



The Strategic
**JOURNAL of Business & Change
MANAGEMENT**

ISSN 2312-9492 (Online), ISSN 2414-8970 (Print)



www.strategicjournals.com

Volume 5, Issue 4, Article 32

EFFECTS OF TENDERING PROCESS ON SERVICES DELIVERY IN ROAD CONSTRUCTION SECTOR. A CASE OF KERRA

Chelimo, F. C., Moronge, M.

EFFECTS OF TENDERING PROCESS ON SERVICES DELIVERY IN ROAD CONSTRUCTION SECTOR. A CASE OF KERRA

Chelimo, F. C.,^{*1} & Moronge, M.²

^{*1} Msc. Candidate, Jomo Kenyatta University of Agriculture & Technology [JKUAT], Nairobi, Kenya

² Ph.D, Lecturer, Jomo Kenyatta University of Agriculture & Technology [JKUAT], Nairobi, Kenya

Accepted: October 22, 2018

ABSTRACT

The aim of this study was to establish the effects of tendering process on services delivery in road construction sector in Kenya. The target population of the study was 196 employees of KERRA The sample frame included the employees defined by their departments. Data collection instrument used was the questionnaires. The pilot test was conducted to ensure the validity and reliability of the instruments. The findings were analysed using Statistical Package for Social Sciences (SPSS Version 21) and presented using windows 8 Microsoft office (version 2014). It was notable that there exists strong positive relationship between the independent variables and dependent variable. Procurement planning is usually the first stage of procurement process and therefore organization need to develop the skills of the employees on developing quality procurement plans based on the approved budgets. The study recommended that the organization need to identify the most appropriate procurement methods to enhance service delivery. There was need to have an open tendering to increase the needed experience and qualified tenderers, lead to fairness and transparency in the tendering process. The study recommended that there was need for organization to create and maintain a good relationship with the contractors. There should be a mutual trust between the contractor and organization. There was need to enhance regular communication with the contractor and timely management of possible problems in the contract. The study recommended that the organization control and manage contract changes efficiently by ensuring that the contractors are paid in time. There should be regular communication between the organization and contractor. The organization should ensure that the contract terms were well adhered to and final reports always well maintained.

Key Words: Procurement Planning, Tendering Method, Supplier Selection, Contract Management, Road Construction

INTRODUCTION

The extent that procurement of goods and services is of benefit to a public organization, and the public at large depends on how effective and efficient the tendering process is (Snider & Rendon, 2012). Public tendering process entails all phases used in acquisition of works, property and services, that involve the use of money belonging to the public to accomplish certain public goal. The process commences with need identification and concludes with the completion of contract. The evaluation of needs is carried out, products, scope of works, or services identified, delivery means and procedure for entering into a contract determined, the buying entity and supplier enter into a contract arrangement and services, goods or works are performed (Bolton, 2008). Tendering process is the sequential phases in the cycle of procurement, which include the procurement plan, procedures choice, soliciting of tenderers, examining and evaluating offers, awarding of contract as well as contract management. In other words, the tendering process begins from need identification, through suppliers selection, to awarding of contract and contract management, including disposal (Lindsley & Stephenson, 2008).

Public tendering process follows a stipulated legal framework during execution while advancing goals of the government (Gordon, 2009). The public entities carrying out the tender may have internal aims such as efficiency, cost and on time delivery of goods or services. In the same token, the public organizations have to attend to the objectives and goals of the public in general who may happen to have conflicting demands (Knight, Harland & Telgen, 2012). This complicates the tendering process and more so the tendering entities who have to attain the expected objectives. In the long run, many tendering entities suffer massive losses because of poor management of the tendering processes. The tendering process is mainly comprised of the tender plan, tendering itself as well as contract management (Shirima, 2009).

The processes of tendering especially tender planning impacts on duration it takes for the execution of works, goods or services to be delivered, the quality and also cost of the works, services or goods acquired, (Basheka, 2008). The management of contract stage aids government entities in getting the right quality of goods or services, within a specific time and budget. It is vital to take note of the tendering processes, among them planning, supplier selection, tendering method, as well as contract management, and it requires a holistic approach. These processes have a central role in the tendering process particularly in managing the contract smoothly and ultimate delivery of expected outputs. Consequently, so as to have a thorough tendering system, efficient tendering processes are of extreme importance to the tendering organization (Mahmood, 2010).

According to Liu, Wang and Wilkinson (2016), efficient and effective tendering processes results in positive social impacts such as enhanced expectation of realizing other government objectives, more access to government contracts by citizens, better reputation for government institutions, and quality social services including stable and reliable electricity, better roads, clean water, airports, schools, hospitals (Raymond, 2008). Poor public tendering processes translates to higher cost to the government and the citizens, delays in execution of projects or deliverables which ends up in escalation of cost, poorly executed project and delaying the delivery of benefits to the beneficiaries. They further result in poor proficiency of job contracts, delivering of poor-quality goods, delaying of benefits to the beneficiaries and nurtures elements of corruption in the tendering process (Tweneboah & Ndebugri, 2017).

Service delivery is a function that is very fundamental in the relationship between citizens and government of the day (Wagana, Iravo, Nzulwa & Kihoro, 2016). Government performance is measured through

service delivery to its people (Shimengah, 2018). Abe and Oluwaleye (2014) contends that the people expects to better service delivery from the government. They offered that improved health care at affordable rates, low inflation, provision of good urban roads and good road networks to the rural areas for the transport of agricultural products and raw materials, better education, provision of clean water, are the indices that can be used to measure service delivery to the people. Scholars around the globe contend that service delivery is an indicator of the health of a society, which strengthens the social contact between the state and its citizens. Public service delivery is also a key determinant of quality of life and an important element of poverty reduction strategy (Akinboade, Mokwena, & Kinack, 2013).

Statement of the Problem

The service delivery in government has continued to draw attention from the internal and external environment. Weakness in delivering public services can be put down to governance failure in developing countries, but it can be equally the case in the context of developed countries (Kemoni & Ngulube, 2008). It is a matter of how, in a given socioeconomic context, a particular country chooses to have its public services designed, developed and delivered. Various factors affecting service delivery include factors such as workforce remuneration, promotional procedures, training, and organizational culture among other factors (Pathak, Naz, Singh & Smith, 2010). However, it is important to note that service delivery in government institutions is highly dependent on efficient and effective tendering processes. Despite the existence of procurement departments and tendering committees in public institutions, the service deliveries they offer are still questionable. Kulshrestha (2013) notes that there is lack of transparency, efficiency, and unreliable delivery of services that mainly originates from poor tendering processes.

