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## **The Role of Capacity Enhancement in Determining Green Procurement Opportunity Exploitation by Small and Medium Enterprises in Nigeria**

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### **Abstract**

Capacity enhancement is a central priority for Small and Medium Enterprises (SMEs). SMEs and government organizations alike have developed a range of activities and programmes to enhance their capacity as they work towards the common goal of improving the economy. Green procurement is one of such programmes as it creates a world in which biodiversity and green information is freely and universally available for science, society and a sustainable future. Capacity enhancement empowers all SMEs in every community to carry out their work in the most effective, self-sustainable and stable way possible. It includes improving the way SMEs can adopt, contribute to and benefit from entrepreneurial opportunities such as green procurement which are most vital to the economic growth and sustainability of every nation in the world. This study seeks to explore the role of capacity enhancement in green procurement opportunity exploitation by Small and Medium Enterprises (SMEs) in Nigeria. The study adopted an exploratory approach using a descriptive survey which was conducted in Kaduna state of Nigeria. The survey was stratified into sub-sectors that were sampled which are agro-based, chemical, construction and engineering. All analysis was conducted to obtain final result of the study sample of 120 registered SMEs drawn from the target population in Kaduna state. The target population was grouped into the manufacturing industry, trade and services. Statistical analyses were conducted with the help and data from Kaduna Chamber of Commerce and Industry (KADCCIMA) to calculate the descriptive statistics and inferential statistics. The major factors of capacity enhancement needed for SMEs to adopt green procurement in this study include: Training, Technology Development and Mastery and Research for New Ventures.

**Keywords:** Capacity Enhancement, Green procurement, Small and Medium Enterprises, Entrepreneurship.

### **Background to the Study**

We live in times of multiple crises. We are confronted not only with a financial or economic crisis, but also with the severe challenges from a climate and a natural resource crisis. Our natural resources, which we rely on for all economic activity and social and economic development, are under severe pressure, and it is clear that business as usual is not an option.

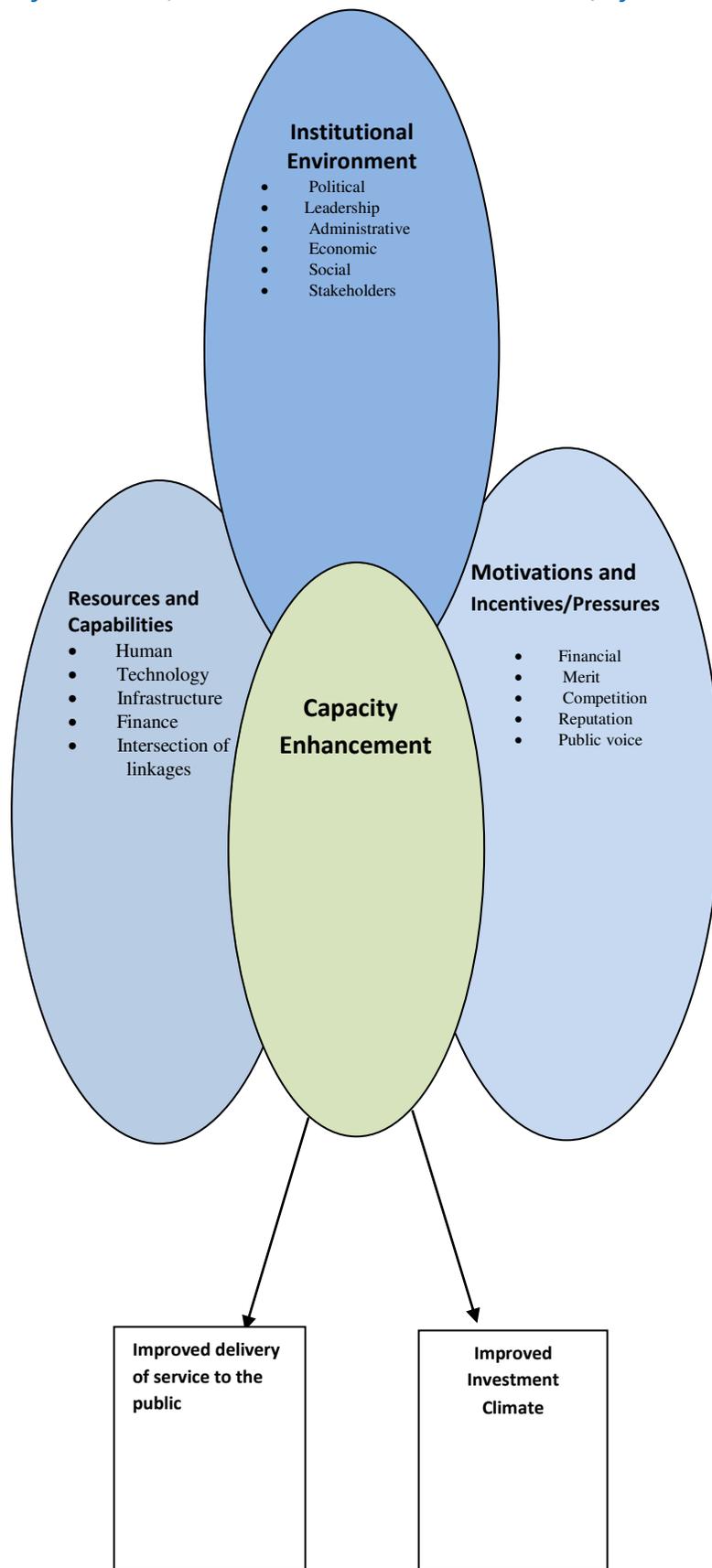
Instead, our response to these crises must be one that is capable of dealing with both crises at the same time. Long-term prosperity requires a transition to a new growth paradigm based on resource efficiency (Casey and Kelley, 2010). A growth that delivers new jobs improves social well-being and reduces vulnerability towards imports of resources, while respecting the carrying capacity of ecosystems. This growth paradigm is called green growth (Auken, 2012). This study shows that green procurement possesses great and largely unharnessed potentials in catalyzing green growth. By utilizing the massive purchasing power of the public sector at all levels, green procurement can transform the market, stimulate green industrial growth and create incentives to invest in, innovate and scale up green solutions when demand is secured and well directed.

