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PROCUREMENT STRATEGY ADOPTION AND PROCUREMENT PERFORMANCE OF PUBLIC SECONDARY SCHOOLS IN NDHIWA SUB-COUNTY, KENYA

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ABSTRACT
Public procurement system in Kenya has undergone significant developments, from a system with no regulations in the 1960s, and regulated by Treasury Circulars in the 1970s to one with regulations in the late 2000s. Although the regulations were to improve on accountability and transparency in the use of public funds, public procurement processes are still questionable as lots of public funds are still lost. This study examined the effect of procurement strategies adopted by public secondary schools in Ndhiwa sub-county on their procurement performance. Specifically, the study: established the status of different procurement strategies used in public secondary schools; identified factors that influence prices, settlement time and customer satisfaction in public procurement in public secondary schools; and, determined the effect of procurement strategies on prices, settlement time and customer satisfaction. Descriptive research design was adopted. Primary data were collected using structured and semi-structured questionnaires from a sample of 241 selected using stratified random sampling techniques from a population of 51 school administrators and 340 non-administrators. Data was analyzed using descriptive statistics and presented using frequency distribution tables, charts and graphs. Likert scale analysis was used to weigh the respondents’ perception. Findings indicated that using strategies in the procurement improves efficiency and minimizes the costs of purchases. The study also revealed that schools face when applying the procurement framework. The study concludes that the underlying challenges should be identified with an aim of reviewing the procurement procedures, training all persons involved in procurement; and, having free access to procurement information by procurement practitioners in public institutions. The study recommends the need to adopt procurement strategies, full implementation of the procurement framework to foster accountability and transparency in the public institutions.

KEYWORDS: Procurement Strategies, Procurement Efficiency, Accountability, Procurement Processes

1.0 INTRODUCTION
Public procurement system in Kenya has undergone significant developments, from being a system with no regulations in the 1960s, and a system regulated by Treasury Circulars between 1970 and 2000, to a system with regulations in the late 2000s through introduction of the Public Procurement and Disposal Act (PPDA) of 2005 and the Public Procurement and Disposal Regulations (PPDR) of 2006) [1]. This was for accountability and transparency in the public sector to reduce abuse of public funds – obtained from the tax-payer. This law led to the creation of the Public Procurement Regulations (PPR) and the Public Procurement Directorate (PPD) in 2001. Between 2001 and 2004, the Public Procurement and Disposal Bill were drafted and after several
modifications, were asent to by the President to become the Public Procurement and Disposal Regulations act in 2006.

Public procurement has been adopted by governments in order to increase efficiency, transparency and for accountability in purchasing goods, services or works in the public sector using public funds. Public procurement is aimed at reducing, if not eliminating, fraud, wastage and corruption in the public sector. It is believed that through public procurement, governments provide quality services, goods or works to its citizens and hence, increasing value for money.

Public procurement is aimed at promoting fair competition among suppliers which is effective in bridging the gap between suppliers - both establishing and established. This is because of the presumed equity and openness in awarding the tenders for supplies of goods/services/works to various government departments.

While public procurement has seen improved efficiency and accountability in most public institutions, little if no research has focused on procurement strategies in public secondary schools which are also direct beneficiaries of the exchequer. While some studies have revealed that with introduction of the public procurement framework, public institutions have come up with different strategies with the aim of reducing expenditure research to determine the effect of procurement strategies adopted by public secondary schools on their procurement performance.

1.1 Purpose of the Study
The purpose of the study was to determine the effect of procurement strategies adopted by public secondary schools on procurement performance. Specifically, the study:

i. Established the status of different procurement strategies used in public secondary schools

ii. Identified factors that influence prices, settlement time and customer satisfaction in public procurement in public schools.

iii. Established whether public secondary schools have rules/regulations in place that govern their procurement processes.