Efficient tendering system is a main prerequisite of managing public expenditure in a contemporary budgetary system. Effective tendering policies and practices can reduce public expenditure; yield timely outputs, stimulate private sector development; as well as reduce delays, waste, corruption and inefficiencies in government (Djurovic-Todorovic & Djordjevic, 2009). Conversely, using public funds inefficiently emanates from issues across the whole process of tendering, from needs identification, bidding documents creation, to a tender process that lacks competition and transparency especially during bidding, evaluation of bids, contract awarding, as well as poor contract supervision. Despite the efforts made to streamlining the public tendering processes in Kenya, tendering processes are still inefficient and usually lack proper accountability. Shirima (2009) is of the opinion that, tendering processes are key among the things that impede attainment of value for money in public sector procurement.

In Kenya, ninety three percent (93%) of all freight and passenger traffic is carried by road. The road network is extensive, consisting of approximately 161,451.4 kilometers (out of which 10% is paved, while the rest of the network is either gravel or earth roads). It is estimated that about 30% of the paved roads are in good condition while only about 20% of the unpaved roads is in maintainable condition. Hence a large portion of the network is in either poor or failed condition and requires urgent rehabilitation to restore it to a maintainable condition. According to the latest data from the Road Inventory and Condition Survey (RICS), the condition of paved roads is – 19% good, 22% fair and 59% poor; while condition of unpaved roads is - 12% good, 22% fair and 66% failed (KRB Annual Report, 2016). According to Annual Public Roads Programme for the Financial Year 2017/2018, road maintenance levy fund collected was 63.5 Billion Kenya Shillings from which 11.4 Billion Kenya Shillings (32%) was allocated to KeRRA. Comparatively, this was huge allocation and

yet very little had been achieved in terms of road development, rehabilitation, maintenance and management of rural roads in the country which fell under KeRRA. It was from this point of view that this study sought to find if tendering process had any effects on services delivery particularly in road construction sector. Besides, there was not a single study that had been carried out in this area and especially using a case of KeRRA. Therefore, this study sought to fill this gap.

Objectives of the Study

The aim of this study was to establish the effects of tendering process on services delivery in road construction sector in Kenya. The specific objectives were:-

- To determine the influence of Procurement Planning on services delivery in road construction sector in Kenya
- To find out the influence of Tendering Method on services delivery in road construction sector in Kenya
- To assess the influence that supplier selection has on services delivery in road construction sector in Kenya
- To establish the influence of contract management on services delivery in road construction sector in Kenya

LITERATURE REVIEW

Theoretical Review

Principal-Agent Theory

The Principal-Agent theory (also known as Agency Theory) was proposed by Jensen and Meckling in 1976 and is one of the main theoretical foundations for describing and analysing public governance. The theory brings out the relationship between a 'principal' who has objectives that are specific and 'an agent' who is mandated with the implementation of

activities geared towards achieving those objectives. Principal-agent theory is dependent on flow of information between the principal and the agent as well as power positions. The issue arises with management of agent's interests by the principal so that the agent's interests are matched with the principal's goals (Leruth & Paul, 2008).

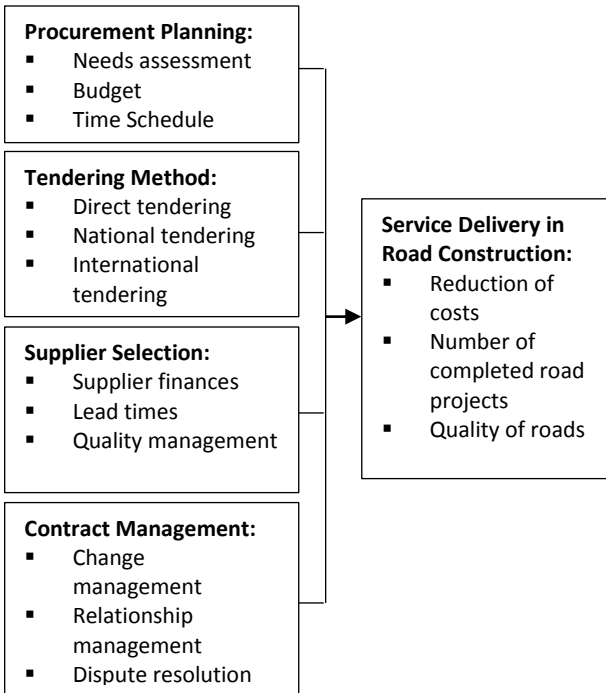
The theory directs that two fundamental tasks have first to be dealt with by the principal so as to choose and control their agents. The first task entails the selection of the best agents as well as creating incentives in order to get the desired results from them. The second task demands that the principal monitors if their agent's performance is as agreed (Gailmard, 2012). A problem may arise when the principal and the agent have conflicting goals or when verification of what the agent is actually doing is expensive or difficult for the principal. In this case asymmetric information introduces a moral hazard problem and an issue of adverse selection (Ballwieser, Bamberg, Beckmann, Bester, Blickle, Ewert & Gaynor, 2012). The problem of agency is predominantly prominent on the public service delivery demand-side, that originates from the fact that people involved such like politicians, citizens and contractors or suppliers have interests that are divergent in nature (Kamara, Ofori-Owusu & Sesay, 2012).

New Public Management Theory

The new public management theory developed by Hood in 1991 contends that to restructure the public sector in a more effective and cost-efficient way then it has to be opened up to a greater influence from private sector. Hughes (2012) asserts that new public management reform agendas focused on improving service quality in the public sector, public expenditure saving, making government operations more efficient as well as increasing the effectiveness of implementing policies. The opinion that monopolistic and large public organizations are fundamentally inept had a serious impact on the new public

management theory emergence (Diefenbach, 2009). New Public Management theory embodies a set of values, ideas and practices that aim to emulate practices in the private sector in the public sector (Groot & Budding, 2008).

