Achieving Public Participation through Risk Management for Sustainable Procurement Management in Devolved System of Governments in Kenya

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Type of Work: Peer Reviewed.
DOI: http://dx.doi.org/10.21013/jmss.v16.n4.p3

How to cite this paper:
doi:http://dx.doi.org/10.21013/jmss.v16.n4.p3

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Public participation is a concept enshrined in the Kenyan constitution, 2010 with an intention to devolve powers to the common citizens and increase transparency and accountability hence may play a role towards public procurement sustainability. However, the relationship between public participation through risk management and sustainable procurement management has not yet been established despite many community-based infrastructure projects facing a lot of supply disruptions, health and safety issues as well as poor supplier selection in county governments in Kenya. The study, therefore, intended to assess the influence of public participation through risk management for sustainable procurement management in devolved systems of government in Kenya. The study adopted a descriptive study design. The target population was 1146 while 348 respondents were sampled through a stratified sampling method from Makueni, Machakos, and Kitui Counties. Semi-structured questionnaires were used to collect data, descriptive and inferential statistics were used to analyze collected data while the F-test was used to test the hypothesis of the study. SPSS aided in data analysis. Key findings of the study indicate a positive and linear relationship between public participation (risk management) and sustainable procurement management. A recommendation is therefore made to both national Government and county governments to stipulate and implement policies that would improve public participation so as to improve sustainable procurement management in devolved systems of government. The study proposes that another public participation framework stipulates (Procurement planning, contract administration, monitoring, and evaluation) as well as other counties be investigated in order to have a holistic picture of the phenomena and the entire country.

Keywords: community-based, county government, open government, infrastructure projects, Public participation, risk management, sustainability, sustainable Procurement, devolution.

1.0 Introduction

Sustainable procurement endeavors to ensure public procurement is managed in a responsible way taking into account of maximum utilization of resources to attain value for money across the whole procurement process. Public participation is a concept enshrined in the Kenyan constitution, 2010 whose intention is to devolve powers to the common citizens and increase transparency and accountability hence may play a role towards public procurement sustainability. Sustainable procurement is a process whereby organizations meet their needs for goods, services, works, and utilities in a way that achieves value for money on a whole life basis in terms of generating benefits not only to the organization, but also to society and the economy, whilst minimizing damage to the environment (Australasian Procurement and Construction Council (APCC), 2013). According to World Bank (2019), Sustainable procurement is a process that incorporates sustainability considerations throughout the procurement process in order to achieve optimal value for money in delivering development objectives. Sustainable procurement management (SPM) is therefore an approach to achieve sustainability because it also takes environmental factors into consideration, in decisions of supply chain management (Yook et al., 2017; Zailani et al., 2012). Sustainability has now become a dominant topic of discussion among purchasing and supply professionals, along with traditional metrics such as cost, quality, and delivery time. According to the Council of Institute of Procurement and Supply ((CIPS), 2009) sustainability is on the mainstream agenda for both private and public sector organizations. SPM aims at reducing the adverse environmental, social, and economic impacts of purchased products and services throughout their life.

Kenyan promulgated a new Constitution in August 2010 which ushered in a new system of governance with two levels of government; Central Government and 47 County Governments, which are distinct and interdependent
Devolution in Kenya is meant to foster public participation in the management of public affairs; a system that seeks to facilitate greater citizen involvement and control in public affairs including planning, budgeting and resource allocation among others (GoK, 2010). Beyond being a constitutional requirement, public participation and civilian oversight remain one of the most powerful tools in demanding increasing transparency, accountability and efficiency in public procurement (Muriungi, 2014). In order to ensure transparency and accountability, there is a need for the provision of the required relevant, timely and accurate information to be given to the members of the public to enhance their participation. The World Bank (2004) considers public participation as a process through which stakeholders’ influence and share control over development initiatives, and the decisions and resources which affect them. According to GoK (2010), public participation has been poised to help in priority setting and providing feedback on government funded projects. UNDP (2016) states that sustainable development tries to establish synergies between environmental balance, social progress and economic feasibility under the principle of good governance. A number of scholars (Kabonga, 2016; Kessler and Tanburn, 2014; Metzeger and Guenther, 2015; World Bank, 2010) have argued that development should be assessed on four significant fronts—effectiveness, efficiency, impact, and sustainability. The County Government Policy framework for public participation is based on the principles of inclusivity, accountability, diversity, building community participation, transparency, flexibility, accessibility, trust, commitment, respect and integration (GoK, 2012).

