procurement plays a connective role among the several steps that result in the conversion of resources into useful goods in the name of the ultimate consumer. It is the planning of all these functions and sub-functions into a system of goods movement in order to minimize cost maximize service to the customers that constitutes the concept of business logistics (Chang, 1998). The role that procurement plays in logistics system is more complex than carrying goods for the proprietors. Its complexity can take effect only through highly quality management. By means of well-handled transport system, goods could be sent to the right place at right time in order to satisfy customers' demands. It brings efficacy, and also it builds a bridge between producers and consumers.

Therefore, procurement is the base of efficiency and economy in business logistics and expands other functions of logistics system. In addition, a good transport system performing in logistics activities brings benefits not only to service quality but also to company competitiveness (Cooper *et al.,* 1997).

2.2 Administrative Review

Administrative management entails "holding administrative to meet customer needs while keeping administrative costs at a reasonable level to produce a profit for the firm" (Mercado 2007).The administrative surplus in the industry is approximately $10 billion which shows the need of best practices in administrative management, redeployment and disposition (Heath 2005). It is estimated that the average book value of surplus administrative of major integrated supply chain companies was $817 million. The annual cost to carry that surplus administrative is 25% from which 17-18% is the cost of money. Therefore, with a hard cost of 7-8% annually it results in $57 million expense per year (Heath 2005).

One of the reasons for this administrative surplus is that Supply chain companies hold higher safety stock of materials and maintenance, repair and operations (MRO) products because a stock-out will oblige them to shut down operations incurring a significant costs. In addition, firms may not completely trust the delivery reliability of their suppliers. Consequently, administrative and administrative carrying costs are a substantial, poorly controlled expense.

2.3 Judicial Review

Judicial refers to the activities involving storage of goods on a large-scale in a systematic and orderly manner and making them available conveniently when needed (Mohan, 2012). In other words, judicial means holding or preserving goods in huge quantities from the time of their purchase or production till their actual use or sale. Judicial is an important element of activity in the procurement of goods, from raw materials and work in progress through to finished products. It is integral part to the supply chain network within which it operates and as such its roles and objectives should synchronize with the objectives of the supply chain (Mohan, 2012).

Judicial and storage can be considered in terms of services for the production process and for product procurement. There have been major changes in the number and location of facilities with the closure of many single-user warehouses and an expansion of consolidation facilities and procurement centres (Addy-Tayie, 2012). Judicial occur when overall logistics costs are reduced.

If adding a warehouse in a logistical system reduces overall administrative cost by an amount greater than required investment and operational cost, then total cost will be reduced since it involves consolidation and break-bulk, sorting, seasonal storage and reverse logistics hence enhancing the procurement of Supply chain products.

A storage warehouse holds products for moderate to long-term periods in an attempt to balance supply and demand for producers and purchasers. They are most often used by small businesses whose products' supply and demand are seasonal. On the other hand, a procurement warehouse assembles and redistributes products quickly, keeping them on the move as much as possible as it is a case of Supply chain companies (Ducham, 2013).

2.4 Independence of Review Authority

Many maintenance approaches or strategies have been developed, such as Reliability Centered Maintenance (RCM), Total Quality Maintenance (TQMain), Total Productive Maintenance (TPM), and Business Centered Maintenance (BCM). Sherwin (2008) discusses these approaches. They have been applied with varying success by many businesses. The most recent approach is to see all of these strategies as tools in the maintenance toolbox; the challenge is to integrate their use and apply them in the correct place, order, and manner.

The fact that both operations and maintenance play a significant role in the maintenance of physical assets is well recognized. Levery (2004) also finds that the relationship between production and maintenance is often quite delicate. In addition, both the number of employees focusing on equipment maintenance and the amount of money invested in maintenance activities have grown (Garg & Deshmukh, 2006). Particularly the nature of process industries with continuous production systems highlights the importance of successful proactive maintenance: these kinds of industries are vulnerable to the potential major losses induced by lost production, which can be caused by not allocating enough resources into asset maintenance, or by maintenance actions of poor quality (Marttonen, 2012).

While industrial maintenance has received more attention from company decision makers, it is at the same time one of the services outsourced more and more often to service providers (Tarakci et al. 2009; Quélin and Duhamel 2003). Close competition has increased the practice of industrial companies to focus on their core competences, which rarely include maintenance. Together with many other supportive activities, maintenance gets often outsourced to service companies (Redondo-Cano and Canet-Giner 2010). Despite the practical significance of maintenance bid structure, this research area still remains somewhat unexplored in the academic literature. Rushing with bid structure can lead to back sourcing, which means reversing the bid structure decision.