2. LITERATURE
Until the early 1970s, public procurement in the East Africa was largely undertaken by external entities. This was primarily because most of the needs of the then colonial government and the incoming new governments could only be met from external sources, as local supplies were still not adequate. With increasing procurement needs, the East Africa governments found it necessary to pass over the responsibilities of procurement to ministries. In Kenya, the Ministry of Finance was charged with the responsibility of overseeing the procurement process and preparing guidelines for procurement. By 1974, the three countries had in place an elaborate procurement system with supplies offices within their ministries and departments. Supply officers were appointed to take charge of procurement [2].

The supplies system for each entity was independent and autonomous, though major procurements were done through the Central Tender Boards. In line with the ideals of the then East African Community, a Supplies Manual was developed in the country. This manual detailed procedures that the public sector followed in purchasing goods and services. The use of the manual was, however, short-lived, as it ceased to exist with the collapse of the EAC in 1977 [2]. Thereafter, the three countries reverted back to individualised procurement systems. Kenya prepared its supplies guide in 1978, which remained in force until 2001. In Kenya, public procurement continued to be decentralised with supplies officers procuring for their own ministries but reverting to the Central Tender Boards for larger value procurement. The Ministry of Finance controlled ministerial procurement by issuing numerous circulars and guidelines to procurement officers in the ministries and local authorities. The main problem with the use of these circulars was that corrupt civil servants easily manipulated the process.

This order gave procedures and regulations to be followed whenever procurement was to take place in any public institution. However, this document did not spell out the procedures to be followed in the process of procurement. It merely gave briefs on the acquisition of goods, completely leaving out works and consultants’ services. According to this order, procurement was done at the ministerial level and there was no mechanism to regulate and control activities of different procurement entities. Although the Central Tender Board existed, it was just a department in the Ministry of Finance [2].

2.1 Procurement Methods in Kenya
The method used to procure public goods can have a significant impact on participation of newer or smaller businesses [3]. The type and value of the contract are important factors that determine the method of solicitation. Thus, public procurements are generally carried out using different methods. These range from complex, costly tendering methods like open tender, restricted tender to less complex methods like invitations for quotations and proposal and direct sourcing.

In Kenya, open tendering is the most used tendering system. It normally happens at two levels;
First, open national tendering, which is open to participation on equal terms by all providers through advertisement. Second, open international tendering is also open to participation on equal terms by all providers. It is mainly used where local suppliers may not provide competitive bids [2]. Open tendering is usually advertised in prescribed newspapers - national or international, although media advertising may be an expensive undertaking for public entities such as public schools.

Another method is restricted tendering, whereby bids are obtained directly without open advertisement. The method is used where the value or circumstances cannot justify open tendering process in such a case, the procuring entity uses its database of pre-qualified providers who are directly invited to tender. However, the procuring agent must demonstrate that open tendering is neither viable nor prudent. Lack of transparency in this method and the fact that most of local suppliers rarely find themselves in the pre-qualified lists, means that this method tends to act as a barrier to their participation in public procurement [2]. An invitation of quotation and proposal is another simplified tendering methodology where the procuring entity calls for quotations or proposals. Request for quotations should be addressed to no less than three or more candidates. This happens where the procurement agents seek to limit transactions costs, thus preferring to contact the firms that have a proven track record.

Finally, direct or single source method is used where circumstance do not allow for competitive bidding. It is used for small quantities in cases where time may not allow for competitive bidding. However, as this type of contract is conducted through informal networks. It is usually more difficult for small and medium enterprises, compared to larger, to have informal access to purchasing agents or departmental heads. Buyers rely on their own lists to solicit vendors in practice, which constitutes a barrier to small businesses, especially the new entrants [3]. Restricted and open tendering methods are frequently used in the acquisition of capital goods and complex services. The methods are complex, time consuming and bear big transaction costs. Invitations for quotation/proposals and single sourcing/direct purchase are carried out for goods and services for maintenance and small items. They are simple, price-driven, with simple specifications as well as numerous competing suppliers [4].