According to World Bank (2019), there are many reasons to practice SPM which include five key business drivers such as Financial; Reduce total operating costs by procuring more efficient and sustainable goods, works, or services that: develop the market’s capacities to deliver sustainable solutions; increase demand for sustainable solutions which in turn increases market competitiveness; strive for innovative and more sustainable outcomes; cost savings on a long-term basis by applying life-cycle costing, and minimize disposal costs and sustainable impacts of products at their end of life. This calls for risk management which engages in the mapping of economic, legal, environmental and social sustainability threats and opportunities and develops approaches to manage them. The Kenyan constitution, 2010 states that public participation is a key issue so as to enhance democracy, accountability and transparency of government projects. This is further elaborated in the county government Act, 2012 that stresses the need for devolution where members of the public become the greater focus of devolution. All the county governments are supposed to establish public participation frameworks to guide the public participation process in their counties. Under this PP framework, stakeholders participate in community-based infrastructure projects through involvement in procurement planning, monitoring and evaluating project performance, risk management and policy making process (GoK, 2012). This study focuses on risk management as a means of public participation that may lead to sustainable procurement management.

A sustainable public procurement system is vital to the advancement of African countries and a concrete expression of their national commitments to making the best possible use of public resources (Lawrence, 2014). Sustainable Public procurement management is a significant activity in the developing world with a study of 106 developing
countries finding that the purchases of their governments account for approximately 5.1 percent of their combined national outputs (Evenett & Hoekman, 2005) and Kenya is not an exception. If implemented effectively, sustainable procurement has the potential to cut costs, shorten timescales, enhance stakeholder relationships, increase sales, reduce risks, enhance the reputation and improve margins (Mathew, 2017). Public Procurement Oversight Authority (2007) estimated that procuring entities were buying goods and services at an average of 60 percent above the prevailing market price. Given the large amounts of money involved in government procurement, it is in the citizens’ interests that the procurement process promotes prudent use of resources, integrity and fairness, ensuring value for money in the acquisition of goods and services. The big question is, therefore, does public participation through risk management lead to sustainable procurement management?

2.0 Literature Review
Risk can be defined as the chance of loss or an unfavorable outcome associated with an action. Risk management is the process of identifying risk, assessing risk, and taking steps to reduce risk to an acceptable level. The risk management approach determines the processes, techniques, tools, and team roles and responsibilities for a specific project. According to ISO 31000:2009, risks affecting organizations can have consequences in terms of economic performance and professional reputation, as well as environmental, safety and societal outcomes. Therefore, managing risk effectively helps organizations to perform well in an environment full of uncertainty. Risk occurs across the spectrum of government and its various enterprises, systems-of-systems, and individual systems (Katiba Institute, 2014). Oracle (2015) states that maintaining an efficient, streamlined supply chain is becoming increasingly challenging due to the growing scarcity of raw materials, rising energy prices, changing demand patterns and increasing costs of compliance. In the procurement guideline of World bank (2019) it asserts that responding to increasing stakeholder expectations; It is important to take account of social responsibility and sustainability issues and this can be enhanced by using sustainable procurement approaches. Through sustainable sourcing processes organizations can improve supplier disclosure and risk management capabilities and support information exchange and verification. According to CIPS and NIGP (2012), significant sustainability impacts should be identified and addressed as part of any comprehensive risk management strategy. Identified risks may include, but are not limited to legal risks, financial liabilities, moral/ethical risks, security of supply risks, price volatility risks and risks to reputation. HERAF, (2015) recognizes the risk of decentralizing corruption and impunity in counties unless urgent measures are put in place to safe guard against this from happening.

According to William (2007) the aim of sustainability from an organization’s perspective is the long-term wellbeing of the society as a whole as well as itself. Guidelines on sustainability encourage procurement to make decisions that encompass the environmental, economic and social elements of the Triple Bottom Line (TBL) (Joanne and David, 2011). The drivers of sustainable procurement are usually a combination of risk management with potential positive impact on corporate reputation and or ability to mitigate any regulatory noncompliance, potential resource depletion or disruption of supply, cost cutting via energy consumption reductions, reduction in the cost of recycling and
packaging production and value creation through developing new green products and leveraging suppliers environmental innovation (HEC, 2009).