Back sourcing is often very challenging and costly (Quélin & Duhamel, 2003). Unfortunately, the company decision-makers often assume bid structure to have created additional value, instead of actually measuring the outcome. Previous research has mostly studied bid structure on a highly aggregate level, whereas studies focusing especially on maintenance bid structure hardly exist. In addition, most previous studies have addressed bid structure as a one-time operation and not as a process calling for continuous follow-up (Dekkers 2011). Thus the previous tools for bid structure performance measurement have often lacked a long-term perspective.

2.5 Performance of the Supply chain

Fernandez (2002) stated that the financial performance of a firm can be examined through its annual account reports, where information about growth, investments, 17 earnings and costs, among others are listed. In order to link these data with financial performance, indexes-ratios based in balance sheets are used, considering that a company's value resides in its balance sheet.

The concept of profitability is based on the comparison of the cash outflows required for implementing a strategic alternative with the cash inflows that this alternative is expected to generate (Michael, 2013). Pandey (2006) included profitability in relation to sales and profitability in relation to investment. According to Athanasoglou *et al*., (2008), PAT has been widely used as a measure of financial performance. Though different factors have been used by other researchers such as: shareholders' equity; liquid assets to assets; fixed assets to total assets; total borrowed funds to total assets; per capita Gross Domestic Product (GDP), the cost to-income ratio and customer satisfaction.

High growth situations are desirable since growth is consistently related to profit under wide variety of circumstances (Capon, Farley, & Hoenig, 2012). Growth is a vital indicator of a flourishing firm. Firms grow in order to achieve their objectives, including increasing sales, maximizing profits or increasing market share. Gilbert *et al.*, (2006) suggested how and where questions are important in the context of the growth of a firm. They suggest that there are many factors like characteristics of the managers, access to resources like finance and manpower which affect the growth of the firm and differentiate it from a non-growing firm.

Market share also, is often associated with profitability and thus many firms seek to increase their sales relative to their competitors. Zagare (2011) while coming up with the game theory, suggested that while there may be uncertainty regarding the expectations and actions of a firm's rivals, a rational firm is expected to overcome uncertainty by forming competitive conjectures, subjective probability estimates of rivals' expectations and behavior.

2.6 Empirical review

Gist (2013) conducted a study on the impact of the supply chain industry on economic growth performance in Nigeria. The study employed a multiple regression analysis to capture the influence of OREV on GDP and also determine the trend effect, that the effect of time as a variable. The study established that there has been environmental degradation, neglect of the people, abandonment of the agricultural and manufacturing sectors and a reasonable contribution to GDP, though with variation in the trend. It was also found that corruption in the Nigerian nation may have contributed immensely to the poor contribution of the supply chain sector to the economic growth of Nigeria whereby allegations abound where retired military officers and some influential politicians are offered supply chain licenses to lift and export crude supply chain and the proceeds are reflected in the private pockets of such people only. This study however limited itself on the impact the of supply chain industry in the economic performance of Nigeria, more variables could still be included in the model and also more sophisticated econometric methods could be employed in determining the impact of supply chain industry in the economic performance of Nigeria.

In his study Arntzen (2006) noted that in Kenya's competitive Supply chain sector, being able to achieve a high degree of customer satisfaction is critical. What a firm selects as its procurement approach, can contribute either positively or negatively to this outcome, e.g. Business may be lost through cancelled orders, and the company's reputation may be severely damaged. Companies should therefore have effective procurement management systems to achieve high customer satisfaction. The Supply chain players including (KPC) Kenya Pipeline Co., the leading Supply chain products distributor in Kenya, have some challenges and successes, all related to the way they handle & manage their major administrative at their disposal and how it impacts on customer satisfaction.

In a study by Mohan (2012), judicial means holding or preserving goods in huge quantities from the time of their purchase or production till their actual use or sale. Judicial is an important element of activity in the procurement of goods, from raw materials and work in progress through to finished products. It is integral part to the supply chain network within which it operates and as such its roles and objectives should synchronize with the objectives of the supply chain.