Conceptual Framework



Independent Variables Dependent Variable
Figure 1: Conceptual Framework

Source: Researcher (2018)

Empirical Review

Procurement Planning

Planning consist of steps with an end result that is not concerned with decisions of ‘today’ but ‘today’s’ impact of decisions that were made ‘yesterday’ (Basheka, 2009). In addition, procurement planning involves finding out the business requirements that are best met by procuring services, works or goods. This process is concerned with; what to procure, how, where, how much, and when to procure (Snider & Rendon, 2012). Khan and Kumar (2012) noted that procurement plan illustrates the products being acquired, as well as when and how they are going to be acquired from suppliers. This process needs to be

supported by other departments through appropriate and timely submission of their procurement needs to the procurement department. In addition, procuring entities need to carry out regular market research on prices of different procurement supplies in order to establish representative cost estimate/budget.

A procurement plan must be prepared as required under public procurement act of 2015 for all public procuring entities so as to avoid emergency procurements and to use suitable procurement method wherever possible. Further, Arney, Yadav, Miller and Wilkerson (2014) notes that procurement plan makes possible aggregation of its requirements wherever possible, both in the procuring entities as well as between procuring entities so as to gain value for money and lessen cost of procurement while drawing on contract framework wherever necessary to provide cost effectiveness, efficiency and a flexible approach to procurement of services, works and supplies which are continuously needed in a given period.

Tendering method

Appropriate procurement method selection is fundamental for the buyer and supplier as it helps in the general satisfaction of the buyer and success of the project (Ramanathan & Narayanan, 2016). This selection depends on factors such as quality and time as well as the cost and they are generally regarded as the most important attaining the end product in the shortest time possible, highest quality and at the lowest cost (Kakwezi & Nyeko, 2010). Project developers today have a wide variety of procurement methods at their disposal and this has led to performance comparison between different methods of procurement. The variety of tendering methods at the disposal of buying entities has made the decision to choose any particular method for a given task quite a difficult one. Several determinants need to be considered for an informed decision to be made on the right method of procurement.

According to Love, Davis, Edwards and Baccarini (2008), selecting appropriate procurement method involves first carrying out an analysis so as to establish priorities for project objectives and secondly, there is a need to compare variety of other options available before selection of the most appropriate one. It is crucial that the buyer's needs and requirements be presented accurately and vividly. There's a preference for using competitive methods of procurement given that they tend to promote transparency, economy and efficiency, and limit favouritism. This procurement methods include direct procurement, National Competitive Tendering (NCT), International Competitive Tendering among others.

Supplier selection

Supplier selection is considered to be one of the most important steps in the purchasing process and usually occurs after the specification is done. This because too detailed specifications will limit the suppliers hence giving the buyer limited buying power over the supplier (Ho, Xu & Dey, 2010). Supplier selection is generally done working together with buyers, and it relates to all activities that require doing to determine the best supplier (Lee, Kang, Hsu & Hung, 2009). To begin with, the buyer should provide a response to the 'make-or-buy' question, and then determine the likely suppliers from the existing or find new suppliers. After the buyer decides to buy, the second step involves determination of the subcontracting method mainly either, turnkey or partial subcontracting. Turnkey subcontracting leaves the whole responsibility of supplying to one supplier while partial subcontracting divides the responsibility between various suppliers. The buyer afterwards decides whether payment to the supplier should be made on a cost-reimbursable basis or fixed-price (Van Weele, 2010; Zhang & Chen, 2013).

Contract Management

Benton and McHenry (2010) describe a contract as an agreement between the supplier and the buyer

whereby both parties have to agree to the transaction buying before the sale can take place. It is critical that a buyer understands contract laws and terms as well as ways to manage them. Moreover, there are various parts in the contract that the buyer may not understand and as such legal counselling is necessary (Rendon, 2008). The contract should clearly indicate terms and conditions as well as the prices. The supplier must accept all the risks, and take responsibility for such things as late deliveries, which might not be part of the contract. The buyer should normally ask for a fixed price mode of engagement, through competition in bids or negotiating with the supplier as this makes it easier to control the cost (Guth, 2009).

For a contract to be enforceable it must contain four different components, in which case if it lacks any of the components the contract may not be binding. In the first component, both buyer and supplier should have awareness of what they are doing. This means that none of the parties signing the contract can be an alcoholic, a drug addict, or insane. The second component requires that the contract be legal such that the service or product is not against public policy or illegal. In the third component there has to be mutual consideration, which simply means that a certain promised value has to be delivered. Such values include price as well as right quality and quantity of deliverables. The last component has to do with the agreement by both parties whereby both accept and sign the contract (Knight, Harland & Telgen, 2012). Usually, a penalty clause has to be included in the contracts to ensure that the deliverables are delivered in good condition. Van Weele and Van Raaij (2014) observe that a contract is not complete until it provides a penalty clause that indicates what happens if a party does not honour its obligations, e.g. late deliveries.

Service Delivery

Service is defined as an activity or a product that solves a user's problem or can be useful to users in

their day-to-day events. Elsewhere, Carlson and O'Casey (2010) depicted service delivery as the relationship between policy makers, service providers and poor people. Service delivery encompasses services and their supporting systems that are typically regarded as a state responsibility. These include social services (primary education and basic health services), infrastructure (water, sanitation, roads and bridges) and services that promote personal security (Alford, 2009).

It is hard and difficult task to measure services rendered. However, Mugambi (2013) avers that to be effective, services are related to attributes such as; timely and available at space and time scales needed by the user; They also need to be reliable and dependable; usable that is, presented in a format users can fully understand; useful implying that user needs are responded to appropriately; credible so that the user can confidently use it in decision-making and it should also be flexible and responsive to the changing user needs. The determinants of service quality by order of importance include reliability, responsiveness (willingness to help customers and prompt service assurance), and the ability to convey trust, empathy and individualized attention to customers (Mutali, 2008).

METHODOLOGY

The research was explanatory and followed a cross-sectional survey as the main objective was to determine the effects of tendering process on services delivery in road construction sector. A case of KeRRA, Kenya. Explanatory survey design allows the use of inferential statistics to determine relationship between the study variables in the model (Hair *et al.*, 2010). The source of information was employees and management of KeRRA, Kenya. This was so as to provide first hand details concerning the information being sought by the study. The total population for this study was 780 employees and management of KeRRA, Kenya. This study adopted

simple random sampling method as it enabled the researcher to eliminate sampling bias. The study used structured questionnaires for collecting primary data from respondents. The study was guided by a model of the form:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$$

Where:

Y = Represents the dependent variable (Service Delivery)

β_0 = The Constant or the value of Y when all X -values are zero.

β_i = The regression coefficients ($i = 1, 2, 3$ and 4). The regression coefficients indicate the relative importance of each of the independent variables in prediction of the dependent variable.

