

# Performance Of Micro And Small Enterprises In The Supply Of Goods And Services To Public Institutions In Kenya

(A Survey of Baringo County)

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## *Abstract*

The Government of Kenya (GoK) has made effort to strengthen the small business sector yet micro and small enterprises (MSEs) are perceived to have registered weak links with all potential customers. The purpose of this study was to establish whether MSEs could satisfactorily supply requirements to public institutions. It specifically sought to establish whether MSEs could assist public institutions achieve procurement objectives; identify attributes that could make MSEs' good suppliers and determine the nature of relationship between Suppliers' attributes and their satisfactory performance. The study was conducted in sample public institutions in Baringo County in Kenya. Descriptive survey research design was adopted on a target public institutional population of 1,600 in the county. Data was collected by use of a questionnaire on study sample of 300 respondents and analyzed by use of descriptive and inferential statistics and subjected to Chi-Square test. The study rejecting the null hypothesis that 'There is no relationship between supplier attributes and satisfactory performance by suppliers' concluded that Micro and Small Enterprises were potential sources of supply that may compete favorably with other sources of items needed in the public institutions; may make satisfactory supply of goods and/or provision of services to all clients depending on the prevailing situations of resources, skills and locations; were capable of assisting public institutions to achieve the procurement objectives of acquiring right quality items in right quantities at right prices delivered at the right time and with the desired levels of service; may be made the preferred suppliers of public institutions. The study recommended that the procurement procedures used should encourage reaching out to all interested potential sources of supply irrespective of size of enterprise and scales of business operations. In order to obtain requirements from the right sources, the institutions should consider competences of the suppliers Enterprises that are to be engaged in the supply of requirements to public institutions should demonstrate flexibility and high speed of response In order to obtain requirements more competitively, public institutions should employ procurement procedures that enable reaching out to all interested potential suppliers in every procurement for which their businesses were suited. It is also recommended that resources, skills and location should be taken into consideration when developing criteria for evaluating potential sources of supply in the procurement process.

**Index terms-** Micro and Small Enterprises, Public Institutions, Procurement

## I. INTRODUCTION

World over, public procurement is central to the growth of all businesses but more so to Micro and Small Enterprises (MSEs) of an average of approximately 70% and 30% developing and developed countries respectively. About 35% of developed and 70% of developing countries' annual budgets are used in public procurement spending (World Bank, 2016; Saxena, 2012). MSEs are among the major players in social and economic development through creation of new jobs and subsequent growth in GDP. (Ngugi, 2012; Kazungu and Panga, 2015; Kazungu, Ngugi, Rotich and Odhiambo, 2018).

The rapid growth of Chinese economy is 98% owed to MSEs creating 80% jobs. MSEs account for 95% of firms, 65% of job creation and approximately 55% of government GDP in Nigeria (Chen, 2013; EC, 2015; WB, 2016; Peprah, Mensah, and Akosah, 2016). In Kenya MSEs account for 98% of all businesses creating 30% of jobs annually and accounting for 3% to Kenya's GDP. (Hansen, Kimeria, Ndirangu, Oshry, and Wendle, 2012; Chen, 2013; World Bank, 2016). The Government of Kenya (GoK) has been spending substantial amounts of money on programmes aimed at promoting micro and small enterprises (MSEs). The anticipated benefits included; creation of demand as well as supply for the domestic commodities; increased participation by indigenous people in commercial activities; increased savings and investments; and better utilization of local resources (GoK, 1992). The Government has mainly concentrated in improving infrastructural facilities in order to create enabling environment for business startup and growth (GoK, 2004). On their part, MSEs were expected to exploit the existing opportunities to promote their performance in the supply of goods and or provision of services.

Some countries have made efforts to reform and restructure their procurement policies that create preferential treatment so as to strengthen the involvement and contribution MSEs in public procurement (Obanda, 2011; Sanchez, 2011). For example, China, Ghana and Tanzania enacted enabling legislations that require public institutions procurement to help, develop and promote MSEs through according first and preferential considerations in procurement of goods and services (Kazungu and Panga, 2015; Peprah, et al., 2016). The systems of Public Procurement in Kenya has progressively improved from a rudimentary system with no regulations in the 1960s, through regulations by Treasury Circulars in 1970s, 80s and 90s to the current public procurement legislations and regulations (Public Procurement Oversight Authority (PPOA), 2009).

The importance of the informal and later the small business sector dominated the debates on employment creation in Kenya and other developing countries. This was because MSEs have been considered potential sources of new jobs and good avenues for technological innovation and rapid acquisition of business management skills. However, industrial development policies, historically favored large businesses in Kenya, providing them with more conducive business environment than the MSEs. Consequently, Kenya's output continued to be dominated by large enterprises with the highest recorded contribution to the gross domestic products. Besides, Kenya's weak indigenous technological base forced the country to rely heavily on technologically superior items from foreign countries.

The Government recognized development of MSEs as the means of strengthening the country's weak economy. In this regard, partnership between indigenous and foreign entrepreneurs was encouraged for the purpose of transferring both management and technological skills. This strategy also helped in restructuring business ownership in favor of indigenous entrepreneurs who were to graduate into competitive business system. In this regard, indigenous entrepreneurs would participate in commercial activities on equal footings with foreign entrepreneurs. Inter-firm linkages was also encouraged as the means of expanding market for the MSE products, hence public institutions were urged to develop partnership with MSEs (GoK, 1992, 2005, 2008, 2009).