2.2 Public Procurement Strategies

Most firms’ procurement strategies are dependent on these purchasing strategies. Some of these procurement strategies used by firms; which can also be applicable in public institutions include:

First cash or spot market, which is defined as buying the good or service on the cash market and immediately taking possession of it. The cash or spot market is where institutions, have no direct contract with a supplier. Rather, they buy from whichever supplier has the lowest cash price at the time when the institution wants to possess the commodity. This method involves the institution making purchases of a certain commodity when inventory drops to a determined threshold level. Reasons for this according to [5], is that; it involves no development of strategies or market analysis; rather it merely involves monitoring current supply and reordering; or it minimizes inventory cost, because there is no storage of commodities purchased.

The spot market is applicable when there is little price fluctuation or price fluctuations cannot be predicted and, hence, a strategy cannot be implemented to minimize or reduce the high risk of unpredictable prices. Disadvantages of using the spot market according to [5] may include; the inherent risk of not being able to procure enough volume when needed, thus leading to inefficiencies in rendering services, eliminates opportunities of purchasing goods or services at lower prices, prices are determined solely by the timing of the need [5]. The second is trading futures which involves future contract. A futures contract is an obligation to buy or sell a given quantity and standard quality of a commodity at a designated future time [8]. Essentially, an institution is involved in a futures contract with suppliers at the current time period which may expire when the good or service will be supplied, assuming price changes, in order to obtain its future requirements [8]. Third is forward purchasing, which involves buying higher volumes when prices are lower, and lower volumes when prices are high. A forward buy is defined when an institution takes possession of a commodity in advance of its needs. It is in order to establish the per-unit cost on anticipated volume required of a good or service by advanced purchase and storage of that good or service at an earlier time period. If the cost saving on the good or service is greater than the storage cost, an advance purchase then results [9]. According to [9], in the concept of forward purchasing, the timing of good or service purchase has a significant influence on a firm’s costs. A disadvantage of a forward buy is that there is price risk. There is a chance that the price could decrease and the institution/school could pay more than the market price at time of need.

2.3 Empirical Literature

Public procurement department has many functions. One of these functions is to minimize the cost of goods, services and works that are used by government departments. Theoretically, a public
department is expected to minimize the costs to reduce wastage of public funds and for transparency and accountability [9].

According to [10], there are five key factors involved in maintaining and/or determining the level of supply. First, future quantity requirements of a good, service or work must be determined. This is then obtained from supplies already in inventory or ordered. Second, future requirements must be converted into a schedule of future purchases, specifying the timing and the size of the product/good to be purchased. Third, financial and operational constraints must be considered to determine the minimum and maximum lead-times needed for production. This helps determine what forward pricing mechanisms, if any, can be used. Fourth, while conforming to constraints of the buying time period, the department determines the timing for actual buys. These two time periods can be exactly the same, or if accurate price forecasts can be obtained, purchases can take place in different time periods to take advantage of price swings. Fifth, buying strategies for a good, service or work must be developed and connected to scheduled orders with appropriate on-time deliveries [10].

Another basic function of public procurement which has long been a department within the ministry of finance is to maintain the continuous supply of goods/services/works to government departments in order to meet their demands or requirements to carry out daily services to its citizens. The supply of a good or service or work is defined as: “making available of the products (goods), services or works for use by the consumer”. These goods, services or works have general quality standards that must be met [11]. Ordinarily, government procurement includes buying, purchasing, renting, leasing or otherwise acquiring any supplies, services or construction; and all functions that pertain to the obtaining of any supply, service or construction, including description of requirements, selection, and solicitation of sources, preparation and award of contract and all phases of contract administration” [12].

Procurement strategies have developed from purchasing strategies. These purchasing strategies that have been in place for developed countries include: Supplier Optimization; where a company chooses an optimum mix of vendors who can provide the best prices and terms. Those suppliers who cannot provide quality service at the terms and prices required are discarded. Total Quality Methods (TQM); which requires vendors to provide an ever increasing quality service with zero errors. Vendor Development; where companies work hand in hand with their vendors and develop processes that help in improving the services of the vendors. This is common where a firm has only one supplier. Green Purchasing; which focuses on the need for recycling and purchase of products that have negative impact on the environment.