Mwikali (2012) carried out a study on the response strategies adopted by Kenya Pipeline Company limited to the challenges of supply chain procurement in Kenya. Basing on its methodology, the study adopted a case study research design because only one organization was involved. The study used primary data collected using an interview guide. The data obtained from the interviews was mainly qualitative. Content analysis was used to analyze the findings. The study established that the strategies developed were tied to the overall corporate strategy to enable the Corporation attain its strategic goals. The challenges facing the Corporation were both internal and external. They included: Capacity constraints with the Sinedet line to Kisumu being smaller, long processes of clearing the products by other stakeholders at the deports leading to delays in supply chain marketers collecting their products; change in technology which made some equipment at the Corporation obsolete; long and bureaucratic government procurement procedures which caused delay in maintenance.

Bosire *et al.,* (2013) conducted a study on the impact of bid structure on Lead-Time and Independence of reviewing Authority in Supermarkets in the City of Nairobi-Kenya. The study used a descriptive survey design to obtain information on the extent to which supermarkets outsourced services and the impact of bid structure on lead-time. The population of the study mainly constituted of procurement officers, marketing managers, operation managers or their equivalents in supermarket headquarters within Nairobi city.

The population of this study consisted of one hundred and two (102) Supermarkets while the sample consisted of fifty (50) supermarkets within Nairobi. The data collected was analyzed by use of frequency, percentage and correlation analysis. The study findings indicate that supermarkets outsourced advertising and marketing to a very large extent. Consultancy and training, administration of information and systems maintenance, security, facilities maintenance, general maintenance and repair were also outsourced to a large extent. Although the study limited itself on the impact of bid structure on Lead-Time and Independence of reviewing Authority in Supermarkets, it contributes to the current study where lead time is used as one the variables that influence the procurement of Supply chain products.

Reviewed Research indicates that The various Supply chain companies involved in the Marketing of petroleum products, Kenya Petroleum Refinery Limited (KPRL) (which operates the only supply chain refinery in the country) and the Kenya Pipeline Company Limited, which operates the pipeline that runs from Mombasa to Nairobi, Kisumu and Eldoret are the major players in the Supply chain(PIEA,2011). The Energy Regulatory Commission (ERC) requires all supply chain marketers to refine at least 40 per cent of their products at the (KPRL) Kenya Petroleum Refinery Limited.

The main marketers in the Supply chain are Total, Shell and Kenol Kobil who control a total of 68 per cent of the Supply chain market in Kenya And have been setting the pace for petroleum pricing however Supply chainibya, the fourth largest player, and National Supply chain have been closing the gap with steady growth of market share. There are also Independent dealers such as Hass Petroleum, Hashi Gulf Energy and Gapco Supply chain ((PIEA, 2011). Effective supply chain management is a vital function to help to ensure the success of the petroleum industry.

3.0 METHODOLOGY

The study embraced descriptive research design in order to provide a framework to examine current conditions, trends and status of events. The respondents of the study were all published bid challenges cases decisions in PPARB website for a period of three years. The period covered 2011-2013. The number of bid challenge decided cases was 173 for the study period. Primary data was collected using semi structured questionnaires. These questionnaires were constructed with both open and closed ended questions to enable for quantitative and qualitative analysis respectively. Data was analysed using both descriptive and inferential statistics. Quantitative data was computed descriptively using frequencies and percentages while for inferential statistics regression analysis was conducted at a 5% (0.05) test significance level.

4.0 RESULTS

4.1 Response Rate

This study reported the number of respondents who participated in the study. The response rate is shown in table 4.1.

Table 4.1 Response Rate

Target Population	**115**
Participants available	108
Total response	80
Non – response bias	16%
Usable responses	80
Un – usable responses	16
Usable responses rate	**74%**

Table 4.1 uncovers that, of the 108 members sampled to take an interest in this study, all were accessible and 108 questionnaires were administered. 80 questionnaires were completed

successfully and were usable for the research. Therefore, the response rate for this pilot study was 74%.

4.2 Regression results

This section covers the regression results from the model

$Y= \beta 0+ \beta 1X1+\beta 2X2+ \beta 3X3+ \beta 4X4+\varepsilon$..... ...(4.1)

Where Y is the dependent variable (Performance of Supply chain Projects), β0 is the regression coefficient, β1, β2, β3 and β4 are the slopes of the regression equation.

Table 4.2 Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.935[a]	.874	.778	2.942

Results from table 4.2 indicates Coefficient of determination R^2 value of .874, This implies that Y; Performance of Supply chain Projects is collectively influenced by X_1; Procurement Review, X_2; Administrative Review, X_3; Judicial Review and X_4; Independence of Review Authority at 87.4 %. At at 0.05 level of significance. This therefore means that majority agree the independent variables are critical factors to Performance of Supply chain Projects.