X_i = The independent variables ($i = 1, 2, 3$ and 4) will explain the variation in the dependent variable (Service Delivery). In this case:

X_1 = Procurement Planning

X_2 = Tendering Method

X_3 = Supplier Selection

X_4 = Contract Management

ε = the error term (To account for all other Variables not considered in the study), assumed to be normally distributed with mean zero and constant variance.

RESULTS

Responses were given on a five-point likert scale (where 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5= Strongly Agree). The scores of 'strongly disagree' and 'disagree' were taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' were taken to represent a statement equivalent to a mean

score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' were taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0.

Procurement Planning

The study sought to assess the effects of procurement planning on the service delivery in the road construction sector in Kenya. Table 1 presented the findings. As tabulated, a majority of respondents were found to be neutral with the statement posed in regard to the effects of procurement planning on the service delivery in the road construction sector in Kenya. The study established that the procurement methods used in the organization were in line with the Act (Mean=3.212). The organization carried out procurement in accordance with the set procedures (Mean=3.009). The procurement plan was prepared early enough to allow for proper allocation of funds (Mean=2.897). The budget was first approved before any procurement was initiated ((Mean=3.112).

Table 1: Procurement Planning Statistics

Procurement Planning	Mean	Std. Dev
The procurement methods used in the organization are in line with the Act	3.212	1.243
The organization carries out procurement in accordance with the set procedures	3.009	1.432
The procurement plan is prepared early enough to allow for proper allocation of funds	2.897	1.535
The budget is first approved before any procurement is initiated	3.112	1.529
The organization ensures there is a procurement plan to avoid reckless and over spending of funds	3.342	1.908

Tendering Methods

The study sought to assess the influence of tendering methods on service delivery in the road sector in Kenya. As tabulated, a majority of respondents found that the organization ensured that there was open tendering to increase the needed experience from the tenderers (3.232); The organization offered the open tendering to encourage applications from the qualified tenderers (3.121); The organization ensured that open tendering led to fairness and transparency in the tendering process (2.998); The organization

The organization ensured there was a procurement plan to avoid reckless and over spending of funds ((Mean=3.342). The study findings implied that procurement planning affects service delivery in the road construction sector in Kenya. The study findings were in tandem with literature review by Byokusheka (2010) and Basheka (2004) argued that employees involvement was very critical in formulation of procurement plans and the top management needed to have necessary leadership skill which would enable them involve all employees in decision making. The study finally indicated that the procurement thresholds were being observed to a small extent especially in the deciding which procurement method should be applied. This implied that the organization was not fully adhering to the procurement rules relating to procurement threshold. The findings were contrary to PPADA (2015) which indicated that the organizations must fully comply to the laid down procurement rules and regulation.

ensured that the single sourcing of suppliers leads to reduction of procurement costs in the tendering process (2.876); The organization ensured that the single sourcing of suppliers enhanced timely delivery of goods and services (2.987). The organization ensured that the request for quotations from suppliers led to reduction of procurement costs in the tendering (3.154). The study findings indicated that procurement methods influence tendering process in the organization. The study findings were in agreement with literature review by Kiage (2013) notes that request for quotations does not allow for

competition in the county's procurement department. Request for quotations involves the entity lending itself to irregularities because the

procuring entity selects the suppliers, service providers or contractors that it wants to send a request for quotations.

Table 2: Tendering Methods Statistics

Tendering Methods	Mean	Std. Dev
The organization ensures that there is open tendering to increase the needed experience from the tenderer	2.987	1.237
The organization offers the open tendering to encourage applications from the qualified tenderers	3.223	1.379
The organization ensures that open tendering lead to fairness and transparency in the tendering process	2.902	1.908
The organization ensures that the single sourcing of suppliers leads to reduction of procurement costs in the tendering process	3.452	1.114
The organization ensures that the single sourcing of suppliers enhance timely delivery of goods and services	2.762	1.238
The organization ensures that the request for quotations from suppliers leads to reduction of procurement costs in the tendering process	4.214	1.908

Supplier Selection

The study sought to assess the effects of supplier selection on the service delivery in the road construction sector in Kenya. A majority of respondents were found to be neutral with the statement posed in regard to the influence of supplier selection on the service delivery in the road construction sector in Kenya. The study established that the organization believed in supplier evaluation to improve performance of its suppliers (Mean=2.908). The organization focused on building long lasting relationships with suppliers (Mean=3.218). The county organization made timely payments to the suppliers after goods and service

delivery (Mean=2.986).). The organization conducts supplier appraisals annually (Mean=3.217). The study findings were in agreement with literature review by Ansari (2009) that supplier selection allows firm to make better use of their suppliers capabilities and coordinating operational activities through joint planning also results to inventory reduction, smoothing production, improve product quality, and lead time reduction Browne (2004) contends that supplier selection is a comprehensive approach to managing an enterprise's interactions with the organizations that supply the goods and services it uses.

Table 3: Supplier Selection Statistics

Supplier Selection	Mean	Std. Dev
The organization believes in supplier evaluation to improve performance of its suppliers	2.908	1.876
The organization focuses on building long lasting relationships with suppliers	3.218	1.276
The organization makes timely payments to the suppliers after goods and service delivery	2.986	1.653
The organization conducts supplier appraisals annually	3.217	1.287

Contract Management

The study sought to assess the effects of contract management on the service delivery in the road construction sector in Kenya. According to the study results in Table 4, a majority of respondents were found to disagree with the statement that the organization ensured that it controls and certifies that both contracting parties had honored the contractual

responsibilities (2.325). The organization controlled and certified activities involved in evaluating degree of successful contract execution (2.223); The organization ensured that there was achievement of the expected results (2.221); The organization ensured that both parties terminated the contracts effectively (2.321).

Table 4: Contract Management Statistics

Contract Management	Mean	Std. Dev
The organization ensures that it controls and certifies that both contracting parties have honored the contractual responsibilities	2.325	.235
The organization controls and certifies activities involved in evaluating degree of successful contract execution	2.223	.321
The organization ensures that there is a of the expected results	2.221	.251
The organization ensures that both parties terminates the contracts effectively	2.321	.238

Service Delivery

The study sought to determine the effects of tendering process on service delivery in road sector reached attributed to the adoption of the procurement planning, tendering methods, supplier selection Findings in Table 5 below revealed improved service delivery in road sector across the 5 year period running from the year 2013 to 2016.