The study sought to confirm whether capacity enhancement plays a role in green procurement opportunity exploitation by Small and Medium Enterprises (SMEs) in Nigeria. The study proceeded by confirming the effect of training to the effect of technology development and mastery in green procurement. The frequency and percentage distribution of the findings on the capacity enhancement variable is represented in Tables and Figures.

### **Capacity Enhancement**

Capacity enhancement has been defined in multiple ways; its ultimate purpose is to leave behind better skilled and oriented individuals, more responsive and effective institutions, and a better policy environment for pursuing development goals (Krueger, Mary, Jonathan, Stuart and Jonathan, 2001). For the purpose of this study, capacity enhancement denotes the development of formal and informal institutions and organizations that is, changes in the rules of the game and organizational behavior that lead to improvements in service delivery to the public and in the country's investment climate (Wilhelm and Mueller, 2003). Capacity enhancement at the institutional or policy level has three main ingredients, (see figure 1):

- The country's resources and capabilities
- An enabling institutional environment
- Motivations and incentives/pressures that promote and help to sustain behavioral change.



**Figure 1: Ingredients of Capacity Enhancement (Source: Wilhelm and Mueller, 2003)**

### **Green Procurement**

Green Procurement (formerly known as Affirmative Procurement) is the purchase of environmentally preferable products and services in accordance with one or more of the established “green” procurement preference programs. It involves the integration of environmental issues into purchasing decisions based on price, performance and quality. (Nicolas 2005). An entrepreneur is person bearing risks, planning, supervising, organizing and owning (Chong, 1997). Schumpeter (1934) describes an entrepreneur as an innovator and develops untried technology. An entrepreneur is an economic man who tries to maximize his profits by innovations (Haggen, 1962).

### **Statement of the Problem**

Green procurement involves pollution prevention, improvement in public transport infrastructure and product stewardship. Incremental steps, beyond compliance actions—addressing current issues of cost, risk and footprint reduction—are important to create a better understanding of what sustainability means (Curkovic and Sroufe, 2007). However, the incremental gains are generally inadequate to fundamentally change the course of transition. Demonstrating significant progress on reducing waste and emissions is crucial, yet high economic growth rates far outweigh any substantial environmental benefits. This approach may offer short-term benefits, but it quickly assumes the “business-as-usual” scenario for itself. The growing commitment to sustainable principles has increased the demand for new green products and services. Businesses and consumers are looking for entrepreneurial skills in the economy which presents better ways to reduce waste, minimize our impact on the environment, and leave a cleaner, greener world for our children and grandchildren. The growing emphasis on protecting the environment translates into opportunities for entrepreneurs (Nelson 2000), but only entrepreneurs in developed nations have been able to operate entrepreneurial skills and capabilities to take advantage of the green procurement entrepreneurial opportunity.