2.3.1 Factors That Influence Prices, Settlement Time and Customer Satisfaction in Public Procurement

Prices, settlement time and customer satisfaction dependent on many factors which include the characteristics of the good, service or works it wants to acquire. These characteristics also include: First the Price risk, which refers to volatility, which is how much the price of a commodity varies over time. The volatility is measured in annual percentage to evaluate the historical volatility of the good/service/works. High price risk goods/services are those with high volatility, while low price risk goods/services have a relatively consistent price [8]. Second is the Volume, which is the amount of goods/services needed within a given time frame to fulfil consumable requirements like laboratory chemicals, foods etc. A larger institution/school may require large quantities of goods/services to be procured in a given time interval.

While smaller schools/institutions may not require large quantities to be procured in order to maintain the learning process. The third is Perishability, which refers to how long it takes before goods expire, so that it cannot be used. Perishability plays a major role in procurement strategies because it determines the amount of goods that can be purchased in advance. Some goods used as foods are of relatively high perishability hence are supplied only at the time of need. Fourth is a Budget constraint which refers to the limited budgets that procurement committee’s face. There may be high budget constraint where procurement committee is faced with limited budget for a certain time period. In this case, institutions/schools are to be involved in fewer forward buys due to high execution costs as they are expensive to execute in the short run because this school/institution delay to settle the payments for the good/service [10].

Lastly is the Seasonality, which is the difference between price highs and lows across seasons historically. For example, for most goods used in institutions e.g. food, the lowest price season of the year is during harvesting when supply is at its highest while for laboratory chemicals and books, prices are highest at the beginning of the year when school open. A high degree of seasonality means that there is very strong and predictable pattern for prices of goods/services. Most of the goods/services are highly seasonal due to the growing patterns on the supply side.

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2.3.1 Impact of Procurement Strategies on Prices, Settlement Time and Customer Satisfaction

Institutions with good procurement strategies can benefit a lot during their purchasing processes. These benefits may include: First, lowered overall cost where the Institutions that have initiated procurement strategies, the overall cost to procure materials and services is much lower. Such institutions know what to purchase, when to purchase it and where to purchase it from i.e. which supplier will offer the item at the lowest affordable cost. Second is faster response from suppliers, which, in addition to lower procurement costs, institutions that have procurement strategies have suppliers who are more efficient and effective in their supplies. This in turn reduces the supplier lead times risks of stock outs are also reduced. The difference in supplier lead time could be related to the closer supplier relationships possessed by institutions with procurement strategy programs.

Institutions can use the visibility provided by procuring team to weed out extraneous or underperforming suppliers. This would leave an institution with fewer suppliers that it can work with to establish more efficient procurement processes.

3. RESEARCH METHODOLOGY

Descriptive research design was adopted. Primary data was obtained through self-administration of questionnaires to 241 respondents which included head teachers and their deputies, school clerks/bursars and members of the tendering committees from 32 sampled public secondary schools in Ndhiwa Sub-County. The respondents were sampled using stratified random sampling technique from a population 51 school administration officers and 340 staff members. The arrival at the sample size was based on 95% level of confidence and a margin of error of ±5% using the formula suggested by [13] as:

\[
n = \frac{z^2 \cdot p \cdot q \cdot N}{e^2(N-1) + Z^2 \cdot p \cdot q}
\]

Where 
- \(e\) = Margin of error,
- \(Z\) = standard variant at a given confidence level under normal curve,
- \(p\) = sample population and
- \(q\) = (1-p).

