

Survival Approaches of Small-Scale Food Processing Enterprises in Imo State, Nigeria

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The survival of small-scale food processing enterprises has become a regular feature of developing countries. The Government has made a substantive effort to ensure their survival but not enough empirical evidence to that effect. This paper examined the types of small-scale food processing enterprise; goals; survival approaches and socioeconomic determinants of the survival approaches adopted by small-scale food processors. One hundred and twenty small-scale food processors were purposively selected from three major urban areas. Structural questionnaire was used for the data collection. Descriptive statistics and regression analysis were used for data analysis. The results of the study identified thirteen types of small-scale food processing enterprises in the state. All (100%) the processors undertook their type of enterprise by reason of generating greater income when compared with primary products. Seven survival approaches were identified. Major constraints to growth of the enterprises were inadequate capital (95.8%), poor infrastructural facilities (83.3%), seasonal scarcity and high cost of raw materials (81.7%). There is a need to enact policies that will promote and sustain the adoption of identified survival approaches.

Field of Research: Management

1. Introduction

Food processing constitutes a vital subsector in agribusiness especially in area of value addition to food crop and animal products. Food processing has two main functions; making food products more digestible and preservation to lengthen their shelf life. Small-scale enterprises are defined as enterprises whose total fixed assets and working capital is less than N500, 000 but more than N50, 000 and employed not more than 50 persons (Asogwa, 2009). Small-scale enterprises play a vital role for the growth and development of Nigeria economy (Onugu, 2005). It has been observed that if this small-scale enterprises' sector is to survive and grow in the present harsh and volatile business environment, appropriate approaches must be developed and adopted by entrepreneurs (Omeresan, 2004). The Federal and State governments have made efforts to ensure the survival of these small-scale enterprises recognising their vital role towards economic development (Amazu, *et al.*, 2012). Programmes promoted by governments to strengthen the survival of these small-scale enterprises include National Economic Empowerment Development Strategy; Small and medium Industries Equity Investment Scheme (Nwajiuba *et al.*, 2012). Furthermore, significant progress has been made in understanding the characteristics, roles, growth and profitability of small and medium scale enterprises in Nigeria (Ayozie, 2011) Despite all these efforts the empirical evidence on the survival approaches adopted by small-scale food processors appears scanty, isolated and devoid of in depth analysis. The study will fill the gap in knowledge. It assessed the types,

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goals, survival approaches and its socioeconomic determinants and constraints to growth of small-scale food process enterprises in Imo State, Nigeria.

The paper is presented in five sections. One, introduction, gives the background, problem statement and objectives of the study. Two and three deal with a related literature, and methodology for data collection and analysis, respectively. Four, the results of the study are presented and discussed. Five, conclusion and recommendations of study are presented.

2. Literature Review

Entrepreneur is a business owner that exploits idea that creates a business that benefits them, the society and acts as developmental weapon. Small- scale enterprises are sub-sector of the industrial sector which plays crucial roles in industrial development (Ahmed, 2006). Following the adoption of Economic Reform Programme in Nigeria in 1981 there have been several decisions to switch from capital intensive and large scale industrial Projects to small- scale. This was based on the philosophy that small- scale enterprise has the potential to generate the required good and services that will propel the economy towards development.

According to Schumpeter theory of entrepreneurship, he described the equilibrium state of an entrepreneur as “the circular flow of economic life” where life activities are done in form of routine based on past experience, no change in the present status including production and distribution. Empirical studies show that specific human capital such as motivation of business intentions and industry specific experience as factors that could influence the development of entrepreneurial competencies, and determines whether or not a business survives and proper (Baptista, *et al.*, 2006).

Small-scale enterprise helps stimulate local economies, diversify and grow their respective industries (Gustafson, 2014). Despite the availability of local agricultural produce, value addition still poses a serious challenge.