(42.30%), to quality of roads by 0%-20% in 2013 (37.7%), 21%-40% in 2014 (3.10%), quality of roads improved by more than 40% in 2015 and improved by more than 40% in 2016(37.50%).

In the reduction of costs, a majority of respondents affirmed having grown incrementally from 0%-20% in 2012 (41.9%), to cost reduction by 0%-20% in 2013 (37.9%), 21%-40% in 2014 (34.80%), reduction of costs by 21%-40% in 2015 and 21%-40% in 2016 Quality of roads also recorded positive with a majority affirming a majority of respondents affirmed having grown incrementally from 0%-20% in 2012

A similar trend was recorded in number of completed roads of 0%-20% in 2012 (44.10%), 0%-20% in 2013 (35.20%), 21%-40% in 2014 (36.40%), number of completed roads improved by more than 40% in 2015(41.10%) and improved by more than 40% in 2016(37.30%). It was deduced from the findings that service delivery in road construction sector had considerable improved with the adoption of the procurement planning, tendering methods, supplier selection and contract management.

Table 5: Service Delivery

Reduction of Costs	2012	2013	2014	2015	2016
Reduced by 0%-20%	41.9	37.9	33.8	29.7	29.1
Reduced by 21%-40%	33.2	29.6	34.8	31.3	34.7
Reduced by more than 40%	24.9	31.5	31.4	39.0	36.2
Quality of Roads	2012	2013	2014	2015	2016
Reduced by 0%-20%	42.3	37.7	31.6	30.7	29.5
Reduced by 21%-40%	31.8	32.9	36.1	28.2	33

Reduced by more than 40%	25.9	29.4	32.3	41.1	37.5
Number of Roads Completed	2012	2013	2014	2015	2016
Improved by 0%-20%	44.1	35.2	33.4	25.7	27.1
Improved by 21%-40%	31.7	32.6	30.2	33.9	35.6
Improved by more than 40%	23.5	32.2	36.4	40.4	37.3

Multiple Regression Analysis Model

It was notable that there exists strong positive relationship between the independent variables and dependent variable as shown by R value (0.844). It showed that the independent variables in the study were able to explain 71.20% variation in the service delivery in the road sector while the remaining 29.80% was explained by the variables or other aspects outside the model. This indicated that procurement planning; tendering methods, supplier selection and contract management need to be well adopted to enhance service delivery in the road sector in Kenya.

Based on the study results of the ANOVA Test or F-test in Table 7, obtained F-count (calculated) value was 23.749 greater the F-critical (table) value 12.345 with significance of 0.000. Since the significance level of $0.000 < 0.05$ we concluded that the set of independent variables (procurement planning, supplier management, ICT and professionalism) had significant influence on the implementation of procurement practices in the county governments in Kenya (Y-dependent variable) and this showed that the overall model was significant.

From the study findings in table 8, regression equation established, taking all factors into account (independent variables) constant at zero service delivery in the road sector would be 16.890. The data findings analysed also showed that taking all other independent variables at zero, a unit increase in procurement planning would lead to a 0.732 increase in service delivery in the road sector. Based at 5%

level of significance, procurement planning was found to have a calculated $t = 5.008$ (greater than the tabulated value of $t > 1.96$) and a significance level of 0.000. This indicated that procurement planning influenced service delivery in the road sector in Kenya.

A unit increase in supplier selection would lead to a 0.600 increase in service delivery in the road sector, supplier selection show a calculated $t = 6.406$ (greater than the tabulated value of $t > 1.96$) and a significance level of 0.002 thus the value of less than 0.05. This indicated that supplier selection influenced service delivery in the road sector in Kenya. This provided the supplier selection to focus on the activity, performance standards, and results achieved in respect to the work involved in the planning for, the establishment and subsequent management and use of supply arrangements in the public sector. This helped to ensure the organization achieved maximum spending leverage in supply negotiations. It also ensured consistent and thorough market analysis, costing measures, and compliance methods are applied to each expenditure category (SDPC, 2009).

A unit increase in contract management would lead to 0.545 increases in service delivery in the road sector in Kenya. The contract management was found to have a calculated $t = 5.927$ (greater than the tabulated value of $t > 1.96$) and significance level of 0.015 thus the value of less than 0.05. This indicated that contract management influenced service delivery in the road sector in Kenya.

Table 6: Model Summary (Overall)

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
1	.844	.712	.698	.001

Table 7: ANOVA Results

Model	Sum of Squares	d.f	Mean Square	F	Sig.
Regression	65.908	4	16.477	36.253	.000
Residual	65.908	145	.4545		
Total	81.816	149			

NB: F-critical value = 18.764

Table 8: Coefficient Results

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	β	Std. Error	β			
(Constant)	16.890	2.859			5.908	.000
X ₁ -PP	.732	.146	.687		5.008	.000
X ₂ -TM	.630	.098	.596		6.406	.001
X ₃ -SS	.600	.101	.497		5.927	.006
X ₄ -CM	.545	.109	.456		5.000	.015

CONCLUSION

The study concluded that there was a significant relation between the procurement planning and service delivery in the road construction sector in Kenya. Procurement planning was found to have a significant positive influence on service delivery in the road construction sector in Kenya. This can be deduced to conclude that increasing levels of procurement planning would increase the levels of service delivery in the road construction sector in Kenya.

The study concluded that there was a significant relation between the tendering methods and service delivery in the road construction sector in Kenya. Tendering methods was found to have a significant positive influence on service delivery in the road construction sector in Kenya. This was deduced to conclude that increasing levels of tendering methods would increase the levels of service delivery in the road construction sector in Kenya.

Further, the study concluded that there was a significant relation between the supplier selection and service delivery in the road construction sector in Kenya. Supplier selection was found to have a significant positive influence on service delivery in the road construction sector in Kenya. This was deduced to conclude that increasing levels of supplier selection would increase the levels of service delivery in the road construction sector in Kenya.

Finally, the study concluded that there was a significant relation between contract management and service delivery in the road construction sector in Kenya. Contract management was found to have a significant positive influence on service delivery in the road construction sector in Kenya. This was deduced to conclude that increasing levels of contract management would increase the levels of service delivery in the road construction sector in Kenya.

Recommendations of the Study

The study recommended that the organization need to identify the most appropriate procurement

methods to enhance service delivery. There is need to have an open tendering to increase the needed experience and qualified tenderers, lead to fairness and transparency in the tendering process. The organization should ensure that that the single sourcing of suppliers leads to reduction of procurement costs in the tendering process and enhance timely delivery of goods and services.