It was envisaged that such partnerships will enable public institutions increase their access to quality supplies which is critical to social – economic growth and productivity. This would translate into increased savings and expedited procurement process. Since the inception of these partnerships, public institutions in Kenya have developed governance and accountability mechanisms that facilitate greater participation of micro and small enterprises in ensuring transparency and accountability in public resource procurement (GoK, 2008). This is imperative considering the fact that the bulk of government funding translates into the procurement of supplies used in public institutions. The ultimate objective is to ensure that these funds are properly utilized and enrich the internal economy by strengthening the micro and small enterprises which provide these supplies.

The establishment of the Public Procurement Oversight Authority (PPOA) was pegged on this objective of accountability, transparency, avoidance of conflict interest, corporate social responsibility and recognition that a public office is a public trust (PPOA, 2009).

In most countries, governments subsidize utilities, and thus the price and quality of these utilities is paramount. In both industrial and developing countries, the procurement function is effectively the major conduit for the distribution of public utilities. These utilities affect people's life chances as adults in terms of their earning ability as well as mobility. Performance of micro and small enterprises in the supply and provision of services to public institutions, therefore, influences the future distribution of income, wealth and status in society.

### **Statement of the problem**

There has been growing interests in developing micro and small enterprises (MSEs) owned by Kenyans in order to reduce large volumes of purchases made by consumers from enterprises whose capital structures tended to be foreign dominated. In the recent past, the Government of Kenya (GoK) with the help of some development partners designed and implemented a number of promotional programmes aimed at increasing the participation of indigenous people in commercial activities. Specifically, inter-firm linkages in terms of sub-contracting had been encouraged to stimulate supply and demand of the locally produced commodities.

It has been widely expected that the indigenous entrepreneurs would take up the opportunities to graduate into competitive suppliers of commodities to all potential customers. However, the perceived weak links between MSE and all potential customers except individual consumers indicated a continued marginalization of indigenous entrepreneurs in the rapidly expanding domestic market (Barclay, 2012). The inherent weaknesses of the small business sector in terms of inadequate finance, outdated business management skills and inappropriate technologies also contributed to the marginalization of MSEs. It remains unknown why despite the Government of Kenya's policy interventions to help MSEs; large enterprises with high levels of foreign capital investments have continued to dominate the expanded domestic market as suppliers of commodities to large scale consumers including public institutions (Pepurah et al., 2016; Hamisi, 2011; Ng'ang'a, 2011 ). To this extent, MSE suppliers remain unlikely to gain long term advantages over competition through better terms that could attract large consumers of commodities. Besides, many potential customers continue doubting whether MSEs had the required capacity and appropriate technology to make them compete favorably with large scale suppliers. This implies that the country's economy continues to be drained by foreign investor through capital flight resulting from such activities as repatriation of profits and transfer pricing.

The purpose of the study was therefore to investigate the performance of micro and small enterprises in the supply of goods and or the provision of services to public institutions in Kenya. The study sought to find out whether procurement agents have the capability of selecting the right suppliers of requirements. Furthermore, it endeavored to find out the attributes required by micro and small enterprise to make them preferred suppliers of requirements for large customers.

The study was guided by the following specific objectives: To establish whether micro and small enterprises were capable of making satisfactory supply of commodities to public institutions; identify the supplier attributes that could make micro and small enterprises preferred suppliers of requirements to public institutions; and determine the nature of relationship between supplier attributes and satisfactory performance by suppliers. The study also sought to test the null hypothesis that "There is no relationship between supplier attributes and satisfactory performance by suppliers"

Business dealings with unacceptable suppliers always result in extra costs due to unsatisfactory performance in terms of poor customer care service. In this regard, purchasing and supply executives in the institutions generally avoid dealings with unacceptable suppliers who should be substituted by the preferred suppliers. Acceptable suppliers who are capable of meeting operational and strategic needs as specified in supply contracts may be identified through competitive bidding techniques.

The exceptionally good suppliers anticipate the operational and strategic needs of customers since they react to the unforeseen needs such as sudden accelerated or decelerated volumes of business or changes in specifications and any other legitimate requests made by customers. They provide technical assistance and other expertise when requested or when they believe it would assist the customer better. They also warn ahead of time, of any material shortages, industrial strikes or anything else that may affect the operations of customers (Lenders et al, 2002).

The buyers "Perception of suppliers" ability to meet satisfactory quality, quantity, price, delivery time and customer care service objectives generally governs the choice of the preferred suppliers. The supplier attributes that relate to these purchasing and supply management objectives include financial strength, technical strength, business management skills, physical facilities and location of the supplier. Changing a supplier from "acceptable" to "good" requires both buyer's and supplier's effort to obtain rewards of mutual break through. In this context, most MSE suppliers are viewed as mere acceptable suppliers who provide levels of performance that can be matched easily and have no strong basis for competitive edge. MSE suppliers may be moved from mere acceptable to good suppliers through a public-private partnership move.

## II. REVIEW OF LITERATURE

Performance of MSEs is of paramount importance since it constitutes a large portion of domestic service and goods market in majority of developing countries (Mchopa, Njau, Ruoja, Huka and Panga, 2014). Purchasing and supply functions in governments and public service are normally carried out through the institutions established to provide essential services to members of the public. Such services include education, healthcare services, security, and other services aimed at enhancing quality life of citizens. Public institutions in this context include Central Government and its Departments, Local Authorities, State Corporations, the Central Bank of Kenya, Cooperative Societies, Colleges, Schools, Public Universities, and all institutions established under voluntary contributions for the general welfare of public community (GoK, 2008)

Purchase *et al.*, 2009 asserts the urgent need to involve MSEs in public procurement so as to harness the massive benefits that would accrue as a result of such partnerships. The authority to use public funds in public institutions is established by law, regulations or statutes. The personnel who undertake purchasing and supply activities in public institutions are expected to observe the appropriate legal structure under which such functions are performed (Leenders, et, al 2002). Purchasing and supply in public institutions is a stewardship function that involves hired administrators who spend money derived mostly from tax in support of activities which the employers undertake on behalf of the clients.

