STORAGE INFRASTRUCTURES AND AGRO-ENTREPRENEURIAL DEVELOPMENT IN NIGERIA: AN EXAMINATION OF SMALL AND MEDIUM ENTERPRISES IN ABUJA.

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Article received: 7th April, 2015; Article accepted: 5th July, 2015.

ABSTRACT

An inventory survey of small and medium enterprises of cold room operations was carried out in Abuja Municipal and Bwari Area Councils of the Federal Capital Territory, Nigeria. Bwari Area Council is located at the north-east of the Federal Capital Territory with a total population of 129,274 inhabitants while AMAC has 776,298. The main occupation of the indigenes is farming. The specific objective of this study was to determine the potential challenges of cold room operations. A random sample of 30 cold room operators was taken in the study area. Primary data for this study were collected using structured questionnaires. The result showed that 50% of the cold room operators were in their late 30s, 56.7% of cold rooms were built for preservation of animal products and 50% of them mentioned capital as the major constraint while 33.4% respondents complained of inadequate power supply. 60% of cold room operators said easy access to loan and electricity will in no small measure boost their operation. It was thus recommended that government should provide loans, subsidized equipment for cold room operators to assist them to grow their businesses. The findings of this study revealed that cold room enhances the living standard of people in the study area, therefore, government agencies like Small and Medium Enterprises Development Agency of Nigeria, Bank of Agriculture and Bank of industries among others should partner with this sector towards sustainable livelihood and economic development.

Keywords: Cold room, agro-entrepreneurship, enterprises, finance.

INTRODUCTION

Agriculture is the backbone of the rural economy, generating about 31 percent of gross domestic product (GDP) and providing by far the largest source of rural employment (Job, 2009). Growth in Nigeria's agricultural sector, while better than the growth achieved in many other African countries, has fallen short of expectations. During Asia's green revolution, for example, many Asian countries spent up to 20% of their budgets on agriculture, while African countries currently spend between 5 to 10% on the sector. This is despite African leaders' commitment in 2003 to allocate at least 10% of national budgets to agriculture. At the moment, Africa spends more on the military than on agriculture (Ighobor, 2014).

Recognizing these challenges, the Federal Government of Nigeria has identified the modernization of the agricultural sector as a major priority. Former President Obasanjo, one of the founding members of the New Economic Partnership for Africa (NEPAD) repeatedly expressed a commitment to meeting the NEPAD goal of investing at least 10 percent of the national budget in agriculture and related activities (Dele, 2012). The National Economic Empowerment and Development Strategy (NEEDS) also explicitly recognizes the strategic importance of the agricultural sector and lists a number of special initiatives that the Federal Government intends to pursue in promoting increased food and agricultural production. The present administration under Goodluck Jonathan also identified food security and agriculture as one of its seven-point agenda. The current government intends to diversify the country's resource base and also to increase the level of export of primary products with some emphasis on adding value to primary products (Chukwu, 2009).

The recently completed Public Expenditure Review for Nigeria reports that agricultural spending averaged only 1.7 percent of total federal spending over the study period (2001-2005), lagging behind spending in other key sectors such as education, health, and water (World Bank, 2008). For Nigeria to overcome most of the current socioeconomic challenges, agriculture and rural development requires more strategic improvement using the small rural farmers and small scale agribusiness development approach. According to Gross (2012), some of the key Millennium Development Goals like halving the proportion of people living in extreme poverty, suffering from hunger, without access to safe water, reducing maternal and infant mortality by three-quarts and two thirds respectively and

enrolment of all children in primary school by 2015 may indeed be a mirage unless there is a turnaround of the Small and Medium Enterprises (SME) fortunes sooner than later (Gross, 2012).

The decreasing level of Nigeria's per capita income, which declined from $870 in 1981 to $260 in 1998, and $205 in 2004 as well as a low level of agricultural, industrial and infrastructural development (irrigation, road and railway networks) all represent disturbing indices, contributes to dismal performance and contribution of our SMEs (Wale, 2000). In spite of the fact that SMEs have been regarded as the bulwark for employment generation and technological development in Nigeria, the sector nevertheless has had its own fair share of neglect with concomitant unsavoury impacts on the economy (Iornem, 2004).