Therefore:

- Administration staff: \(n_1 = \frac{(1.96)^2 \cdot (0.5)(1 - 0.5)(51)}{(0.05)^2(51 - 1) + (1.96)^2(0.5)(0.5)} = 45\)
- Non-Administrators: \(n_2 = \frac{(1.96)^2 \cdot (0.5)(1 - 0.5)(340)}{(0.05)^2(340 - 1) + (1.96)^2(0.5)(0.5)} = 196\)

<table>
<thead>
<tr>
<th>Table 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
</tr>
<tr>
<td>Administrators</td>
</tr>
<tr>
<td>Non-Administrators</td>
</tr>
<tr>
<td>Total</td>
</tr>
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</table>

These were supplemented by secondary data from available procurement records in the schools. Data were analysed using descriptive statistics and presented using frequency distribution tables, charts and graphs. Validity of data collection instrument was done through a reconnaissance survey aiding in its improvement while reliability was done using internal consistency technique in which the scores obtained from the subjects were computed to determine the correlation among the items.

4. RESULTS

4.1 Status of Different Procurement Strategies in Public Secondary Schools

Data for this research was collected based on: existence of procurement committees, use of existing strategies, application of other strategies and presence of governing rules. Of the duly completed questionnaires realized, the results scored weighted means as per Table 2. This gives an indication most schools have strategies and governing rules in place compared to using other strategies not in place. However, most schools tend not to have well established tendering committees.
### Table 2

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree (1)</th>
<th>Agree (2)</th>
<th>Disagree (3)</th>
<th>Strongly Disagree (4)</th>
<th>Σfi</th>
<th>Σwifi</th>
<th>Σwifi/Σfi</th>
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<tbody>
<tr>
<td>Existence of procurement committee</td>
<td>185</td>
<td>25</td>
<td>14</td>
<td>12</td>
<td>236</td>
<td>325</td>
<td>1.3771</td>
</tr>
<tr>
<td>School uses strategies</td>
<td>27</td>
<td>79</td>
<td>30</td>
<td>100</td>
<td>236</td>
<td>665</td>
<td>2.8178</td>
</tr>
<tr>
<td>School applies other strategies</td>
<td>160</td>
<td>46</td>
<td>2</td>
<td>28</td>
<td>236</td>
<td>366</td>
<td>1.5508</td>
</tr>
<tr>
<td>School has governing rules on procurement</td>
<td>10</td>
<td>171</td>
<td>28</td>
<td>27</td>
<td>236</td>
<td>544</td>
<td>2.3051</td>
</tr>
</tbody>
</table>

*Source: Research Data (2012)*

### 4.3. Factors That Influence Prices, Settlement Time and Customer Satisfaction in Public Procurement

The other objective of this study was to identify factors that influence the choice of procurement process in public secondary schools and whether the factors had any significant effect on the prices, settlement time and customer satisfaction. Data for this objective was based on three factors namely: political, social and legal. The opinions of the respondents concerning the factors having any influence on the prices, settlement time and customer satisfaction were sought. The results provides an indication that the three factors were almost having the same influence with political having the highest influence with weighted mean of 2.3517, followed closely with social at weighted mean of 2.2712 and legal at weighted mean of 2.2331, as indicated in Table 3. This may imply that the procurement entities in most public schools in the sub-county are not autonomous as their processes are still influenced by external factors.

### Table 3

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree (1)</th>
<th>Agree (2)</th>
<th>Disagree (3)</th>
<th>Strongly Disagree (4)</th>
<th>Σfi</th>
<th>Σwifi</th>
<th>Σwifi/Σfi</th>
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</thead>
<tbody>
<tr>
<td>Political factors</td>
<td>49</td>
<td>71</td>
<td>100</td>
<td>16</td>
<td>236</td>
<td>555</td>
<td>2.3517</td>
</tr>
<tr>
<td>Social factors</td>
<td>59</td>
<td>83</td>
<td>67</td>
<td>28</td>
<td>236</td>
<td>536</td>
<td>2.2712</td>
</tr>
<tr>
<td>Legal factors</td>
<td>117</td>
<td>20</td>
<td>28</td>
<td>71</td>
<td>236</td>
<td>527</td>
<td>2.2331</td>
</tr>
</tbody>
</table>