The Public Procurement Directorate (PDD) has already formulated and implemented various strategies in order to create greater public procurement awareness throughout the Central Government and other organizations. It has organized Seminars and Workshops for Training Officers and operatives through the technical and financial assistance received from the World Bank. The need for transparency and proper accountability was emphasized in the trainings and workshops and it is hoped this will go a long way in eradicating corrupt practices as well as developing capacity and sustainable human resource.

The Public Procurement Reforms brought about by the new Regulations need political endorsement and commitment through legislation, organization and support. Pursuant to the Regulations established under Legal Notice No. 51 of 2001, resulting to the current public procurement and assets disposal legislation. Puddephatt & Kaspar (2012), asserts that a frail national regulatory framework accounts for most challenges facing MSMs in public procurement. There is need for a strong legal, legislative and regulatory framework institute the foundation for transparent and competitive public procurement process. It is however important to ensure that such frameworks do not inadvertently impact negatively on MSEs as opposed to the envisaged benefits such as reduction in red tape and value of money among others (Perry, 2011).

The World Bank is funding the Public Procurement Reforms, through the Public Sector Reforms Co-coordinating Unit (PSRCU). The objective of the public procurement component is to improve transparency, fairness, and probity and enhance capacity and thus curb corruption in public procurement a pandemic that Mwemezi (2013) and Badenhorst-Weiss (2012), posits that it totals 200 billion USD per year or constitute about 3.5% of the world procurement spending.

Systematic identification of both potential and actual suppliers with a view to selecting the one with the most appropriate terms forms the basis of creating sound suppliers base in the organizations. The units which make supplier selection decision in Public Institutions comprise the buyers, users, influencers, gatekeepers, and chief decision makers whose decisions should fit the risks profile of the organization concerned. Risk in purchasing and supply is higher with unknown materials, parts, equipment, and increased value of transaction, hence the perceived high risk of placing business orders with unknown suppliers (Leenders et al, 2002). In Kenya the Ministry of Trade whose MSEs operate has the mandate of advocating and ensuring through other institutions that MSEs are supported. Government set affirmatively at least one in every 10 State tenders for MSEs and the youth who control a huge chunk of Kenya's MSEs. Despite such interventions, MSEs face challenges in accessing public procurement opportunities (Ng'ang'a, 2011).

Involving MSEs in procurement process leads to increased competitiveness of the procurement process which is likely to results to better value for procurement funds to public institutions and resultant benefits to the economy (Memba, Gakure & Karanja, 2012). Selection of the right supplier is a crucial component of purchasing and supply function since it ensures the right quality on time at the right price with the desired levels of service. In this regard, a search for the new sources of supply requires adequate market research which may be conducted informally as part of routine

purchasing and supply activities involving discussions with sales representatives; visiting exhibitions; reading trade journals; or investigating a market before placing orders. Supply market research may as well be conducted formally as a support function to purchasing and supply management by full time research staff. However, the decision to place a certain volume of business with particular suppliers would depend upon reasonable criteria that reflect buyers' perception of suppliers' ability to meet satisfactory quality, quantity, delivery price and service objectives of purchasing and supply management in the public institutions. (Leenders et al, 2002).

Most formal supplier rating schemes track supplier performance on quality, price, delivery time and customer care services. In many organizations, only certified suppliers are considered for future businesses and extensive evaluation on quality and other dimensions of performance attributes are carried out accordingly. However, a critical factor that all buyers would examine thoroughly is quality capability of a potential supplier MSEs included. Buyers believe that no action other than quality management may be taken so as to improve performance; increase profits; and reduce costs with minimum efforts. A good quality management approach is where the organization focuses on quality based on the participation of all its members and carried out as a long term success through customers' satisfaction. Depending on the nature and volume of transactions, offers received from suppliers should be evaluated for both technical and commercial qualifications (GoK, 2002). Technical evaluation may be carried out by a technical evaluation committee appointed for that purpose whereas commercial evaluation may be carried out by a committee composed of buyers (Leenders et al, 2002).

Uncertainty makes MSEs to have small customer base and low levels of capital investments leading to high levels of flexibility. Innovation of new products is key to the success of new enterprise whereas evolution makes MSEs to be unique suppliers with shorter response time to needs of customers. MSEs also have faster and efficient internal communication systems required for emergency purchasing and supply needs in public institutions. Obanda (2011) posits the need for MSEs to be techno-savvy by utilizing ICT to harness quick access to information on public procurement. Enterprises in this category have shown loyalty and service demand deemed impossible by large enterprises, making them more ideal for emergency procurement that tend to dominate buying in public institutions (Leenders et al, 2002). MSEs tend to be more local and handy for the items in which flexibility, speed of response and availability are more important especially where additional cost that a customer has to bear while waiting for delivery or looking for alternatives is significant. Because of their sizes and geographical locations, MSEs have greater flexibility in meeting 'buyers' needs and they tend to fill market niches that large enterprises have chosen not to cover (Fearon et al, 2000).