Poverty has risen in Nigeria, with almost 100million people living on less than a \$1 (£0.63) a day (bbc.com, 2012). It is inevitable that something fundamental must change if a national population of about one hundred and sixty million is to live a decent lifestyle within the limitations of planet resources. Looking at the overall trend and the need to bring over 61 per cent of the Nigerian population out of poverty, it is obvious that the incremental approach is not enough. As corroborated by Broome (2002), transport and energy systems, together with urban development, today make buildings and energy part of the problem rather than part of the solution. Recent reports suggest that the rise in global temperatures will not be limited to 2° C. Not only will natural calamities become more common, but the cost of tackling climate change will substantially increase. It is clear that access to food and water will be the next big challenge influencing economic development (Crook, 2011).

### **Purpose of the Study**

Capacity is the rate of doing work, not the quantity of work done. Capacity planning is the process of determining the resources required to meet the priority plan and the methods needed to make that capacity available (Arnold & Chapman 2004). Entrepreneurs manage their enterprises through their employees and other resources. Human resource management consists of creating the conditions that allow people to do their best on behalf of the enterprise. It enables them build capacity in functioning and relating in an enterprise. Creating right conditions is a matter of motivating people, both individually and on an organizational scale. Creating the right conditions involves specific skills that can be taught (Wren, 2005). This study therefore seeks to investigate the role of capacity enhancement in determining green procurement opportunity exploitation by Small and Medium Enterprises in Nigeria. The purpose of this study is to ensure that SMEs in Nigeria are able to adopt transformative innovations such as green procurement by building their organizational capacity in three fundamental variables such as:

- To assess the role of training as a factor of capacity enhancement,
- Examine research for new ventures in capacity enhancement ,
- And to investigate technology development and mastery in capacity enhancement; all to meet the demands of a global economic change.

## **Significance**

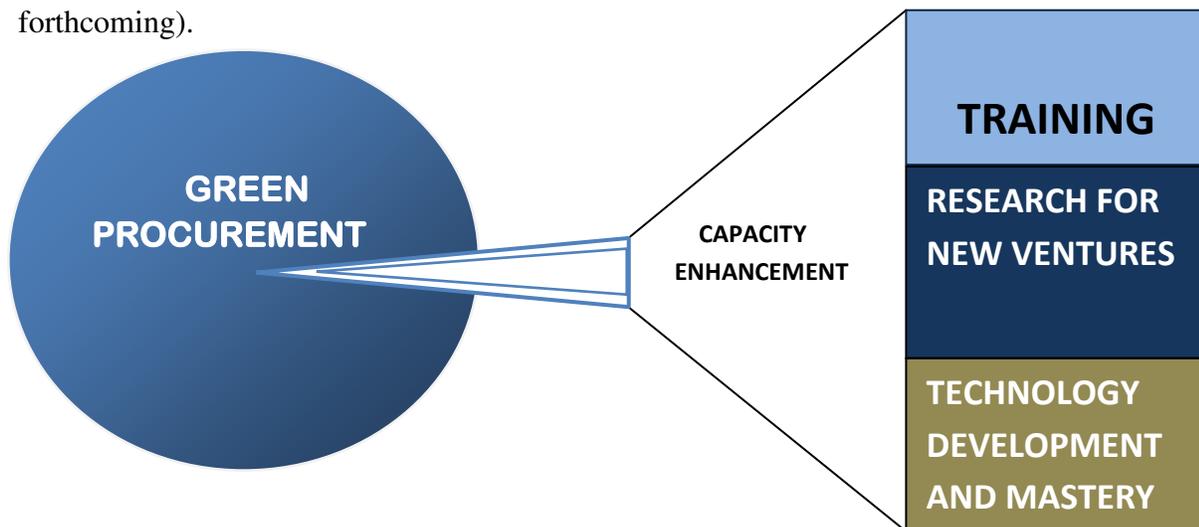
The significant aspect of this study is to thoroughly explore and properly investigate the role of capacity enhancement as a determinant of green procurement opportunity exploitation by small and medium enterprises in Nigeria. The findings of this study are to benefit the following; entrepreneurs, stakeholders, end users and practitioners, the government, scholars and academics and future researchers. The ability to adopt transformative innovations such as green procurement will be dependent on SMEs willingness and ability to build their organizational capacity to meet the demands of a global economic change.