Roos (2012) explains that in 2002, the World Summit on Sustainable Development acknowledged that public procurement can contribute to achieving sustainable development goals. In all countries, irrespective of their differences, local, regional and/or national authorities have in recent years made experimental use of public participation (EIPP, 2009). The GoK (2010) acknowledges the fact that public participation should be enhanced in all government institutions undertaking to ensure accountability and equitable distribution of resources in order to uphold democracy. People’s participation in development programs is not only affected by the environment in which participatory practices take place but also conditioned by the institutional framework, socio-economic as well as political backgrounds of the participant (Hussein, 2013).

Roos (2012) states that Sustainable Public Procurement (SPP) is receiving an increasing amount of attention as a consequence of a rise in environmental, social, and economic challenges both in developed and in developing countries. Public procurement represents approximately 15 % of GDP in OECD countries and up to 25-30 % of GDP in developing countries, and governments progressively use this purchasing power to drive markets towards innovation and sustainability, leading by example to deliver key policy objectives. Organizations should recognize the need to foster stakeholder goodwill and proactively and effectively address expectations and concerns in regard to sustainable procurement (CIPS and NIGP, 2012). There is need to encourage environmental impact assessments of products in the design stage and tailor policies to specific products and issues, drawing from a ‘tool box’ of measures which include voluntary agreements, taxes and subsidies (Mathew, 2012). The impact of any procurement process can only be felt directly by stakeholders who are likely to be affected or benefit from such a process. Therefore public procurement having to draw funds from taxes contributed by members of the public, there is need to give this public a chance starting from design stage up to when the goods have to be delivered for consumption since these are the people who will be able to determine sustainability of these processes.

Toolseram (2012) in a study titled role of stakeholders in promoting sustainable Consumption and Production (SCP) and optimizing their participation acknowledges that SCP should be acknowledged by policy makers as a policy field in its own right, mainstreamed into all policy areas as a means of implementing sustainable development objectives. SCP should be embedded in an appropriate institutional framework and needs to be built from the national level. Its success will depend on the level of ownership from all stakeholders. The same as it is in sustainable procurement it clearly indicates the need for public participation to ensure all are part of the policy hence no resistance and will be an automatic obligation to support even in the implementation of the policy resulting to no resistance which may increase cost in terms of legal battles, increased cost for implementation, time wastage as well as other negative consequences. Therefore, the researchers proposed the hypothesis that.
H0: Risk management does not significantly influence sustainable procurement management in devolved system of governments in Kenya

3.0 Research Design
The study adopted descriptive survey research design. According to Anne (2016) descriptive research design is used to examine the relationships among variables (correlational). Views on sustainability can be relative and varied from individual to individual, organization to organization, sector to sector and country to country (Walker and Phillips, 2009). Therefore, the study collected data from those directly involved in public participation within the three counties of Makueni, Machakos and Kitui comprising of Project coordinators, procurement officers and Project management committee members through use of open ended and closed ended questionnaires. The 1146 are individuals who extensively participate in community-based infrastructure development projects. The researcher used stratified sampling method to obtain the study sample (Ali, 2014) while Slovin’s formulae was used to obtain the sample size of 348 respondents. Project proposal approval was sought from Jomo Kenyatta University of Agriculture and Technology Board of Post Graduate Studies after which a research permit was sought from National Council for Science and Technology Innovations.

The research tool was administered to 10% (35 respondents) of the sample obtained from Embu county government and who in turn did not take part in the final study to ensure that it was relevant and effective. Sekaran (2008) reinforces that pilot test is necessary for testing the reliability of instruments and the validity of a study. Questionnaires were dropped and picked after two weeks. More time of one week was added to respondents who had not completed the exercise. Collected data was analyzed through descriptive and inferential statistics, the F-test was used to test the study hypothesis, while the research results were represented in form of tables. The study used the research model represented to indicated the presumed relationship between risk management and sustainable procurement management:

\[ Y = \beta_0 + \beta X + \varepsilon \]

Where \( \beta_0 \) is the constant or intercept, \( \beta \) is the regression coefficient or change induced in \( Y \) (Sustainable Procurement Management) by \( X \) (Risk management) while \( \varepsilon \) was the error term.