The study recommended that there is need for organization to create and maintain a good relationship with the contractors. There should be a mutual trust between the contractor and organization. There is need to enhance regular communication with the contractor and timely management of possible problems in the contract. The study recommends that the organization control and manage contract changes efficiently by ensuring that the contractors are paid in time. There should be

regular communication between the organization and contractor. The organization should ensure that the contract terms were well adhered to and final reports always well maintained.

Areas for Further Research

The study established that tendering process affects service delivery in road construction sector in Kenya. The tendering process in terms of procurement planning, tendering methods, supplier selection and contract management accounted for the 62.00% of service delivery in road construction sector in Kenya. There is need to establish other factors which account for 38.00% of service delivery in road construction sector in Kenya. There is need also to establish whether the contract management practices influence service delivery in road construction sector in Kenya.

REFERENCES

- Abe, T., & Oluwaleye, J. M. (2014). Citizen Participation and service delivery at the local government level: A case of ise/orun local government in Ekiti State, Nigeria. *JL Pol'y & Globalization*, 27, 102.
- Ahmed, E. A. R. E., Mahfouz, M. S., & Fdul, I. O. (2011). How to determine sample size: The design of sample size in health studies. *Gezira Journal of Health Sciences*, 7(2).
- Akinboade, O. A., Putuma, M. M., & Kinfack, E. C. (2013). Understanding citizens' participation in service delivery protests in South Africa's Sedibeng district municipality. *International Journal of Social Economics*, 40(5), 458-478.
- Akuffo, M. K. (2014). *Assessing the level of compliance with the public procurement Act 2003, (Act 663) in selected public entities in Upper Denkyira East Municipality, Central Region* (Doctoral dissertation).
- Alford, J. (2009). *Engaging public sector clients: from service-delivery to co-production*. Springer.
- Arifin, W. N. (2013). Introduction to sample size calculation. *Education in Medicine Journal*, 5(2).
- Arney, L., Yadav, P., Miller, R., & Wilkerson, T. (2014). Improving procurement practices in developing country health programs. *Ann Arbor: William Davidson Institute, University of Michigan*.
- Arrowsmith, S., & Quinot, G. (Eds.). (2013). *Public procurement regulation in Africa*. Cambridge University Press.
- Ballwieser, W., Bamberg, G., Beckmann, M. J., Bester, H., Blickle, M., Ewert, R., ... & Gaynor, M. (2012). *Agency theory, information, and incentives*. Springer Science & Business Media.

- Barua, A. (2013). Methods for decision-making in survey questionnaires based on Likert scale. *Journal of Asian Scientific Research*, 3(1), 35.
- Basheka, B. C. (2008). Procurement planning and accountability of local Government procurement systems in developing countries: Evidence from Uganda. *Journal of Public Procurement*, 8(3), 379-406.
- Basheka, B. C. (2009). Procurement planning and local governance in Uganda: A factor analysis approach. *International Journal of Procurement Management*, 2(2), 191-209.
- Basheka, B. C., & Bisangabasaija, E. (2009). Determinants of unethical public procurement in local government systems of Uganda: a case study. *International Journal of Procurement Management*, 3(1), 91-104.
- Benton, W. C., & McHenry, L. F. (2010). *Construction purchasing & supply chain management*. New York: McGraw-Hill.
- Bergman, M. A., & Lundberg, S. (2013). Tender evaluation and supplier selection methods in public procurement. *Journal of Purchasing and Supply Management*, 19(2), 73-83.
- Bolton, P. (2008). The public procurement system in South Africa: main characteristics. *Public Contract Law Journal*, 781-802.
- Bozeman, B., & Su, X. (2015). Public service motivation concepts and theory: A critique. *Public Administration Review*, 75(5), 700-710.
- Bryman, A. (2015). *Social research methods*. Oxford university press.
- Carlson, J., & O'Cass, A. (2010). Exploring the relationships between e-service quality, satisfaction, attitudes and behaviours in content-driven e-service web sites. *Journal of services marketing*, 24(2), 112-127.
- Cohen, N. (2016). Forgoing new public management and adopting post-new public management principles: The on-going civil service reform in Israel. *Public Administration and Development*, 36(1), 20-34.
- Cooper & Schindler (2011). *Business Research Methods*. India: McGraw-hill.
- Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Denhardt, J. V., & Denhardt, R. B. (2015). *The new public service: Serving, not steering*. Routledge.
- Diefenbach, T. (2009). New public management in public sector organizations: the dark sides of managerialistic 'enlightenment'. *Public administration*, 87(4), 892-909.
- Djurovic-Todorovic, J., & Djordjevic, M. (2009). The Importance of Public Expenditure Management in Modern Budget System. *Facta Universitatis Series: Economics and Organization*, 6(3), 281-294.
- Drost, E. A. (2011). Validity and reliability in social science research. *Education Research and Perspectives*, 38(1), 105.

- Engelbert, A., Kaltenborn, M., & Reit-Born, N. A. (2016). *Effective corruption control: Supplier remedies in public procurement in Kenya, Uganda and Tanzania-A comparative analysis of mechanisms and their implementation* (Vol. 68). Logos Verlag Berlin GmbH.
- Francis, J. J., Johnston, M., Robertson, C., Glidewell, L., Entwistle, V., Eccles, M. P., & Grimshaw, J. M. (2010). What is an adequate sample size? Operationalising data saturation for theory-based interview studies. *Psychology and Health, 25*(10), 1229-1245.
- Gailmard, S. (2012). Accountability and principal-agent models. *Chapter prepared for the Oxford Handbook of Public Accountability*.
- Garson, G. D. (2012). Testing statistical assumptions. *Asheboro, NC: Statistical Associates Publishing*.
- Githinji, R. M., & Were, S. (2018). Challenges of Implementing E-Procurement in the Ministry of Transport, Infrastructure, Housing and Urban Development in Nairobi, Kenya. *Journal of procurement & Supply Chain, 2*(1), 1-13.
- Gordon, M. J. (2009). Public procurement strategy for accelerating the economic recovery. *Supply Chain Management: An International Journal, 14*(6), 429-434.
- Groot, T., & Budding, T. (2008). New public management's current issues and future prospects. *Financial Accountability & Management, 24*(1), 1-13.
- Gumede, N., & Dipholo, K. B. (2014). Governance, restructuring and the new public management reform: South African perspectives. *Journal of Educational and Social Research, 4*(6), 43.
- Guth, S. (2009). *Project procurement management: A guide to structured procurements*. Lulu. com.
- Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2010). *Multivariate Data Analysis*. Seventh Edition. Prentice Hall, Upper Saddle River, New Jersey.
- Ho, W., Xu, X., & Dey, P. K. (2010). Multi-criteria decision making approaches for supplier evaluation and selection: A literature review. *European Journal of operational research, 202*(1), 16-24.
- Hughes, O. E. (2012). *Public management and administration: An introduction*. Macmillan International Higher Education.
- Ika, L. A., Diallo, A., & Thuillier, D. (2012). Critical success factors for World Bank projects: An empirical investigation. *International journal of project management, 30*(1), 105-116.
- Jacob, O. A. (2010). Procurement law in Nigeria: Challenge for attainment of its objectives. *U. Botswana LJ, 11*, 131.
- Johnson, B., & Christensen, L. (2008). *Educational research: Quantitative, qualitative, and mixed approaches*. Sage.
- Kakwezi, P., & Nyeko, S. (2010). Procurement processes and performance: Efficiency and effectiveness of the procurement function. *Retrieved April, 3*(2011), 1-22.