Every day in the rural communities food crops are processed for sale as convenient ready-to eat foods. The industry which accomplishes this daily food processing task is characterised by its small scale, simple technology, and orientation towards its consumers. In most cases, the final product is produced from raw materials by only one person. No formal standard of quality or quantity are observed by the producers. There is a gainful employment for thousands of rural people, primarily women and a substantial amount of locally generated income, result from the functioning of this processing industry (Gustafson, 2014). Omeresan (2004) observed that there is need for development of appropriate survival approaches to be adopted by entrepreneurs for survival and growth of small-scale enterprises in the present harsh and volatile business environment.

3. Methodology

The study was conducted in Imo State, Nigeria. Three urban areas were purposely selected from each of the three Agricultural Zones of the state namely; Okigwe, Orlu and Owerri. These urban areas were purposely chosen because of large number of small-scale food processing enterprises in the areas. Imo State is located between Latitudes 4° 45'N and 6° 17'N and Longitudes 6° 35' and 8° 9'E (Imo State Government, 1993).

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Forty small-scale food processing enterprises were purposely selected from the three urban areas. A total of one hundred and twenty small-scale food processing enterprises were used for the study. The lists of small scale food processing enterprises collected from Imo State Ministry of Commerce and Industry and Imo State Chambers of Commerce, Agriculture and industry are used as sample frame from which the samples were selected. Primary data were collected using a set of questionnaire. Data collected were analysed using frequency distribution, percentages, bar chart, and regression analysis.

The implicit model of the regression is stated as follows, $Y = f(X_1, X_2, X_3, X_4, X_5, e)$.

Where: Y = Number of business strategies adopted;
 X_1 = Small-scale food processing age (year);
 X_2 = Small-scale food processor's gender (Dummy variable; Male = 1, Female= 0);
 X_3 = Small-scale food processor's educational Level (Years spent school);
 X_4 = Small-scale food processor's experience (Years);
 X_5 = Small-scale food processor's income (Naira); and
 e = Error term.

4. Results and Analysis

4.1 Small-Scale Food Processing Enterprise Types and Goals of the Processors

4.1.1 Types of Small-Scale Food Processing Enterprises

The study identified the following types of small-scale food processing enterprises (Figure 1) in the state:

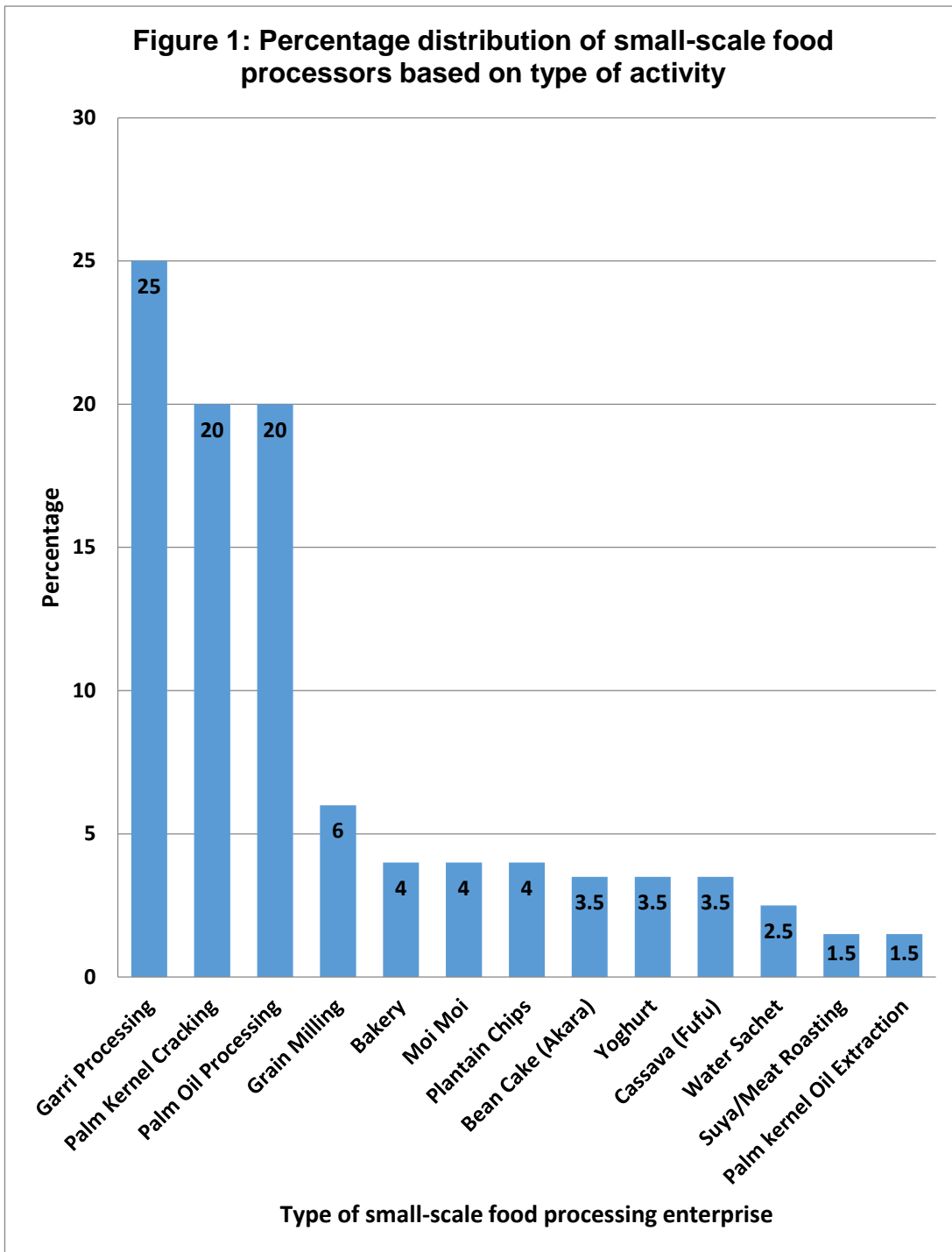
- Garri processing: The raw material (cassava) is a primary product direct from the farm. It is processed into garri by the small-scale food processors. Twenty five percent of small-scale food processors are involved in the garri processing.
- Palm kernel cracking: This enterprise involves in separation of palm kernel from the shell. Both the kernel and shell are economically useful products. About the 20% of the processors are involved in this processing business.
- Palm oil processing: This involves the processing of oil palm fruits through hydraulic press method or use of other simple local made devices to produce palm oil and other derivatives. About 20% of the processors are engaged in palm oil processing.
- Grain milling: About 6% of the processors are engaged in grain milling, the enterprise involves the grinding of grain into flour of different types depending on the type of grain.
- Bakery: Four percent of the sampled processors in the state are involved in bakery activity, the enterprise involves in the production of confectioneries such as breads, cakes etc.
- Moi-Moi production: This involves the use of beans and other condiments which are processed and cooked to produce food called Moi-Moi. About 4% of the processors are involved in the activity and mostly women.
- Plantain Chips: The activity involves using ripped or un-ripped plantain to produce chips which are fried to produce a kind of food packaged in water proof bags. About 4% of the processors are involved in the activity.
- Bean cake (locally called Akara): This typically involves grinding of beans into paste with condiments and fried into small balls. The activity involves 3.5% of the processors. It is gender specific. Women are the processors.

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- Yoghurt: This involves fermenting and pasteurizing of milk. Additives and preservatives are also added. About 3.5% of the processors are involved in this small-scale food processing enterprise. The low involvement of food processors in this enterprise could be attributed to fact that the enterprise requires high technical capacity of entrepreneurship which may be lacking in most of the processors in the area.
- Cassava fufu: This involves production of dough from ground or powdered cassava used as staple food. About 3.5% of the processors are engage in the activity. The low percentage involvement of processors could be attributed to the fact that processors are mainly involved in processing cassava into garri which is not labour intensive and more profitable compare to fufu production.
- Water Satchet: The activity involves packaging of portable water from treated bore-hole into water proof bags. Low percentage (2.5%) involvement of processors in the enterprise could be due to high technical capacity required in the enterprise which most processors lack.
- Suya/meat roasting: The enterprise involves roasting of meat predominantly from beef, chicken and mutton. Very low percentage (1.5%) of the processors is involved in this activity. The enterprise is ethnic specific. It is engaged by Nigerians from Hausa extraction. This is responsible for the low involvement of processors in the activity in the state since the people of the state are predominantly Ibo tribe.
- Palm Kernel oil extraction: The palm kernel is grinded and the oil extracted from it through a specialized processing system. Only about 1.5% of the processors are engaged in this enterprise because the processing system is capital intensive and requires specialized skills.