Table 4.3 ANOVA

Table 4.3 presents the results of ANOVA test:

	Sum of Squares	df	Mean Square	F	Sig.
Regression	220.80	4	55.2	28.192	.002[b]
Residual	328.961	168	1.958		
Total	2609.941	172			

The table reveals that all the independent variables notably; (X_1) Procurement Review, (X_2) Administrative Review, (X3) Judicial Review and (X_4) Independence of Review Authority have a significance influence on Supply chain projects. Since the P value is actual 0.02 which is less than 5% level of significance. It also indicates that the high value of F (28.192) with significant level of 0.00 is large enough to conclude that all the independent variables significantly influence Supply chain projects.

Table 4.4 presents the results of the test of beta coefficients which indicates that the significant relationship between independent variables notably; (X_1) Procurement Review, (X_2) Administrative Review, (X3) Judicial Review and (X_4) Independence of Review Authority and dependent variable Y = Supply chain projects.

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Table 4.4 Regression coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.243	.233		1.546	.0001
Procurement Review	.865	.508	.156	1.703	.0012
Administrative Review	.868	.819	.130	1.060	.0022
Judicial Review	.810	.607	.130	1.335	.0019
Independence of reviewing Authority	.741	.430	.140	1.723	.0009

As presented in table 4.4, (X_1) Procurement Review coefficient of 0.865 was found to be positive at significant level of 0.0012 and this indicates that Procurement Review has a positive influence on Supply chain projects, (X_2) Administrative Review coefficient of 0.868 was found to be positive at significant level of 0.0022 and this indicates that Administrative Review has a positive influence on Supply chain projects, (X3) Judicial Review coefficient of 0.810 was found to be positive at significant level of 0.0019 and this indicates that Judicial Review has a positive influence on Supply chain projects. (X_4) Independence of Review Authority coefficient of 0.741 was found to be positive at significant level of 0.001 and this indicates that Independence of Review Authority has a positive influence on Supply chain projects.. This clearly demonstrates that all the independent variables significantly influenced Supply chain projects. However, since the significance values were less than 0.005, all the coefficients were significant an thus the regression model was fit;

$$\mathbf{Y = 243 + 741X_1 + 865X_2 + 810X_3 + 868X_4 + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (4.2)}$$

From Table 4.3 the t values of 1.703, 1.060, 1.335 and 1.723 is statistically significant. Kothari (2008) notes that the closer T is to 0, the more likely there isn't a significant difference.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The study established that Procurement Review improves performance of the Supply chain projects. Lysons and Farrington (2010) argued that Procurement Review as an aspect of planning in the process of the project implementation strategy formulation which clearly revealed that retail chains use Procurement Review which assist in the costs reduction and proper resources utilization. The study further revealed that proper management of Procurement Review at a great extent resulted to increase number of orders and reduces number of complaints. The study found that Administrative Review increases the success of Supply chain projects. The study shows that Administrative Review has influence on the improvement of performance of Supply chain projects and enables in meeting objectives which emphasize that Administrative Review is an essential strategic issue imperative for Supply chain projects. The study also showed that well utilization of organization resources results in improvement in Supply chain project implementations.

The study established that the Judicial Review affects Supply chain projects implementation in Kenya. The study further revealed that Supply chain projects have key performance indicators which contributed to increase in number of white elephant projects and improve in quality of service. The study found out that Judicial Review also reduces risks and increases in customer loyalty. The study found that contract Independence of Review Authority improves the effective Supply chain project implementation. The study found that ascertainment of set targets and actual results were affected and need to increase customer loyalty.

From the findings, the study concludes that Supply chain Project implementation is affected by Procurement Review, Administrative Review, Judicial Review and Independence of reviewing Authority. The study found out that industry is facing challenges in product management which lead to not achieving its objectives. On other hand, the organization is faced by conflict of interest.

5.2 Recommendation

The study established that product management affect during the implementation of Supply chain projects, therefore they need to be checked in a more appropriate for a successful implementation of the project. The resources need to be more utilized to enable more development and less wastage in the company. The study also recommends the company stakeholders involved during Supply chain projects. Supply chain Projects also need to handle on the issue of conflict of interest from the management and the outsiders when dealing with the private brands and project implementation section.

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