4.0 Findings and Discussions
4.1 Response Rate, Reliability and Validity of Study Instrument
Out of 348 distributed 290 questionnaires were properly filled and returned. This represents a response rate of 83.3% which is sufficient for analysis in line with Babbie (2004) who proposes that a response rate of 50% is acceptable, 60% is good and 70% is very good for analysis and publication. Cronbach’s Alpha (Cronbach, 1979) measure of internal consistency was done to check the consistency of construct items. The overall Cronbach’s alpha statistic attained of 0.871 was greater than the recommended threshold of 0.7 hence all the 4 items were maintained for further analysis.
4.2 Community Awareness on Procurement Opportunities in the Counties

When respondents were asked to indicate the level of awareness of the existence of procurement opportunities within their county, 76% of the respondents indicated that the community was aware of procurement opportunities with only 24% indicating a contrary opinion. This shows that majority of the communities’ members are aware of the existence of procurement opportunities hence have an opportunity to participate in this process. These results indicate that majority of the citizens are aware of their county government procurement activities due to existence of different public participation strategies.

4.3 Descriptive Analysis of Risk Management and Sustainable Procurement Management

The study sought to establish whether the county governments had embraced public participation through risk management (resistance levels, supply disruptions, health and safety issues) in achieving sustainable procurement on community-based infrastructure projects. Respondents were asked to rate the statements concerning risk management. The four items evaluating risk management were rated on a five-point Likert type scale ranging from 1 representing "Not at all" to 5 designating "very large extent". Table 1 indicates that the item mean scale for risk management ranged from 3.20 to 3.91. This implied that the respondents believed that involvement of community in Project risk management was exhibited to moderate levels. The standard deviations of the risk management items ranged from 1.026 to 1.318. The low standard deviations implied that the risk management items responses dispersed narrowly about the mean, implying low variations in the responses given by the respondents. The overall mean composite score for the risk management scale was (Mean=3.50, SD=1.13, n=290) which denoted a moderate level of extent of involvement of community in Project risk management.

These results are supported by Mostert (2003) assertion that recent years have witnessed an increased understanding of the value brought about by the involvement of both institutional actors and lay citizens in public decision-making processes (Mostert, 2003). In very general terms, PP mostly aims at improving decision making by either enhancing the effectiveness of the decisions, or their legitimacy, or both (Newig, 2005). Through a stakeholder analysis, it is possible to assess the distinguishing features of different stakeholders. Stakeholders have knowledge, experience or aspirations due to the economic, social or cultural relationship that they have with the problem (Harrison et al., 2001). However, in order to ensure transparency and trust, justification of the prioritized stakeholders should also be made (EU, 2002; Videira et al., 2003). Further support to the findings is provided by Beckley, Parkins and Shephard (2005) that effective public participation leads to avoidance of conflicts and delays, in turn results into information sharing and desired outcomes as well as lower operational costs.
Table 1: Descriptive Statistics for Risk Management and Sustainable Procurement Management

<table>
<thead>
<tr>
<th>Risk Management</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The community is made aware of the community infrastructural development projects to be undertaken in their areas</td>
<td>3.91</td>
<td>1.04</td>
</tr>
<tr>
<td>Community is regularly informed of the progress of community infrastructural projects</td>
<td>3.40</td>
<td>1.13</td>
</tr>
<tr>
<td>Complains by the community on matters of project health and safety are acted on immediately on matters arising in the implementation of Community involvement</td>
<td>3.49</td>
<td>1.03</td>
</tr>
<tr>
<td>Community involved in projects supplies leads to less supply disruptions</td>
<td>3.20</td>
<td>1.32</td>
</tr>
<tr>
<td>Composite Score</td>
<td>3.50</td>
<td>1.13</td>
</tr>
</tbody>
</table>

4.4 Test for Linearity for the Relationship between Risk Management and Sustainable Procurement Management

The ANOVA table 2 contains tests for the linear, nonlinear, and combined relationship between Risk management and Sustainable procurement management. The test for linearity has a significance F value smaller than 0.05 (F=1128.678, P<0.05), indicating that there is a linear relationship between Risk management and Sustainable procurement management. The test for deviation from linearity (nonlinear) has insignificance F value, (F=1.063, P=0.355) which means that there is no nonlinear relationship in addition to the linear component.