All the above identified types of small-scale food processing enterprises and percentage distribution of the processors based on type of food processing undertaken are presented in figure1.

The raw materials for these enterprises are essentially outputs of agricultural sector, which are available in the locality signifying that small-scale food processing enterprises provide ready market outlets, while adoption of better business strategies and incentive for continuous value addition of these agricultural products will maximize the processors' incomes. This is in agreement with Sani and Danwanka (2011) which stated that it is imperative, that steady supply of produce through a well-developed market infrastructure, effective marketing information, and provision of inputs and adopting of better business strategies would make the processors to maximize income and the consumers of such products to pay little.



4.1.2 Small-Scale Food Processing Enterprise Goals of the Processors

In any business enterprise, the goals of the venture are specifically and clearly stated. In the context of the small-scale food processing enterprises, there are usually a few set goals. Goals indicated by the various small-scale food processors were profitability, productivity, growth, innovation, market standing, social responsibilities and manpower development. Table 1 reveals the aspirations of small-scale food processors in term of enterprise goals. All the processors (100%) indicated profitability as their main goal, 92.5% of the respondents indicated growth, while 88.3% 75.0%, 85.8%, 83.3%, 70.8% and 62.5% small-scale processors indicated productivity, innovation, survival, market standing, social responsibility and man power development goals, respectively (Table1). All the small-scale food processors

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interviewed indicated profitability as one of their goals probably due to the fact that businesses exist to make profits. According to Anyanwu (2006), profit in itself provides an attraction in business. Hence, profit appears to be the most veritable measure of a form success and efficiency in the use of resources. From Table 1, the second choice of most of the processors was growth. This is because the processors do not only aim at expanding its share of the market but looks at other competitors within the industry. The small-scale food processors in their enterprise goals as shown in Table 1 clearly suggests that all the enterprise goals are laudable and can only be realized through well-articulated, conceptualized and appropriate approaches.

Table1: Distribution of small-scale food processors base on enterprise goals

| Goal | Frequency | Percentage |
|-----------------------|-----------|------------|
| Profitability | 120 | 100 |
| Growth | 111 | 92.5 |
| Productivity | 106 | 88.3 |
| Innovation | 90 | 75.0 |
| Survival | 103 | 85.8 |
| Market standing | 100 | 83.3 |
| Social responsibility | 85 | 70.8 |
| Man power development | 75 | 62.5 |

*Multiple responses recorded.

4.2 Survival Approaches and Socioeconomic Determinants of the Survival Approaches Adopted by Small-Scale Food Processors

4.2.1 Survival Approaches by Small-Scale Food Processors

The survival of any business is not by chance. Such survival must be planned for and adequate approaches mapped out to ensure success and continuum in business. Therefore approaches to be adopted must be completely dependent on the peculiarity of problems and economic situation facing the enterprise. Six survival approaches adopted by small-scale food processors were identified. They include enterprise diversification/ incorporation of new enterprises, new market outlets, improvement of products through innovation, the use of alternative sources of energy, new management technique, product differentiation, and use of formal institutional credit.

Table 2 shows that 98.3% of small-scale food processors either diversified their products range or incorporate new enterprises in their food processing business. For instance, palm oil processors diversified into vegetable oil and black soap production. However, some of small-scale food processors (58.3%) opted for improvement of their products through innovations in areas of improvement of product taste, packaging and other value addition. Some food processors asserted that such improvements ensure their customers satisfaction and loyalty. This agrees with Anyanwu (2006) that emphasized that any organization that wants to survive must pay attention to the continuous improvement of its products and services.