- Kamara, S., Ofori-Owusu, D., & Sesay, L. F. (2012). Governance, Accountability and Effective Basic Service Delivery in Sierra Leone.
- Kemoni, H., & Ngulube, P. (2008). Relationship between records management, public service delivery and the attainment of the United Nations Millennium Development Goals in Kenya. *Information Development, 24*(4), 296-306.
- Khan, S., & Kumar, S. (2012). Optimization of Material Procurement Plan—A Database Oriented Decision Support System. *Bharati Vidyapeeth's Institute of Computer Applications and Management (BVICAM)*, 417.
- Kimberlin, C. L., & Winterstein, A. G. (2008). Validity and reliability of measurement instruments used in research. *Am J Health Syst Pharm, 65*(23), 2276-84.
- Knight, L., Harland, C., & Telgen, J. (2012). Public procurement in perspective. In *Public Procurement* (pp. 44-52). Routledge.
- Kombo, D. K., & Tromp, D. L. (2011). *Proposal and thesis writing; An introduction*. Nairobi. Paulines Publications Africa.
- Korir, S., Rotich, J., & Bengat, J. (2015). Performance management and public service delivery in Kenya. *European Journal of Research and Reflection in Management Science, 3*(4).
- Kraaijenbrink, J., Spender, J. C., & Groen, A. J. (2010). The resource-based view: A review and assessment of its critiques. *Journal of management, 36*(1), 349-372.
- Kulshrestha, S. P. (2013). Public Service Delivery System and E-governance. *CSI Communications, 37*(4), 18-20.
- Kusumasari, B., Alam, Q., & Siddiqui, K. (2010). Resource capability for local government in managing disaster. *Disaster Prevention and Management: An International Journal, 19*(4), 438-451.
- La Rue, K. S., Alegre, J. C., Murei, L., Bragar, J., Thatte, N., Kibunga, P., & Cheburet, S. (2012). Strengthening management and leadership practices to increase health-service delivery in Kenya: an evidence-based approach. *Human resources for health, 10*(1), 25.
- Lambright, K. T. (2008). Agency theory and beyond: Contracted providers' motivations to properly use service monitoring tools. *Journal of Public Administration Research and Theory, 19*(2), 207-227.
- Lee, A. H., Kang, H. Y., Hsu, C. F., & Hung, H. C. (2009). A green supplier selection model for high-tech industry. *Expert systems with applications, 36*(4), 7917-7927.
- Leruth, L., & Paul, E. (2008). A principal-agent theory approach to public expenditure management systems in developing countries. *OECD Journal on Budgeting, 7*(3), 1-29.
- Lindsley, G., & Stephenson, P. (2008). E-tendering tendering process within construction: A UK perspective. *Tsinghua Science and Technology, 13*(S1), 273-278.
- Liu, T., Wang, Y., & Wilkinson, S. (2016). Identifying critical factors affecting the effectiveness and efficiency of tendering processes in Public–Private Partnerships (PPPs): A comparative analysis of Australia and China. *International Journal of Project Management, 34*(4), 701-716.

- LoBiondo-Wood, G., & Haber, J. (2014). Reliability and validity. *Nursing research-ebook: Methods and critical appraisal for evidence-based practice*. Missouri: Elsevier Mosby, 289-309.
- Love, P. E., Davis, P. R., Edwards, D. J., & Baccarini, D. (2008). Uncertainty avoidance: public sector clients and procurement selection. *International Journal of Public Sector Management*, 21(7), 753-776.
- Mahmood, S. A. I. (2010). Public procurement and corruption in Bangladesh confronting the challenges and opportunities. *Journal of public administration and policy research*, 2(6), 103-111.
- Malaba, P. N., Ogolla, K., & Mburu, D. K. (2014). Influence of Green Supply Chain Management strategy on procurement performance of sugar industry in Kenya. *International Journal of Economics, Commerce and Management United Kingdom*, 2(11).
- Mamiro, R. G. (2012). Regulating Procurement in Commercial Public Entities: Merits and Demerits. In *5th International Public Procurement Conference, August, Seattle, WA*.
- Mlinga, R. S. (2008, September). Ethics in Public Procurement: A missing link in the education and training of construction industry practitioners. In *Proceedings of Construction Industry Forum, September 12-13, Dar es Salaam, Tanzania* (pp. 1-19).
- Mongkol, K. (2011). The critical review of new public management model and its criticisms. *Research Journal of Business Management*, 5(1), 35-43.
- Montgomery, D. C., Peck, E. A., & Vining, G. G. (2012). *Introduction to linear regression analysis* (Vol. 821). John Wiley & Sons.
- Motza, M., & Conder, D. J. (2012). Sustainability through Contract Drafting and Management. *Government Finance Review*.
- Mugambi, M. K. (2013). Effects of E-government strategy on service delivery in the government ministries in Kenya. *Unpublished Research Project, University of Nairobi, Nairobi*.
- Mukura, P. K., Shalee, N., Kanda, M. K., & Ngatia, P. M. (2016). Role of Public Procurement Oversight Authority on Procurement Regulations in Kenyan State Corporations. A Case of Kenya Electricity Generating Company (KenGen). *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 6(3), 190-201.
- Muriu, A. R. (2017). Performance management in Kenya's public service.
- Mutali, E. (2008). Factors influencing quality service delivery in Kenya Ports Authority.
- Neuman, W. L. (2013). *Social research methods: Qualitative and quantitative approaches*. Pearson education.
- Okech, T.C. (2017). Impact of Performance Contracting on Efficiency in Service Delivery in the Public Sector. *International Journal of Economics, Commerce and Management*, 5(5), 198-213.
- Osborne, S. P., & Brown, L. (2011). Innovation, public policy and public services delivery in the UK. The word that would be king?. *Public Administration*, 89(4), 1335-1350.