All the foods utilized by man are obtained either from plants or animal kingdom. Apples, tomatoes, pepper, fish, meat, eggs, etc are found all year round but are perishable. Therefore, meat, fish, eggs, tomatoes, etc require their corresponding temperatures for cold room storage. Thus, it became very essential and imperative to preserve them during transportation and subsequent storage until they are finally consumed. Cold room system of preservation is the process of removing heat from a substance under controlled conditions (Raynor, 2006). In Nigeria, the proliferation of cold room is an indication that freezing agricultural produce like meat, fish, dairy product, fruits and vegetables for sales is a lucrative business (FAO, 2011). There is hardly a household today that does not feed on frozen foods. Business minded individuals are now taking advantage of the huge demands to establish or patronize cold rooms in order to make quick profit (Susan,2004).

Commercially constructed cold rooms can be quite expensive, but fortunately the small-scale operator has many choices. In Nigeria, there are many cold rooms for storing meat, fish, eggs, vegetables, cassava and other perishable products but most of them are situated in urban areas where there is constant supply of electricity, fuel, market and accessibility. This involves money, labour, market and consistency. The use of cold rooms for preserving agricultural products saves wastages, time, money and it helps to improve gross domestic product (GDP) of the country through direct export thereby leading to a robust economy, job creation and food security (Chinedu, 2000).

Nigeria is a country that is blessed with abundant human and natural resources. Prominent among the natural resources is agriculture.. In spite of this, availability of agricultural products are quite low because of losses which account for about 25 to 30% of production (Steve, 2000). Besides, quality of a sizable quantity of produce also deteriorates by the time it reaches the consumer. Most of the problems relating to the marketing of agricultural products can be traced to their perishability. This study examine the availability as well as prospects and challenges of cold room operation of small and medium enterprises in Abuja Municipal and Bwari Area Councils and make recommendations towards sustainable socio-economic development.

Materials and Methods

The study covered Abuja Municipal and Bwari Area Councils of Abuja, Federal Capital Territory (FCT). Abuja shares boundaries with Kogi State in the southwest, in the north by Kaduna State, in the South East by Nasarawa State and in the West by Niger State. The federal capital territory has a land mass of approximately 7,315km^2 of which the actual city occupies 275.3km^2. It has moderate climatic condition. The city of Abuja has a population of 776, 298 (NPC, 2006).

Data Collection

Primary data for the study were collected through the use of questionnaire. Forty questionnaires were administered to the business owner, managers and employees of cold rooms in the study area. Thirty questionnaires were returned which were later used for analysis. Secondary data was obtained from existing literature (both theory and empirical studies) such as journals, articles, research papers, magazines, catalogues and books. Data collected were analyzed using descriptive method of analysis like percentages, simple frequency distribution, graphs, etc.

RESULTS AND DISCUSSION

Socio-Economic Characteristics

Table 1: Socio-Economic Characteristics of Sampled Respondents

Variable	Frequency	Percentage (%)
Age (Years)		
21 – 30	4	13.3
31 – 40	15	50
41 – 50	9	30
51 – 60	2	6.7
Total	30	100

Source: Field Survey, 2014

Table 1 showed the socio-economic characteristics of cold room owners/managers. Greater percentage of the respondents (13.33%) was between 21 – 30 and 6.7% were between 51 – 60 years. Also 67% of the respondents were female and 33% were males. Finally, the 13.3% of the respondents were single and 86.7% were married. This table showed that different age groups are involved in cold room business and is dominated by female and married people.

Table 2 Educational Background

Educational Background	Frequency	Percentage (%)
Primary/Secondary	4	13.3
Higher Institution	15	50
M.Sc./Ph.D	11	36.7
Total	30	100

Table 2 showed that 13.3% of the respondents hold primary/secondary school qualifications, 50% higher institutional qualification and 36.7% are M.Sc./Ph.D. qualifications. The involvement of 36.7% in cold room business by higher degrees holder buttress the fact that cold room business contributes in no small measure to employment generation and livelihood improvement.

Table 3: Registration of Enterprise

Variable	Frequency	Percentage (%)
Registered	14	46.7
Not registered	16	53.3
No response	0	0
Total	30	100

Source: Field Survey, 2014

According to Table 3, 46.7% of the respondents have registered their cold room businesses while 53.3% have not. This could be attributed to lack of information about where, how, when and how much to register a cold room and the reluctance of cold room operators to register could be due to finance. The owner's decision to register their company depends on the importance placed on registration and possibly to avoid taxes.