Majority of MSEs operate in the service sector where they have competitive edge due to personalized tailor made activities suited to their flexibility and responsiveness. Since most services involve consumption at the point of purchase, MSEs as local suppliers may respond more positively to the unique demand of public institutions. They are considered more dependable for customer made requirements given that public institutions generally purchase considerable amounts of construction materials. Peprah *et al.*, (2016) in their study on MSEs accessibility to public procurement established that MSEs contribute enormously to economic development when procurement operating environment for MSEs favourable. He however found out that MSEs are yet to fully benefit from public procurement albeit frameworks established by procurement legislations. It is essential that MSEs possess majority of public procurement requirements alongside requisite resources, skills and competencies including modern production equipment's, machinery, experience in a various and specific fields and financial capability. This will ensure MSEs effectively participates in public procurement (Nicholas and Fruhmann 2014)

However, the performance of micro and small enterprises in the provision of requirements to public institutions has been hampered by economic recessions. Economic recessions have the potential impact on micro and small enterprises' efforts to keep afloat and be consistent in their pricing policies (I.M.F, 2009). The report suggested that micro and small enterprises design strategies to exit from financial, monetary and fiscal uncertainties. These strategies should be consistent across the board to avoid opportunities for financial and regulatory arbitrage. Medium term strategies should help establish a lasting framework of sound financial regulation, sustainable fiscal balance and price stability. To enhance performance of MSEs, there would also be a general need to upgrade developing countries Infrastructure also viewed as a challenge for MSEs since it can affect prospects of MSEs cost competitiveness (Olawale and Garwe, 2010).



Sandman (2009) established that MSEs face some important truths during economic recessions thereby hindering their performance are; many micro and small enterprises fear for the loss of their contracts; many of them loose new businesses due to increased costs of doing business and many of the micro and small enterprises face exceptional challenges (Kazungu, Ndiege, Mchopa, and Moshi, 2014). Though many of the micro and small enterprises involved in the supply of goods and or the provision of services to public institutions cut their budgets by about 10% during such times, it does not mean that the working environment is 10% more dangerous, but it does mean that the work environment is at least a little more dangerous. When they seek for a bigger budget, their goal is to improve performance. International Finance Corporation (2011), asserts the need to ensure access to funds for MSEs so as to expedite their contributions of MSEs in economic development and resultant contributions to employment and GDP. Indeed Wanjohi (2012) considers lack of access to credit as almost universal problem faced by MSEs, a problem that further affects the choice of technology which limits number of alternatives that can be considered by MSEs this makes such enterprises rely on cheap and inappropriate technology albeit their serious disadvantages. Going forward MSEs will need to ensure they growth and access to better public procurement through collaborations with larger and even foreign enterprises, this collaborations will also strengthen the entrepreneurial, financial and technical capability of MSEs (Abor and Quartey, 2010; Barclay, 2012).

### **III. RESEARCH DESIGN AND METHODOLOGY**

The study based on survey research design involved making testable proposition about the relationship between supplier's attributes and satisfactory performance, hence necessitating a hypothesis testing research that required careful approach not only to reduce biasness and increase reliability but also to allow drawing conclusion about causes (Kothari 2003). The target population was all the public institutions in Baringo County in Kenya. These institutions procure requirements using public funds. From the county records office, there are 1,600 public institutions in Baringo County of different categories. The respondents for this study were the procurement agents representing public institution in the procurement process.

Baringo county was selected the sampling unit and a complete list of all cases in the population was prepared in order to develop correct, reliable and appropriate sampling frame which had one thousand six hundred (1600) public institutions. Proportional Allocation Method was used in selecting number of public institutions in Baringo County to constitute a sample. This was found to be a suitable method since there was no serious difference in within stratum variance and sampling was simply to estimate number of public institutions which benefited from the services of MSEs (Kothari, 2003).

A sample was drawn from the sampling frame, taking into account the need for efficiency, reliability, representativeness and flexibility (Kothari, 2003). While determining the sample size, the proportion of public institutions which benefited from the services of micro and small enterprises was estimated. The level of confidence in the estimate was 95% while the margin of error that was tolerated stood at 5%. Providing an adjusted minimum sample size sample size of 300. Data was collected through self-administered questionnaires were delivered to the widely spread respondents whose responses were collected immediately in order to avoid contamination of answers through group discussion. Data was then analyzed using both descriptive and inferential statistics and subjected to the Chi-Square test. The research findings were presented using statistical tables, graphs, charts and statistical indices.

### **IV. DATA ANALYSIS, PRESENTATION AND INTERPRETATION**

#### **4.1. Respondents demographic characteristics**

The people in-charge of purchasing and supply management in public institutions participated in this study. Demographic characteristics relating to their age, sex experience and qualifications formed the basis for the descriptions about the workforce in public institutions.

One hundred and twenty respondents' volunteered information about their ages, majority of who were in the age bracket of between forty and fifty years. Majority of the public procurement officers were aged between 40 and 50 years old.

The information gathered on gender of workers revealed that there were more male than female procurement officers' employees in the workforce. Ninety six out of one hundred and twenty respondents (80% male, 17% women and 3% others) performing purchasing and supply functions in public institutions surveyed were male Employees.

Regarding work experience, responses on how long the workers had been engaged in the institutions to perform purchasing and supply functions was established majority of the officers had worked between 30-39 years.

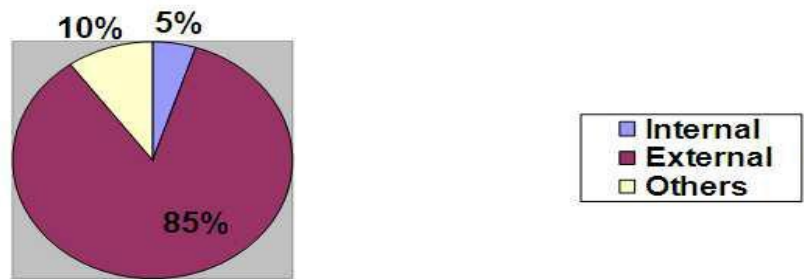
Responses on qualifications of employees performing purchasing and supply functions in public institutions were 81% secondary education, out of which 26% were supply chain professionals.