## **Literature Review and Conceptual Framework**

Cohen (1993) believes the term capacity building (or enhancement) has been used too broadly and inconsistently to the point where it has lost its analytic power and utility. He claims that **capacity** needs to be narrowly defined as “individual ability, competence to carry out a specific task” and that capacity enhancement must therefore focus on increasing the abilities of specific types of personnel within an organization (1993). This narrow definition, however, does not “travel” well to the other analytic dimensions of capacity and capacity enhancement: the organizational and institutional levels. The UNDP (United Nations Development Programme) may provide the most analytically useful and less controversial definition (Morgan, 2001). Capacity refers to the “ability to perform functions, solve problems and set and achieve objectives.” This recognizes that national capacity is not just the sum total of individual capacities; that the concept is richer and more complex that “weaves individual strengths into a stronger and more resilient fabric. If countries and societies want to develop capacities, they must do more than expand individual skills. They also have to create the opportunities and incentives for people to use and expand individual skills.” (Fukuda-Parr, Lopes, and Malik, 2002).

Furthermore, even when most authors acknowledge that capacity and capacity enhancement needs to be approached on a three dimensional analytical framework, authors usually tend to focus more on one analytic dimension more than another. Thus, for example, in his study of building technical capacity in the public sector, Cohen (1993) focuses more on building functional capacities (skills), at the individual level. In contrast, Peterson’s analysis of bureaucracies in Africa (1997) focuses on the organizational dimension, and Boknick’s study of fiscal discipline in Zambia (1997) focuses on the institutional level of analysis.

In a 2002 publication, the UNDP recognizes that despite years of training through technical assistance projects, weak institutions and poor skills remain unyielding constraints to development. While this document stresses that these projects failed due in large part to lack of “ownership,” it devotes most of its attention to “finding new solutions to old problems,” but offers little in terms of suggesting more concrete indicators to evaluate the effectiveness or progress of capacity enhancement projects (Atsma, 2011). A more recent publication, however, grants greater attention to defining capacity and capacity enhancement in more operational terms. Building on the experiences and lessons of previous capacity enhancement projects in different countries, the main goal of this UNDP document is to offer practical and useful advice for practitioners and decision makers in developing countries and the international donor community. To disaggregate the term capacity, the document identifies “key capacities” that could be expected from “an empowered and capable individual, organization, or society in molding its own destiny” (Lopes and Theisohn, forthcoming).



## **Figure 2: Conceptual Framework Design**

### **Training**

Green procurement training in educational institution seeks to provide students with the knowledge, skills and motivation to encourage entrepreneurial success in a variety of settings (Maria, Hlupic, Coakes and Mohammed 2011). Today it is a well-recognized fact that Internet-based education is cost effective and efficient way of reaching out to learners across the globe, even for those in remote areas. Companies that have incorporated green procurement via e-learning with their educational portfolio have access to the entire world as a potential market place and will surely enhance their capacity for continuous growth and profit (Badi and Badi, 2005).

### **Research for New Ventures**

For green procurement to be effectively exploited by any SME, it is always advantageous to take up a market research for the chosen product to go green with and the chosen marketing area. Marketing research for green products involves collection of data relevant to customers' preference and various disposed product attributes, price distribution channel and about their opinion on the adoption of the new recycled products (Griffiee 2010).

### **Technology Development and Mastery**

The techniques of production and new product developments may take away the existing consumers of the items of an organization (Badi and Badi 2005). Technology is scientific knowledge that is applied to business and used by people (Mariotti 2006). The method of green procurement opportunity exploitation is therefore scientific and technological, it is time taking and consists of principles and processes, conducting experiments and validating the hypothesis (Badi and Badi 2005).

### **Methodology**

A well structure questionnaire was used to collect data from SMEs. The study used random sampling technique and collected data from 120 SMEs. Regression analysis, correlation and coefficient calculations were done using statistical packages for social sciences (SPSS) obtaining the correlation between the role of capacity enhancement and green procurement opportunity exploitation by SMEs in Nigeria. Results were discussed to enhance SMEs capacity and ability to adopt green technology and bring profitability.

### **Analysis**

Descriptive statistics for all the variables were calculated and inferential analysis was also done. Pearson’s correlation coefficient was calculated for all the variables to corroborate the role of capacity enhancement as a factor for determining green procurement opportunity exploitation by SMEs in Nigeria.

### **Findings**

The findings in all contributing variable reveals that the role of capacity enhancement cannot be negated or overemphasized as a determining factor green procurement opportunity exploitation and is also a necessity for SMEs to thrive in the Nigerian economy. Findings also presents that SMEs in Nigeria need to take capacity enhancement into consideration such as timely training of its staff and research for new ventures. New initiatives for business can best be seen and exploited by SMEs that build its capacity to meet the demands of trends in a thriving economy as Nigeria.