Table 4: Nature of cold room building

Variable	Frequency	Percentage (%)
Block	30	100
Other materials	0	0
No response	0	0
Total	30	100

Source: Field Survey, 2014

Analysis from table 4 above showed that all the cold room owners have a block built cold room. However, there are other smaller cold room operators which does not use block but they are not part of the scope of this study as they did not qualify to be under SME category. This means that the raw materials used in the building of cold rooms especially blocks are readily available.

Table 5: Reasons for present business location

Variable	Frequency	Percentage (%)
Because of the availability of market	10	33.3
Because there is constant electricity	5	16.7
Because of the availability of agricultural products for storage	5	16.7
Other reasons	10	33.3
Total	30	100

Source: Field Survey, 2014

Table 5 above showed that 33.3% of cold room operators locate their cold room in the present location because of availability of market, 16.7% due to constant electricity supply and availability of agricultural products for storage while 10% mentioned other reasons such as low costs of living, closeness to residential area among others are the reasons why they locate their cold rooms in the present location. This result indicated that the business under consideration will only have the expected impact on the nation's economy if challenges of infrastructures like power and accommodation among others are properly addressed.

Table 6: Formal design/plan for the structure

Variable	Frequency	Percentage (%)
Yes	14	46.7
No	16	53.3
No response	0	0
Total	30	100

Source: Field Survey, 2014

Table 6 shows that 46.7% of the respondents have blue print/design of cold room building before procurement while 53.3% do not have. This might be due to the cost of designing a blue print as most cold room operators in Nigeria have low income and would not want to spend money in designing as there are cheaper or no-fee ways of procuring cold room. On the other hand, considering the percentage of educated owners, 46.7% of the respondents were able to have proper designs.

Table 7: Source of materials to build cold room

Variable	Frequency	Percentage (%)
Within the Area Council	3	10
Within Abuja	4	13.3
Outside Abuja	15	50
Imported	8	26.7
Total	8	26.7

Source: Field Survey, 2014

Table 4. indicates that 10% of the respondents get their materials to build cold room within the study area, 13.3% from other parts of Abuja (Gwagwalada, Abaji and Kwali), 50% outside Abuja (Lagos, Rivers, Kaduna, etc) and 26.7% imported. From this, it means that most of the materials used for the construction of cold rooms are available within the Federal Capital Territory, Abuja and thus the operators do not need to go far in order to purchase the materials. This saves cost of establishment and will reflect on their returns.

Table 8: Specific Products the cold room

Variable	Frequency	Percentage (%)
Animal products	17	56.7
Other products	13	43.3
No response	0	0
Total	30	100

Source: Field Survey, 2014

According to the responses from cold room operators, 56.7% of the respondents built for the preservation of animal products only and 43.3% said it is not only meant for the preservation of animal products. This means that 43.3% of the respondents have mixed products including juice and soft drinks.

Table 9: Source of animal product for preservation.

Variable	Frequency	Percentage (%)
From Nigerian farmers	20	66.7
Imported	10	33.3
Total	30	100

Source: Field Survey, 2014

Table 9 showed that 66.7% of the respondents source their animal products for preservation locally while 33.3% sell imported products. Majority of the respondents source their animal products for preservation from Nigerian farmers. This could be as a result of the availability and the cheap cost of procuring it. The demand for foreign products is mainly due to interest in imported products (even if they are expired, produced many years ago and less nutritious) at the expense of local products which are fresh and nutritious. The negative impact of high demand for foreign products such as frozen chicken, beef, apple e.tc on local industries and the economy are quite enormous.

Table 10: Desire for business expansion

Variable	Frequency	Percentage (%)
Yes	12	40
No	18	60
No response	0	0
Total	30	100

Source: Field Survey, 2014

Analysis from table 10 showed that most cold room owners do not have the capital to expand their cold room business as represented by 60% while 40% have the capital for expansion. This might be due to poor access to loan, inadequate information about the process of operating cold room before and after building it and poor business ideas. Some already have the capital and this capital according to the respondents were from personal savings and borrowing from friends, family members and even loan from the banks and other financial institutions. Some of the challenges faced by cold room operators in accessing loans are the issue of collateral, lack of access to loans and the difficulties in obtaining loan.