## 4.2. Sources of Supply

One of the main tasks of this study was to establish the sources of requirement for public institutions. To accomplish this task, people in-charge of purchasing and supply units in public institutions were probed by means of questions which sought to establish types, sizes and competences of supply sources;

### 4.2.1. Types of Suppliers

Regarding types, respondents pointed out that public institution obtained requirement from two main types of suppliers, namely internal and external suppliers i.e. some institutions made what they required internally while others conveniently obtained their requirement from external sources of supply. Responses on the types of suppliers were as summarized in Figure 1.



### 4.2.2. Sizes of Supplier Enterprises

Respondents indicated that public institutions obtained items from sources of supply whose sizes differed in accordance with the levels of resources employed. Number of workers in the firms that supplied requirement to public institutions was used in determining sizes of supply sources. Responses in this regard were as summarized in in Figure 2.

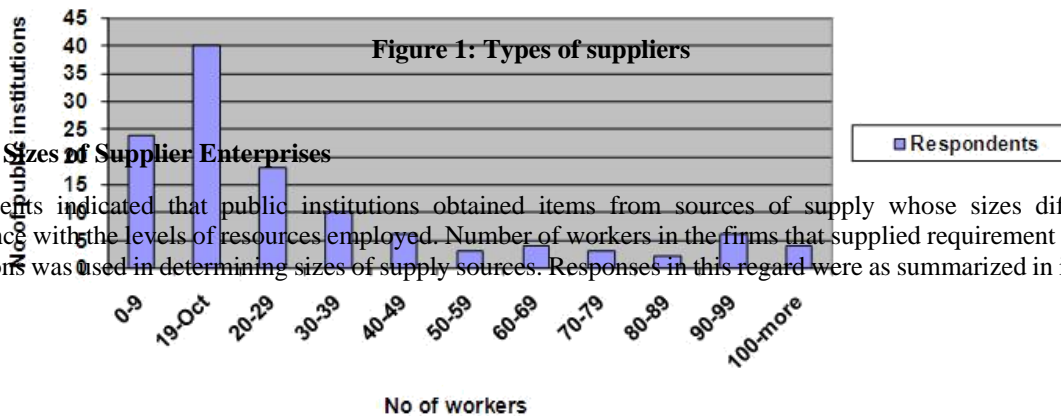


Figure 2: Number of workers in suppliers' businesses

### 4.2.3. Competences of Suppliers

Sources of supply demonstrated different abilities in meeting procurement needs of public institutions. Responses on quality, quantity, delivery, price, and service competences of the suppliers were as shown in Figure 3.



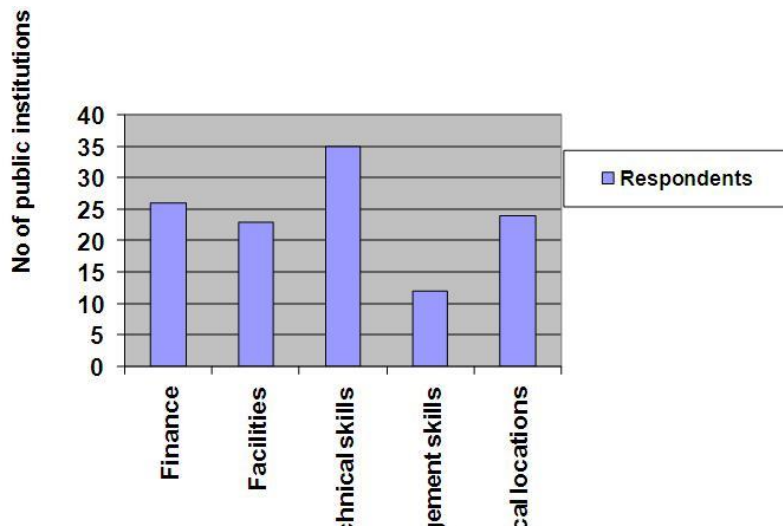
Figure 3: Competences demonstrated by the supplier

### 4.3. Suppliers' Attributes

This study also sought to establish the existence of attributes that made particular suppliers to perform more satisfactorily. In this regard, respondents were asked to identify the kind of attributes, the dominating attributes in particular business sector and the impact of attributes on competences of suppliers.

#### 4.3.1. The Kind of Attributes

All incidences of satisfactory supply of goods and/or provision of services to public institutions were associated with the presence of particular attributes in the suppliers. Respondents identified the attributes that were associated with satisfactory performance as finance, technical skills, physical facilities, business management skills and geographical location of the suppliers as shown in in Figure 4.

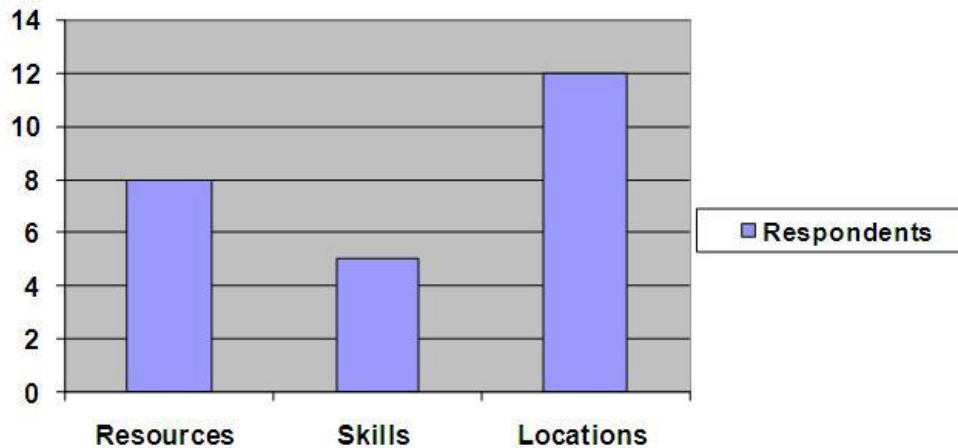




**Figure 4: Kinds of attributes present in the suppliers**

**4.3.2. The Dominant Attributes**

Respondents showed that some attributes were more dominant in particular suppliers than in others. The highly dominant attribute in the suppliers from the small business sector was found to be 'location' while that dominating in suppliers from large business sector were 'resources' and 'skills' as shown in Figure 5.