**Table 1: Statistical Results on Training**

<b>Statement</b>	<b>Yes</b>		<b>No</b>		<b>Total</b>
	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>	
Enhancing the capacity of the staff through training	61	50.8	59	49.7	100
Cost of training	70	58.3	50	41.7	100
<b>Average</b>					

**Table 2: Coefficients of training in green procurement**

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Policies for enhancing the knowledge of employee	.226	.090	.226	2.508	.014
(Constant)	.393	.066		5.987	.000

Table 2 shows a coefficient of 0.393 for training which indicates that training as capacity enhancement among SMEs do influence the operation of green procurement opportunity exploitation by SMEs in Nigeria, positively. In fact, for a unit change in the training levels, there is a corresponding 0.393 unit change in the adoption of green procurement.

Using the summary presented in Table 2, a linear regression model of the form,  $Y = \alpha + \beta X_i$  can be fitted as follows:

$$Y = 0.226 + 0.393X_2 \quad \dots \text{Equation 1}$$

**Table 3: Statistical Results on Research for New Ventures**

Statement	Yes		No		Total
	f	%	f	%	
Research for new ventures	92	76.7	28	23.3	100
<b>Average</b>	<b>92</b>	<b>76.7</b>	<b>28</b>	<b>23.3</b>	<b>100</b>

**Table 4: Coefficients of Research for New Ventures**

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
Number of research for new ventures in the past 3 years	.087	.061	.130	1.422	.158
(Constant)	.532	.125		4.240	.000

Table 4 indicates that a coefficient of 0.532 for number of research for new ventures in the past 3 years which shows that research for new ventures as capacity enhancement among SMEs do influence the operation of green procurement opportunity exploitation by SMEs in Nigeria, positively. In fact, for a unit change in the research for new ventures levels, there is a corresponding 0.532 unit change in the adoption of green procurement.

Using the summary presented in Table 4, a linear regression model of the form,  $Y = \alpha + \beta X_i$  can be fitted as follows:

$$Y = 0.087 + 0.532X_2$$

... Equation 2

**Table 5: Statistical Results on Technology Development and Mastery**

Statement	Yes		No		Total
	f	%	f	%	
Technology development and mastery as capacity enhancement in green procurement	86	71.7	24	28.3	100
<b>Average</b>	<b>86</b>	<b>71.7</b>	<b>24</b>	<b>28.3</b>	<b>100</b>

**Table 6: Coefficients of Technology Development and Mastery**

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Technology inclined	.817	.114	.550	7.156	.000
(Constant)	1.206	.097		12.471	.000

Table 6 indicates that a coefficient of 1.206 for technology inclination which shows that technology development and mastery as capacity enhancement among SMEs do influence the operation of green procurement opportunity exploitation by SMEs in Nigeria, positively. In fact, for a unit change in the research for new ventures levels, there is a corresponding 1.206 unit change in the adoption of green procurement.

Using the summary presented in Table 6, a linear regression model of the form,  $Y = \alpha + \beta X_i$  can be fitted as follows:

$$Y = 0.817 + 1.206X_2 \quad \dots \text{Equation 3}$$

## **Conclusion**

Small and medium enterprises will be enlightened that training of staffs especially on green procurement is not expensive and yet very important to enhance the success of their businesses and to build the capacity to meet up with present market challenges as far as profitability is concerned. In conclusion SMEs from every business sector will now see the need to involve technological mastery to its business operations for a better output and also to be able to take advantage of entrepreneurial opportunities that suffices on a daily bases in the market. It is of essence to note that the cost of acquiring technology in a business operation is not as costly as it is for a business to operate on a manual level, because such a business either existing or a new one will eventually fizzle out. Therefore, SMEs in Nigeria need to get involve in technology development and mastery as capacity enhancement towards green procurement.

## **Recommendation**

From the analysis it can be inferred that more importance should be attached to SMEs interest in training, researching for new business ventures and technology development and mastery at all times, especially on the area of pollution prevention and waste management. Waste prevention and management initiatives should be seen by SMEs on the procurement side. Green procurement initiatives that focus on reduction of waste and packaging, training of procurement staffs and SMEs and design of easier recyclable products should be promoted as a source of a new business venture. Every green procurement research initiatives could facilitate green entrepreneurial opportunity development.

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