*Source: Research Data (2012)*

### 4.4. Effect of Procurement Strategies on Prices, Settlement Time and Customer Satisfaction

On the last objective, the research sought to determine the effect procurement strategies on the outcomes of the procurement process based on prices, settlement time and customer satisfaction. Data for this objective was also based on three factors namely: strategies suitable for procurement; strategies effective under circumstances they were applied; and conformity of outcomes to the item specification. From the results in Table 4, it was observed that procurement strategies becoming effective in the reduction of the spent in terms of costs, lowers suppliers’ lead times and satisfaction of the parties involved. Strategy becoming effective under the circumstances applied had the highest weighted mean of 3.1102, the used strategy being most suitable had a weighted mean of 2.288, outcome conformity to item specification showed a weighted mean of 2.3347. This may imply that most schools do prefer to applying laid down strategies in their procurement and may also change strategy when circumstances change. This could be the reason for achievement of their objectives.
Table 4

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>$\Sigma f_i$</th>
<th>$\Sigma wfi$</th>
<th>$\Sigma wfi/\Sigma f_i$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategies suitable for procuring items</td>
<td>53</td>
<td>102</td>
<td>55</td>
<td>26</td>
<td>236</td>
<td>526</td>
<td>2.2288</td>
</tr>
<tr>
<td>Strategies are effective</td>
<td>0</td>
<td>27</td>
<td>156</td>
<td>53</td>
<td>236</td>
<td>734</td>
<td>3.1102</td>
</tr>
<tr>
<td>Outcomes conform to item specification</td>
<td>51</td>
<td>106</td>
<td>28</td>
<td>51</td>
<td>236</td>
<td>551</td>
<td>2.3347</td>
</tr>
</tbody>
</table>

Source: Research Data (2012)

5. CONCLUSION

This study was necessary because of the fact that suppliers and government institutions have not achieved the desired level of procurement practices. Though the current legality provides for decentralization of procurement processes, most local institutions are yet to decentralize their systems fully, with only a few leaving the process to their tendering committees. The decentralization of the procurement processes depicts a milestone in the reform process towards achieving efficient and effective procurement system. However, the application of the procurement rules in the public institutions need to thorough to enable them have effective procurement processes. Formation of independent procuring entities such as tendering committees is a necessity toward improving procurement systems in public secondary schools.

It is also very clear that the procurement function needs to be developed further and more effort put into defining strategies and making open tendering the main method of procurement. This was evident by procurement committee members having the knowledge of procurement rules governing the procurement process, but intentionally failing to use them.

From the results, it is clear that there are still many challenges that face stakeholders in the application on the procurement framework into practice and complying with the new provisions and standards as per the law stipulates. As a result efficient public procurement in public secondary schools is far from being achieved. The study has also revealed that many challenges face the stakeholders when applying the framework of procurement practice in the public secondary schools and as a result of this, the challenges of public financial management through efficient procurement in secondary schools are far from being achieved.

6. RECOMMENDATIONS

Following the conclusions above, the study makes the following recommendations. First there is need to identify the underlying challenges with an aim of reviewing the procurement procedure. This could be done by establishing independent tendering committees in public institutions to execute their duties with minimal manipulation. Secondly there is need to train all persons who are involved in procurement like the tendering committees and the suppliers to make them knowledgeable on matters of procurement. This will reduce malpractices in public institutions. Thirdly there should be a free access to procurement information by the public as this will improve procurement process in public institutions. Things like reasons for awarding or rejecting tenders should be put public. Lastly head teachers, Deputy Head teachers, teachers, bursars/clerks, committee members and suppliers found to be flouting the laid down procurement procedure should be prosecuted.

7. SUGGESTIONS FOR FURTHER RESEARCH

This study suggests that a further research be conducted on:

i. Challenges facing effective implementation of Public Procurement Regulations of 2006.

ii. The impact of the Public Procurement Regulations of 2006 on micro, small and medium enterprises.

SELECTED BIBLIOGRAPHY