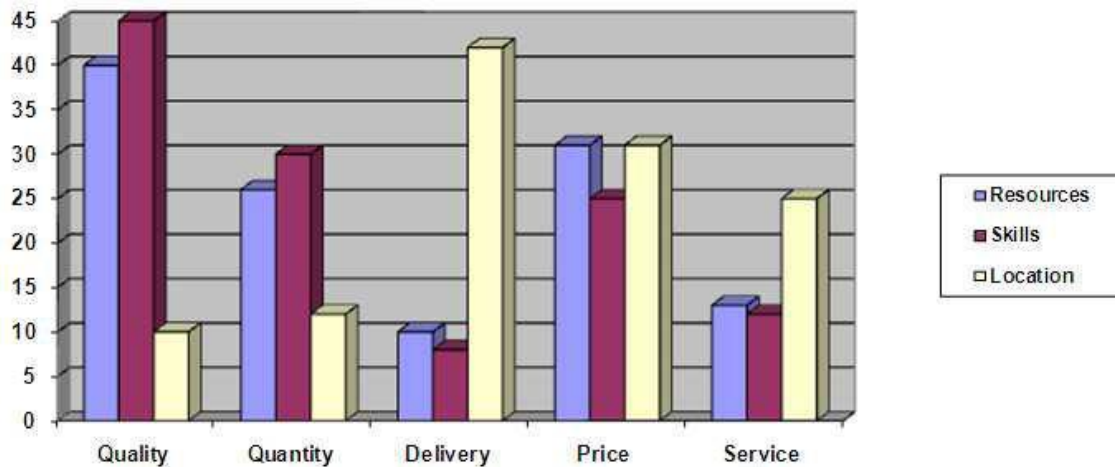


**Figure 5: Dominant attributes in small business suppliers**

**4.3.3. The Impact of Attributes on Areas of Competences**

Impacts of attributes were on quality, quantity, delivery, price and service competences of the suppliers. Responses on how different attributes created impact on quality, quantity, delivery, price and service competences of the suppliers were as shown in the composite bar graph below;

Responses showed that resources, skills and location created different levels of effect on competencies of suppliers in different public institutions. Resources and skills created more effect on quality, quantity and price performance in institutions while location (distance) created more impact on delivery, service and price performance of suppliers as shown in Figure 6.



**Figure 6: Effect of Attributes on Suppliers' Competences**

**4.4. Nature of Relationship between Satisfactory Performance and Attributes**

This study established the nature of relationship between satisfactory performance by suppliers and the attributes present in the suppliers. Information gathered on incidences of satisfactory supply of goods and/or provision of services to public institutions was analyzed to ascertain the association between the attributes and satisfactory performance by the suppliers.

Responses on the observed frequencies when satisfactory performance was associated with resources, skills and location of suppliers from both small and large business sectors were as shown in table 1.

**Table 1: Incidences When Satisfactory Performance was Associated with Attributes**

Attributes /Frequency	Resources	Skills	Locations	Total
Suppliers from small business sector	8	5	12	25
Suppliers from large business sector	41	42	12	95
Total	49	47	24	120

The expected frequencies when satisfactory performance was NOT associated with resources, skills, and location of suppliers from both small and large business sectors are shown table 2.

**Table 2: Incidences When Satisfactory Performance was Not Associated with Attributes**

Attributes /Frequency	Resources	Skills	Locations	Total
Suppliers from small business sector	10.2	9.8	5.0	25
Suppliers from large business sector	38.8	37.2	19.0	95
Total	49.0	47.0	21.0	120

**4.5. Testing the Hypothesis**

The significance of the association between satisfactory supply of goods and/or provision of services to public institutions with resources, skills, and locations of suppliers from both small and large business sectors was established through Chi-Square ( $X^2$ ) test. The value of Chi-Square( $X^2$ ) was computed using the observed and expected frequencies of incidences of satisfactory performance by the suppliers as shown in table 3.

**Table 3: Significance of the Association between Attributes and Satisfactory Performance by Suppliers**

Sources of Supply	Attributes	Frequencies		O-E	[O-E] <sup>2</sup> /E
		Observed [ O ]	Expected [ E ]		

Small Business Sector	Resources	5	10	-5	2.5
	Skills	8	10	-2	0.4
	Location	12	5	7	9.8
Large Business Sector	Resources	41	39	2	0.1
	Skills	42	37	5	0.7
	Location	12	19	-7	2.6

Value of Chi-Square[X<sup>2</sup>] was computed by summing up [O-E]<sup>2</sup>/E as shown below:

$$\sum [O- E]^2 / E = 16.1$$

The computed value of Chi-Square[X<sup>2</sup>] was found to be 16.1 for two degrees of freedom at five percent levels of significance. The table value of Chi-Square at 2 degrees of freedom at five percent levels of significance was found to be 5.991 for two degrees of freedom at five percent levels of significance. The calculated value was greater than the table value, indicating that the association between satisfactory supply of goods and provision of services to public institutions with supplier attributes was significant and not by chance.