Table 11: Major challenges of cold room operations

Variable	Frequency	Percentage (%)
Poor electricity supply	10	33.4
Transportation problem	1	3.3
Poor market	1	3.3
Spoilage of products	1	3.3
High cost of materials	2	6.7
Inadequate capital	15	50
Total	30	100

Source: Field Survey, 2014

Table 11 showed that 33.4% of the respondents experienced poor electricity supply, 3.3% complained of transportation, poor market and spoilage of product while 2% and 15% reported high cost of materials and capital as their major challenges respectively. This means cold room operators are not left out of the problems facing the growth and development of small and medium scale enterprises in Nigeria as all the problems are common to the Nigerian SMEs' environment. The attention of government, concerned agencies and other stakeholders is needed in this regard so as to achieve the aim of the current transformation agenda of the present administration.

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CONCLUSION AND RECOMMENDATIONS

Cold room proves a better storage facility for perishable agricultural products especially animal products such as meat, fish and vegetable products to communities towards the promotion of the living standard of the people. The importance and relevance of this study to the teaming population in the study area are enormous. The cold room enhances the living standard of the community by providing them the access to fresh animal products as well as business opportunity. Cold room operations are not left out of the problems erratic power supply, associated marketing challenges as well as finance and transportation challenges. However, the equipment for the construction of cold rooms are readily available in the study area.

The growth of SMEs especially cold room businesses can be enhanced by both the government and non-governmental organizations. Government parastatals and agencies like Bank of Industries (BOI), Bank of Agriculture (BOA), Central Bank of Nigeria, National Poverty Eradication Programme (NAPEP) and Small and Medium Scale Enterprises Development Agency of Nigeria (SMEDAN) which promote the development of SMEs should come to the aid of cold room business because of the crucial role of this business towards agro-industrial as well as economic development of Nigeria.

Cold rooms in form of SMEs has contributed to the development of indigenous entrepreneurship through the local content, made domestic savings and utilization of local resources possible, created employment opportunities for the teaming youths, it has also help in the development of appropriate technology for both skilled, unskilled and semi skilled people, self-employment and help in the industrialization of the country. Most of these cold room operators cannot access loan on a long and short term basis. The implication of this shows that small scale businesses enterprises are either discriminated against or cannot access funds at the credit market. The cold room business contribute to agro-entrepreneurship development by providing storage facilities for agricultural products especially for those who are into buying and selling and even producing agricultural products. Therefore, government should provide loans, subsidized equipment for cold room operators and assist them other incentives that will expand their businesses so that the potentials of the business will be efficiently harnessed for the benefit of Nigeria's economy.

REFERENCES

Chinedu, D. S. (2000). An Almost Ideal Demand System. *American Economics Review.*70 (33): 312 – 326.

Chukwu, R. (2009). *Investigations on Building a Food Marketing Policy Evidence Base in Nigeria.* Ibadan: University Press. Pg.122.

Dele, J. S. (2012). *Essentials of Agricultural Economics.* Ibadan: Impact Publishers Nigeria Limited. Pg. 3 – 8.

Food and Agricultural Organization (FAO) (2011). *Temperature for Variety for Food Storage.*

Gross, S. (2012). Small and Medium Sale Enterprises and Agriculture In Nigeria: Prospects and Challenges. *American European Journal of Agriculture and Environmental Science,* 2(3): 231 – 239.

Ighobor, K (2014). Africa's Economy Grows, but many Stomach' are Empty. Africa Renewal: Special edition on Agriculture 2014. www.un.org/africarenewal

Iornem, S. (2004). Small and Medium Scale Enterprises in Nigeria. *Agronomy Journal,* 64(3): 409 – 412.

Job, H. (2009) Agriculture and Small and Medium Scale Industries. National Population Commission (NPC) (2006) Population Census Data, Umuahia. *Annual Book.* Pg. 7 – 9.

Toluhi, B & Oluwafemi, R.A (2014) Field Survey on Small and Medium Enterprises of Cold Room Operations in Abuja Municipal and Bwari Area Councils of Federal capital Territory of Abuja. An unpublished field report

Raynor, R.A. (2006) *Management and Business Studies.* Enugu: The Chance press limited. Pg. 147-148.

Susan, B. A. (2004). Market Liberalization for the Poor in Nigeria. *Journal of Development and Agricultural Economics* 2(6), 226– 230.

Wale, S. (2000). *Elasticities in Rural Nigeria: An Application of the AIDS Model.* The Bangladesh Development Studies. Vol. 22, No. 1, March.

World Bank (2008). Existing Technologies and Approaches for the prevention of deterioration of agricultural products in some selected States of Nigeria: Effectiveness and Constraints.