About 65.8% of the small-scale food processors indicated that use of new market outlets is good survival approach for their food processing businesses. Right choice of market outlets will ensure good outlet for products. Besides, the study observed that most of the small-scale food processors do not sell to distributors because their outputs are small. They rather make

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use of retailers and direct sale to final consumers. By this, they are able to beat the dominating actions of big food processing companies and survive economic competitive environment.

Energy supply is a major problem among business entrepreneurs. Public electricity source of energy is very unreliable in Nigeria for any meaningful business particularly as regards food processing enterprises. About 62.5% of the sampled small-scale food processors opted for use of alternative sources of energy as a survival approach for their food processing enterprises. Such alternative sources of energy are private power generating set (generator), firewood, charcoal and manual power.

A significant proportion of the small-scale-food processors (45.8%) needed good management helps in planning and organization of their businesses. The study observed that the small-scale food processors sought for assistance in some managerial functions such as adaptation methods to the ever changing business environment, obtaining of formal institutional credit and accurate keeping of business records.

About 25.8% of the small-scale food processors indicated products differentiation as a business survival approach expected to be rewarding. Products differentiation include packaging products in foils or water proof bags, bottling of products, using of labels and National Agency for Food and Drug Administration and Control numbers which assure quality of such products. Product differentiation aims at making product unique and differentiating such product from others in the market.

Table 2: Distribution of Small-Scale Food Processors Based on Types of Survival Approaches

| Business approach | Frequency | Percentage |
|---|------------------|-------------------|
| Enterprise diversification/incorporation of other enterprises | 118 | 98.3 |
| Use of new market outlets | 79 | 65.8 |
| Use of alternative energy sources | 75 | 62.5 |
| Improvement of products through innovation | 70 | 58.3 |
| Use of good management technique | 55 | 45.8 |
| Product differentiation | 31 | 25.8 |
| Use of formal institutional credit | 25 | 20.8 |

- Multiple responses recorded.

Low percentage (20.8%) of the respondents favoured use of formal institutional credit as survival approach to their small-scale food processing enterprises. Most of the small-scale food processors affirmed that they prefer funding their businesses with their personal savings because of high interest rate charged by commercial banks.

4.2.2 Socioeconomic Determinants of the Survival Approaches Adopted by Small-Scale Food Processors

The extent to which the socioeconomic variables of the small-scale food processors influenced the rate of adoption of the identified survival approaches by the processors were determined using multiple regression analysis. These key socioeconomic variables of the small-scale food processors were regressed on the rate of their adoption of the survival approaches. The semi-log functional form was chosen as the lead equation. This was because it gave the best fit.

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The equation was $Y = -9.935 - 0.730\text{LN}X_1 - 0.474\text{LN}X_2 + 0.059\text{LN}X_3 + 0.922\text{LN}X_4 + 1.513\text{LN}X_5$. Table 3 showed all the relevant parameter estimates. The regression line gave coefficient of multiple determination (R^2) of 0.722. This implied that the ability of the small-scale food processors to employ the identified survival approaches was dependent on their socioeconomic characteristics up to 72.2%. While 27.8% was explained by other important variables not included in the model and were taken care of by the disturbance term. The F-value (14.478) result showed that the combined impact of the independent variables on the adoption rate of the survival approaches was significant.

The interpretation of the regression of the independent variables estimates are as follows:

Small-scale food processors' education level (X_3) positively influenced adoption of small-scale food processing enterprises' survival approaches. It is significant at 5% level of probability. This shows that the more educated small-scale food processors adopted higher number of business approaches than the less educated processors. Furthermore, the small-scale food processors with higher education were much more aware of sources of information and more efficient in evaluating and interpreting information on small-scale food processing business survival strategies than those less educated. Education is, therefore, very important in improving one's ability to access, decode and understanding information relevant to making profitable and innovative decisions.