- Oso, W. Y. & Onen, D. (2011). *A general guide to writing research proposal and report; Handbook for beginning researchers*. Nairobi. Jomo Kenyatta Foundation.
- Pathak, R. D., Naz, R., Singh, G., & Smith, R. F. I. (2010). ICT for improved public service delivery in Papua New Guinea (PNG). *Journal of Administration & Governance*, 5(1), 36-44.
- Podrug, N., Filipovic, D., & Milic, S. (2010). Critical Overview of Agency Theory. *Annals of DAAAM & Proceedings*.
- Ramanathan, C.T., & Narayanan, S. (2016). Project Procurement Methods and Success of Infrastructure Projects in Malaysia. *International Journal of Innovative Research in Science, Engineering and Technology*, 5(14), 346-353.
- Raymond, J. (2008). Benchmarking in public procurement. *Benchmarking: An International Journal*, 15(6), 782-793.
- Rendon, R. G. (2008). Procurement process maturity: Key to performance measurement. *Journal of Public Procurement*, 8(2), 200-214.
- Rendon, R. G. (2010). *Assessment of Army Contracting Command's contract management processes* (No. NPS-CM-10-154). Naval Postgraduate School Monterey CA Graduate School of Business and Public Policy.
- Rossi, P. H., Wright, J. D., & Anderson, A. B. (Eds.). (2013). *Handbook of survey research*. Academic Press.
- Shimengah, M. M. (2018). Influence of Strategic Leadership Practices on Service Delivery Within County Governments in Kenya: A Literature Review. *Journal of Strategic Management*, 3(1), 1-13.
- Shirima, L. (2009). Procurement of Roadworks and Standardizing for Improvement of Absorption Capacity. *Tanzania Procurement Journal*, 38-41.
- Sifuna, O. N. (2012). *Perceived effect of performance contracting on service delivery at Jomo Kenyatta University of agriculture and technology* (Doctoral dissertation, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI).
- Simonet, D. (2011). The new public management theory and the reform of European health care systems: An international comparative perspective. *International Journal of Public Administration*, 34(12), 815-826.
- Snider, K. F., & Rendon, R. G. (2012). Public procurement: Public administration and public service perspectives. *Journal of Public Affairs Education*, 18(2), 327-348.
- Snider, K. F., & Rendon, R. G. (2012). Public procurement: Public administration and public service perspectives. *Journal of Public Affairs Education*, 18(2), 327-348.
- Song, Z., Landrum, M. B., & Chernew, M. E. (2013). Competitive bidding in Medicare Advantage: Effect of benchmark changes on plan bids. *Journal of health economics*, 32(6), 1301-1312.
- Tai, Y. M. (2017). Role of management capability and web-enabled direct procurement in creating competitive direct procurement advantage. *International Journal of Logistics Systems and Management*, 26(1), 125-143.

- Takano, Y., Ishii, N., & Muraki, M. (2014). A sequential competitive bidding strategy considering inaccurate cost estimates. *Omega*, 42(1), 132-140.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International journal of medical education*, 2, 53.
- Tejada, J. J., & Punzalan, J. R. B. (2012). On the misuse of Slovin's formula. *The Philippine Statistician*, 61(1), 129-136.
- Thai, K. V. (Ed.). (2008). *International handbook of public procurement*. CRC Press.
- Tweneboah, S. E., & Ndebugri, H. (2017). Evaluating the effectiveness of the Procurement Acts in public financial administration; the case study in Ghana.
- Uyarra, E., Edler, J., Garcia-Estevéz, J., Georghiou, L., & Yeow, J. (2014). Barriers to innovation through public procurement: A supplier perspective. *Technovation*, 34(10), 631-645.
- van Waarden, F., & van Kersbergen, K. (2009). 'Governance' as a bridge between disciplines: Cross-disciplinary inspiration regarding shifts in governance and problems of governability, accountability and legitimacy. In *European Corporate Governance* (pp. 64-80). Routledge.
- Van Weele, A. J. (2010). *Purchasing & supply chain management: analysis, strategy, planning and practice*. Cengage Learning EMEA.
- Van Weele, A. J., & Van Raaij, E. M. (2014). The future of purchasing and supply management research: About relevance and rigor. *Journal of Supply Chain Management*, 50(1), 56-72.
- Verschuren, P., Doorewaard, H., & Mellion, M. (2010). *Designing a research project* (Vol. 2). The Hague: Eleven International Publishing.
- Vyas-Doorgapersad, S. (2011). Paradigm shift from new public administration to new public management: Theory and practice in Africa. *TD: The Journal for Transdisciplinary Research in Southern Africa*, 7(2), 235-250.
- Wagana, D. M., Iravo, M. A., Nzulwa, J. D., & Kihoro, J. M. (2016). Effect of Financial and Political Decentralization on Service Delivery in County Governments in Kenya. *International Journal of Academic Research in Business and Social Sciences*, 6(6), 304-320.
- Waigwa, M. W., & Njeru, A. (2016). Factors influencing management of procurement contracts in public security agencies: A case of Kenya Police Service. *International Academic Journal of Procurement and Supply Chain Management*, 2(2), 20-40.
- Wetzstein, A., Hartmann, E., Benton Jr, W. C., & Hohenstein, N. O. (2016). A systematic assessment of supplier selection literature—state-of-the-art and future scope. *International Journal of Production Economics*, 182, 304-323.
- Whipple, J. M., & Roh, J. (2010). Agency theory and quality fade in buyer-supplier relationships. *The International Journal of Logistics Management*, 21(3), 338-352.

- Zhang, J. L., & Chen, J. (2013). Supplier selection and procurement decisions with uncertain demand, fixed selection costs and quantity discounts. *Computers & Operations Research*, 40(11), 2703-2710.
- Zungura, M. (2014). Understanding New Public Management within the Context of Zimbabwe. *International Review of Social Sciences and Humanities*, 6(2), 246-253.