Table 2: Linearity Relationship between Risk management and Sustainable Procurement Management

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable procurement management * Risk management Between Groups (Combined)</td>
<td>25.803</td>
<td>126</td>
<td>0.205</td>
<td>10.012</td>
</tr>
<tr>
<td>Linearity</td>
<td>23.085</td>
<td>1</td>
<td>23.085</td>
<td>1128.678</td>
</tr>
<tr>
<td>Deviation from Linearity</td>
<td>2.718</td>
<td>125</td>
<td>0.022</td>
<td>1.063</td>
</tr>
<tr>
<td>Within Groups</td>
<td>3.334</td>
<td>163</td>
<td>0.020</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29.137</td>
<td>289</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.5 Inferential Analysis for Risk Management and Sustainable Procurement Management

The study objective was to establish the influence of risk management on sustainable procurement management. Normality of risk management variable was tested using Shapiro-Wilk test, which compares the scores in the population of study to a normally distributed set of scores. The results were not significant at p<.05, and so the data was assumed to be normally distributed. The research hypothesis formulated from the specific research objective was.

\[ H_0: \text{Risk management does not significantly influence sustainable procurement management} \]

Linear regression was used to test the relationship between risk management on sustainable procurement management. Path coefficients were used to determine the direction and strength while T-statistics provided information on the significance to the relationships. The \( R^2 \) for the regression model between risk management and sustainable procurement management was 0.470 meaning that risk management explained 47% variation in the sustainable procurement management while the remaining variation is explained by other factors as shown on table 3.

**Table 3: Model Summary for Risk Management on Sustainable Procurement Management**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.685*</td>
<td>.470</td>
<td>.468</td>
<td>.30076</td>
</tr>
</tbody>
</table>

(a. Predictors: (Constant), risk management)

The regression model was a good fit as indicated by a significant F-statistic (F=255.205, p<0.05).

**Table 4: ANOVA for Risk Management on Sustainable Procurement Management**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>23.085</td>
<td>1</td>
<td>23.085</td>
<td>255.205</td>
<td>.000*</td>
</tr>
<tr>
<td>Residual</td>
<td>26.052</td>
<td>288</td>
<td>.090</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>49.137</td>
<td>289</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(a. Dependent Variable: Sustainable procurement management  
b. Predictors: (Constant), Risk management)

The regression model obtained from the output was

\[ \text{Sustainable Procurement Management} = 1.029 + 0.668 \text{ Risk Management} + \text{error} \]

From table 5, the standardized regression coefficient for risk management was 0.685. This indicates that a unit increase in the risk management would result in 68.5% increase in Sustainable procurement management. The t-statistic for the regression coefficient for risk management was significant at 5% level of significance (T=15.975, p<0.05) implying rejection of null hypothesis. On the basis of these statistics, the study concludes that there is significant positive relationship between risk management and Sustainable procurement management. According to
CIVICUS (2018) effective public oversight depends on a degree of freedom of information to access relevant government data and documents and freedom of expression to publicly discuss findings and concerns. It is important that public oversight mechanisms be accessible, independent and have the trust of the general public. Stakeholders can be a considerable asset, contributing knowledge, insights and support in shaping a project brief as well as supporting its execution. The high failure rate of major projects has been attributed to a lack of attention to stakeholders. Stakeholders’ negative attitudes towards a project can cause cost overruns and time schedule delays due to conflicts over project design and implementation (Ouyeabaka, 2017).

Table 5: Coefficients for risk management on sustainable procurement management

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.029</td>
<td>.126</td>
<td>8.148</td>
<td>.000</td>
</tr>
<tr>
<td>Risk management</td>
<td>.668</td>
<td>.042</td>
<td>.685</td>
<td>15.975</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Sustainable procurement management

5.0 Conclusions and Recommendations

Various statistical tests were carried out to determine the relationship that existed between the two variables. The study found that risk management had a moderate positive significant relationship with sustainable procurement management. Linear regression analysis was used to test the hypothesis which indicated that there is a positive significant relationship between risk management and sustainable procurement management in devolved system of government. This indicated that the null research hypothesis was rejected, and it was therefore concluded that there is a positive significant relationship between risk management and sustainable procurement management in devolved system of government in Kenya. From the forgoing, it can be concluded that an improvement in risk management in community-based projects leads to a positive improvement in sustainable procurement management in devolved systems of Government in Kenya.

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