Business experience (X_4) is positively related to adoption of small-scale food processing enterprises' survival approaches. The relationship is significant at 5% level of probability. This means that the more experienced small-scale food processors adopted more of the enterprises' survival approaches than the less experienced small-scale food processors. Therefore, experience is a function of knowledge one has about business. That is, experienced processors are better equipped in terms of knowledge and information on small-scale food processing (Nwosu *et al*, 2012). Hence they easily adopt better survival approaches for their businesses.

The processors' annual income (X_5) was found to be positively and significantly influenced adoption of small-scale food processing enterprises' survival approaches. It has a high t-value of 1% level of probability. This implies that the rich small-scale processors adopted more of survival approaches than the poor small-scale food processors. This finding is in agreement with Knowler and Bradshaw (2007) that observed that adoption of business small-scale strategies requires sufficient financial wellbeing. Besides, higher income small-scale food processors were less risk averse and have more access to information resources, a lower discount rate and longer-term planning horizon. Therefore, they were more able to take risks in the business.

Gender and age were negatively and insignificantly influenced adoption of the small-scale food processing enterprises' survival approaches. This could be attributed to the fact that effect of age and gender in use of business survival approaches is general location or technology specific (Adesina and Baidu-Forson, 1995; De Groot and Conlibay, 1998; and Quisumbing *et al*, 1995). Therefore, the influence of age and gender as determinants of business survival strategies adoption are inconsequential.

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Table 3: Multiple Regression Parameter Estimates of Socioeconomic Determinants of Use of Identified Survival Approaches

| Variable | Semi-log | Double-log | Linear | Exponential |
|--------------------------------|---------------------|--------------------|---------------------|-----------------------|
| Intercept | -9.935 (-2.361)* | -2.042 (-1.909) | 2.986 (2.428)* | 1.121 (3.858)* |
| Age (X ₁) | -0.730 (-0.784) | -0.187 (-0.874) | -0.013 (-0.712) | -0.003 (-0.760) |
| Gender(X ₂) | -0.474 (-0.621) | -0.086 (-0.480) | -0.083 (-0.273) | -0.008 (-0.118) |
| Education (X ₃) | 0.059 (2.248)* | 0.005 (0.094) | -0.004 (-0.155) | -0.003 (-0.293) |
| Experience(X ₄) | 0.922 (2.748)* | 0.127 (1.655) | -0.049 (-1.702) | 0.013 (1.774) |
| Annual income(X ₅) | 1.515 (5.245)** | 0.351 (5.221)** | 0.0018 (5.563)** | 0.000005 (5.360)** |
| R ² | 0.722 | 0.488 | 0.517 | 0.498 |
| F-value | 14.478** | 8.156** | 9.281 | 8.714 |

Note: Values in parenthesis are the t-values.

** Significant at 1% level of probability.

*Significant at 5% level of probability.

4.3 Constraints to the Growth of Small-Scale Food Process Enterprises

The study identified six major problems militating against the growth of small-scale food processing enterprises in the area. The constraints are inadequate capital, poor infrastructural facilities, seasonal scarcity and high cost of raw materials, high cost of capital/poor access to loans, no direct government support, underestimation of competition (table 4).

Table 4 revealed that 95.8% of the small-scale food processors indicated inadequate capital as their major constraint to the growth of their food processing enterprises. This affirms Osuala (1995) findings that initial capital investment of most small-scale enterprises usually comes from personal savings of the owners derived from wages that are often grossly inadequate. This source of fund is not enough for starting, expansion and day-to-day running of the small-scale food processing enterprise.

About 83.3% of the small-scale food processors reported that poor infrastructural facilities are one of the problems militating against growth of small-scale food processing enterprises. Productive investments are supplemented by provision of social and economic infrastructure, which facilitate and integrate economic activities. Availability of these infrastructure facilities

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will facilitate technological innovation and better access to inputs, markets and information. In reality, unsteady power supply, poor provision of water, poor telecommunication, high fuel costs and poor state of road network hamper business activities (Nwajiuba *et al*, 2012). Addressing these problems will reduce to the barest minimum the overhead costs of the small-scale food processors and boost their production, quality of products of sales.