## V. SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Summary of Findings

The information gathered for the purpose of this study was carefully analyzed in order to establish the following; Nature of the workforce responsible for purchasing and supply functions in public institutions; Sources of the items used in public institutions; Attributes that enhanced competences of suppliers; and nature of relationship between attributes and satisfactory performance by suppliers.

Generally, the research established that, the mature nature of the workforce coupled with several years of hand-on experience gave an assurance that purchasing and supply personnel in public institutions were capable of selecting the right suppliers. They were capable of using skills and experience acquired through on-the job training to enhance competitive edge of public institutions and facilitate the development of appropriate business relationship with a wide range of suppliers from both small and large business sectors. The research also established that public institutions obtained requirements more often from micro and small enterprises. Finance, physical facilities, technical skills, business management skills and geographical location were found to be key attributes that enhanced performance of micro and small enterprises in the supply of requirements.

#### 5.1.1 Nature of the Workforce

The workforce responsible for purchasing and supply functions in public institutions was described as aging, inadequately trained, comprised workers with several years of hands-on-experience in purchasing and supply management, and was a demonstration of gender imbalance in the public sector. These descriptions were based on the research findings that: Many workers were aged forty five (45) years and above; A relatively low number of workers involved in purchasing and supply function of public institutions had relevant professional qualifications; Majority of workers performing purchasing and supply function in public institutions acquired skills and experience through on-the job training; and More male than female workers were undertaking purchasing and supply activities in the institutions.

Despite the above descriptions, the mature nature of the workforce coupled with several years of hand-on experience gave an assurance that purchasing and supply personnel in public institutions were capable of selecting the right suppliers. They were capable of using skills and experience acquired through on-the job training to enhance competitive edge of public institutions and facilitate the development of appropriate business relationship with a wide range of suppliers from both small and large business sectors. In this context, micro and small enterprises (MSEs) which formed part of suppliers' base for public institutions were competitively selected.

#### 5.1.2 Sources of Supply

This study also intended to establish the sources of items used in public institutions, the outcome indicated that institutions either made internally or conveniently obtained the requirements from external sources. The levels of resources employed demonstrated different sizes of enterprises which supplied goods and/or provided services to public institutions. The sources of supply demonstrated different competences in meeting quality, quantity, price, delivery, and service needs of public institutions.

### **5.1.3 Types of suppliers**

In the context of the above findings, it was clear that public institutions obtained requirements from two main types of suppliers namely: Internal sources of supply which comprised institutions with capabilities to make internally what they required; and external sources of supply which comprised micro, small, medium and large enterprises that had the ability to supply goods and/or provide services to the institutions.

However, to choose the right suppliers, the institutions should undertake a well searched '*make or buy*' decisions, whereby: A decision to make has to explore the competences of the institutions with a view to 'making' the items that require capabilities linked to the core competences; and A decision to obtain items from external suppliers has to be based on a well-developed and maintained viable 'source base' that must include suppliers with particular strengths which give them competitive edge over the others. A practical consideration for effective 'make or buy decision' was found to be a comparison of situations in public institutions and that of the suppliers in terms of cost, quality capability and volumes of requirements.

### **5.1.4 Sizes of Enterprises:**

Additionally research findings also indicated that levels of resources employed by the enterprises provided a measure of business sizes and scale of operations. Enterprises with high levels of resources were larger in sizes and were operating in large scales while those with low levels of resources were smaller in sizes and were operating in small scales. For the purpose of this study, the number of workers engaged in the suppliers' enterprises demonstrated their respective sizes, hence: Micro enterprises included those which employed between zero and nine workers; Small enterprises included those which employed between ten and nineteen workers; Medium enterprises those which employed between twenty and ninety nine workers; and Large enterprises those which employed one hundred and more workers.

Although public institutions obtained requirements from enterprises of different sizes it was noted that: Requirements were obtained more frequently from Micro and Small Enterprises; and requirements were obtained less frequently from Medium and Large Enterprises.

### **5.1.5 Competences of Suppliers**

The research findings also indicated that suppliers demonstrated different abilities to meet quality, quantity, delivery, and price and service needs of public institutions as follows: Micro and Small Enterprises (MSEs) demonstrated price, delivery and service competences; and medium and Large Enterprises demonstrated quality, quantity and price competences.

### **5.1.6 Supplier Attributes**

This study also established the presence of certain attributes in the sources of supply which made satisfactory supply of goods and/or provision of services to public institutions and it were established that: Performance of the enterprises improved with the presence of particular attributes; the presence of particular attributes enhanced competences of suppliers in specific areas; and some attributes were more dominating in particular suppliers than in others.

### **5.1.7 Supplier Attributes**

The research findings showed that satisfactory supply of goods and/or provisions of services to public institutions were attributed to the presence of one or more of the following attributes in the sources of supply: Finance; Physical facilities; Technical skills; Business management skills; and Geographical locations.

These may be conveniently categorized as resources, skills and locations of the supply sources. To this extent, satisfactory performance by the suppliers was considered to be dependent on the resources, skills, and locations of the suppliers. However, to obtain requirement from the right sources, purchasing and supply management of public

institutions should develop and use appropriate evaluation criteria, capable of establishing adequate resources, appropriate skills and favourable locations of the supply sources.

### **5.1.8 Dominating Attributes**

Findings of this study showed that certain attributes were more dominant in particular suppliers than in others. It was established that: Micro and small enterprises were in most cases, the suppliers with favourable physical locations; and Medium and large enterprises were in most cases, the suppliers with plenty of resources and skillful workers.