Seasonal scarcity and high cost of raw materials constitutes one of the constraints militating against growth of the small-scale food processing enterprise. About 81.70% the processors identified this as constraint to growth of their food processing business. This problem is common among small-scale business enterprises in Africa (Nwajiuba *et al*, 2012). Most of the raw materials required by processors are abundantly available during harvest period and scarce at off-season. The scenario creates scarcity and high cost of the raw materials.

About 54.2% of the small-scale food processors indicated high interest rate or high cost capital/poor access to loan as a problem affecting the growth of small-scale food processing. Credit is important for stimulating of business productivity (Arifalo and Ayilaran, 2012) and this is one of the major goals for any business enterprise. Some studies attributed the inability of small-scale business entrepreneurs in getting loans from financial institutions to lack of knowledge of the source of credit, lack of knowledge in loan application, long bureaucratic processes and misuse of the funds (Koyenikan and Abiola, 2011 and Nurbani *et al*, 2011). Financial institutions regard small-scale enterprise as unsecure and costly business to deal with because they lack required collateral and have the capacity to absorb only small amount of funds. This makes many leading institutions unwilling to lend to small-scale entrepreneurs in Nigeria.

The small-scale food processors (48.3%) indicated no direct government support as one of the problems affecting the growth of small-scale food processing business. This is typical for small-scale enterprises in the informal sector of Nigeria's economy. In addition, 37.5% of the food processors observed underestimation of competition as a problem militating against growth of small-scale food processing business. That is, this percentage of these food processors is unaware of any form of competition in the business hence they failed to make efforts to increase their share of market. This finding agrees with Achoja (2011) who stated that small-scale agribusiness is relying on their major customers as a result of unawareness of competition. He further described such business venture as being vulnerable as competitors could easily sweep away such patronage which may affect the survival and growth of their business.

Table 4: Percentage Distribution of Small-Scale food Processors based on Problems Militating against the growth of their Food Processing enterprises.

| Problem | Frequency | Percentage |
|--|------------------|-------------------|
| Inadequate capital | 115 | 95.8 |
| Poor infrastructural facilities | 100 | 83.3 |
| Seasonal scarcity and High cost of raw materials | 98 | 81.7 |
| Cost of capital/poor access to loans | 65 | 54.2 |
| No direct government support | 58 | 48.3 |
| Underestimation of competition | 45 | 37.5 |

*Multiple responses recorded.

4. Conclusion and Recommendations

Thirteen different types of small-scale food processing enterprises were identified and most common ones were garri processing, palm oil processing and palm kernel cracking. Eight enterprises' goals were identified namely profitability, growth, productivity, innovation, survival market standing, social responsibility and manpower development. Six key survival approaches were identified and they include enterprise diversification/incorporation of enterprises, use of new market outlets, and use of alternative sources of energy, improvement of products through innovation, product differentiation and of formal institutional credit. The significant socioeconomic variables that influence adoption of these survival approaches were education, business experience, and annual income of the small-scale food processors. Constraints to the growth of small-scale food processing enterprises were inadequate capital cost of capital/poor access to loans, lack of direct government support and underestimation of competition.

From these findings it is evidenced that the small-scale food processing enterprises in the state are yet fully developed and its effective promotion by all the stakeholders including the state government are yet to be given serious attention. Therefore, the enterprises have no appreciable impact on both rural and state economy.

Based on these, the researchers therefore recommend that small-scale food processors should efficiently and effectively embrace and promote the adoption of the survival approaches which will in turn bring about the growth of their enterprises. The policy makers, the state and local governments should support small-scale food processing enterprises through formulation of policies and legislations which will promote and sustain the adoption of the survival approaches for growth and survival of the enterprises in the state. The governments should provide business enabling environment for the small-scale processing enterprises to flourish without hindrances. The entrepreneurs should form cooperative societies to enable them pool the resources together so as to solve the problem of inadequate funds. It also avail the opportunity of easily access to loans and enjoy the benefits associated with economy of scale through bulk purchases.

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