On the basis of the dominating attributes, enterprises were categorized as those with adequate resources, appropriate skills and favourable locations.

## **5.2 Effect of Attributes on Suppliers' Competences**

Through the study, it was established that satisfactory performance by suppliers was realized in public institutions when right quality items were obtained in right quantities delivered at the right time and at the right price with the desired levels of service. In this regard, the following were established as the effect of attributes on competences of suppliers: Resources created significant impact on quality, quantity and price competences of the suppliers; Skills created significant impact on quality, quantity and price competences of the suppliers; and Location [distance] created significant impact on delivery, service and price competences of the suppliers.

Thus, suppliers that had relevant attributes demonstrated enhanced competences in the areas of quality, quantity, delivery, and price and service performance in public institutions.

## **5.3 Nature of Relationship between Suppliers' Attributes and Performance:**

The association of attributes with satisfactory performances by suppliers revealed that: The observed high frequency of satisfactory performance by suppliers from large business sector was due to high levels of resources and appropriate skills; The observed low frequency of satisfactory performance by suppliers from large business sector was due to unfavourable locations; The observed high frequency of satisfactory performance by suppliers from small business sector was due to favourable locations; and the observed low frequency of satisfactory performance by suppliers from the small business sector was due to low levels of resources and inappropriate skills. Thus, observed incidences of satisfactory supply of goods and/or provision of services to public institutions were associated with presence of particular high levels of resources, appropriate skills and favourable locations of the suppliers.

However, in the context of the predictive statement of this study, satisfactory supply of goods and/or provision of services to public institutions should not necessarily be associated with resources, skills and locations of the suppliers, hence: The expected high frequency of satisfactory performance by suppliers from small business sector was not due to favourable locations of the suppliers; The expected low frequency of satisfactory performance by suppliers from small; The expected high frequency of satisfactory performance by suppliers from the large business sector was not due to high levels of resources and appropriate skills; and the expected low frequency of satisfactory performance by suppliers from the large business sector was not due to unfavourable locations.

Thus, the expected frequencies of satisfactory supply of goods and/or provision of services to public institutions were not associated with the presence of high levels of resources, appropriate skills and favourable locations of the suppliers. This conforms to the null hypothesis that, 'Satisfactory performance by suppliers was independent of the supplier attributes'.

## **5.4 Hypotheses Testing**

Chi-Square( $X^2$ ) test was applied to establish the nature of the relationship between satisfactory performance by the suppliers and the attributes in the enterprises which supplied goods and/or provided services to the institutions. This proved that the association between the variables was significant and not by chance since the difference between the table value (i.e.5.991) and the calculated value (i.e. 16.1) was significant. Hence, alternative hypothesis that, 'Satisfactory performance by suppliers was dependent of the supplier attributes' was considered more appropriate.

It was observed that suppliers of requirements who were selected from among the potential sources of supply with the most appropriate attributes, from either small or large business sector demonstrated satisfactory performance as



follows: Micro and Small Enterprise (MSE) suppliers with appropriate attributes demonstrated high level of competences in areas of quality, quantity, price, delivery and service; Micro and Small Enterprise (MSE ) suppliers without appropriate attributes demonstrated low level of competences in the areas of quality, quantity, price, delivery and service; Medium and Large Enterprises with appropriate attributes demonstrated high level of competences in the areas of quality, quantity, price, delivery and service; and Medium and Large Enterprises without the appropriate attributes demonstrated low level of competences in the areas of quality, quantity, price, delivery, and service

### 5.5 Conclusions

In view of the above findings, it was concluded that Micro and Small Enterprises: were potential sources of supply that may compete favorably with other sources of items needed in the public institutions; may make satisfactory supply of goods and/or provision of services to all clients depending on the prevailing situations of resources, skills and locations; were capable of assisting public institutions to achieve the procurement objectives of acquiring right quality items in right quantities at right prices delivered at the right time and with the desired levels of service; may be made the preferred suppliers of public institutions by making available to them adequate resources, appropriate skills and favorable geographical locations; May only make satisfactory supply of requirement to public institutions if the requisite supplier attributes that enhance their respective competences were made available to them.

### 5.6 Recommendations

Based on the findings, it is recommended that,

The procurement procedures used should encourage reaching out to all interested potential sources of supply irrespective of size of enterprise and scales of business operations. This should be encouraged in order to bring about the desired competition, including technological competition.

In order to obtain requirements from the right sources, the institutions should consider competences of the suppliers along with the following: The likely costs to be incurred while awaiting delivery of items; Additional costs to be incurred while looking for alternative sources; The need for flexibility by the sources; Speed of response to urgent or emergency needs of customers; and the need to respond positively to unique demand of customers.

Enterprises that are to be engaged in the supply of requirements to public institutions should demonstrate flexibility and high speed of response especially since these were rated more important than any other factors.

In order to obtain requirements more competitively, it is recommended that public institutions should employ procurement procedures that enable reaching out to all interested potential suppliers in every procurement for which their businesses were suited. This implies reaching out to suppliers in both small and large business sectors that have adequate resources, appropriate skills and favourable locations.

Since suppliers that had relevant attributes demonstrated enhanced competences in the areas of quality, quantity, delivery, and price and service performance in public institutions, it is recommended that, resources, skills and location should be taken into consideration when developing criteria for evaluating potential sources of supply in the procurement process.

It is necessary that employee resourcing process in public institutions take into account both external and internal factors like age trend of the general population and ages of current staff respectively. The process should as well disaggregated the use of gender as a genuine occupational qualification and should lay emphasis on formal training and perpetual refresher courses to enhance purchasing and supply skills in public institutions. This will ensure selection of enterprises that can assist the institutions to achieve the desired procurement goals.

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