



Analysis of Entrepreneurial Behavior among Cassava Farmers in Ebonyi State, Nigeria

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Abstract

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The study assessed the entrepreneurial behaviour of smallholder cassava farmers in Ebonyi State, Nigeria. Multistage sampling technique was employed in the selection of 108 cassava farmers across the agricultural zones in Ebonyi state using pretested and structured questionnaire from which data and information were elicited. Analytically, the study employed entrepreneurial behavioural index (EBI) in the assessment of entrepreneurial behaviour of the cassava farmers. The result showed that the overall entrepreneurial behaviour of the cassava farmers posted a mean value of 0.4529 on a range of 0.17 – 0.70. This implies that their minimum entrepreneurial behaviour indicates gross underutilization of entrepreneurial attributes by the farmers while the maximum shows reasonable utilization of entrepreneurial capacity. The study concluded that aggressive agricultural transformation to enhance food security in Nigeria is feasible with effective management of human as well as material resources by promoting entrepreneurial behaviour of farmers. The study therefore recommends amongst others that government at all levels needs to deepen its educational and policy support to farmers through total overhauling of activities/programmes to activate their creativity.

1. Introduction

Agriculture and farming have long been recognized as potent source of rural economy, food security, economic growth and development (FMARD, 2006; FAO, 2011; Nicholas et al., 2012). However, Nigeria's farming system has over the years been criticized as rural activity; unattractive, uneconomic, lacks innovativeness and competitiveness. This is principally due to the fact that farming, nay agriculture is not thought of as an agric-food enterprise capable of moving Nigeria economy forward, or able to bridge food scarcity occasioned by increasing population nor as an export earning provider (FAO, 2011). A serious implication of this scenario includes low productivity, food scarcity, unemployment, rural-urban migration, and declining rural economy.

To reverse this trend, and address the challenge of rural development, it has been argued that rural farmers must behave as change agents of rural development with the same traits of entrepreneurship as visible in other sectors. Hence in

recent times, researchers, policy makers and government efforts have been directed on developing entrepreneurship in the area of agriculture. Thus the activation of "agripreneurship" (Ukpata and Onyeukwu, 2014; Shoji et al., 2014)

Rural development is more than ever before linked to entrepreneurship. Institutions and individuals promoting rural development now see entrepreneurship as a strategic development intervention that could accelerate the rural development process (Ezeibe et al., 2013). Generally, the entrepreneur is considered as a person who initiates, organizes the activities, manages and controls the affairs of business unit combining the factors of production to supply goods and services. Farmers deciding to take particular crop or use scientific methods to grow crops also exhibit entrepreneurial behavior (Rao and De, 2009; Palmurugan et al., 2008; Subrahmanyeswari et al., 2007). Understanding of such behavior has become necessary essentially to improve the productive capacity of farmers to contribute to Nigeria quest to

fully enhance especially cassava value chain and improve competitiveness, given that cassava has progressively gain strategic position in the global business arena. Agricultural entrepreneurship (agripreneurship) thinking is one of the key policies behind agricultural transformation agenda in Nigeria. The concomitant realization is that only agripreneurship behavior can change farmers attitude from being at the receiving end to contributing maximally rural development.

Theoretical Framework: The need to reduce food scarcity, unemployment, rural-urban migration and its spiral effects in Nigeria has received attentions of policy makers and development practitioners. The current government agricultural transformation agenda, which seek to encourage agripreneurship by addressing challenges of agricultural value chain and commercialization, is tailored to address rural transformation (Usman et al., 2013). Institutions and individuals promoting rural development now see entrepreneurship as a strategic development intervention that could accelerate the rural development process. Furthermore, institutions and individuals seem to agree on the urgent need to promote rural enterprises; development agencies see rural entrepreneurship as an enormous employment potential; politicians see it as the key strategy to prevent rural unrest; farmers see it as an instrument for improving farm earnings; and women see it as an employment possibility near their homes which provides autonomy, independence and a reduced need for social support. To all these groups, however, entrepreneurship stands as a vehicle to improve the quality of life for individuals, families and communities and to sustain a healthy economy and environment (Petrin, 1994).

Nomesh kumar and Narayanaswamy (2000) defined entrepreneurial behaviour as a combination of seven components viz., innovativeness, decision making ability, achievement motivation, information seeking ability, risk taking ability, co-ordinating ability and leadership ability. In the same vein, Vijay kumar (2001) operationalized entrepreneurial behaviour as the cumulative outcome of information seeking behaviour, farm decision making, leadership ability, risk taking ability, innovativeness, achievement motivation and market orientation of farmers.

Subrahmanyeswari and Veeraraghava Reddy (2003) perceived entrepreneurial behaviour as the changes in knowledge, skill and attitude of women livestock farmers towards dairy enterprises while Narayana Swamy (1996) described entrepreneurial behaviour as not necessarily doing new things but also doing things in a new way that have been already done, but with different results. Patil et al (1999)

studied the entrepreneurial behavior of gourd growers and Rao and Dipak (2003) conducted a study on entrepreneurial behaviour of vegetable growers in Varanasi. In a study on vegetable seed producer's farmers Nagesha, (2005) found that majority of the respondents belonged to medium entrepreneurial behaviour, whereas 17.50 per cent were in low entrepreneurial behaviour and 14.10 per cent of respondents were in high entrepreneurial behaviour category.

Farming is a major occupation of the rural dwellers in Sub-Saharan Africa. In Nigeria, many farmers never thought of farming as a business enterprise and strategic in entrenching rural transformation, it therefore become necessary to assess entrepreneurial behavior of farmers in Nigeria given that no studies have done that in the past especially as 2015 MDGs deadline draws near and vision 2020 takes the center stage.

2. Materials and Methods

Study Location: Ebonyi State is located in the south-eastern part of Nigeria. It is one of six new states created in 1996 by the former General Sanni Abacha Administration. Ebonyi was carved out of the old Abakaliki division of Enugu State and the old Afikpo division of Abia State. The State shares a border with Benue State to the North, Enugu State to the west, Imo and Abia States to the south and Cross River State to the east with a population estimated at 4,339,136, based on the 2005 census.

Sampling procedure: For this research, a multi-stage sampling technique was adopted. The first stage was random selection of three local governments from each agricultural zone in Ebonyi state. This gave a total of nine local government areas. The second stage of the sampling involved random selection of two communities each from the local government areas (LGAs) and these were drawn from the agricultural zones giving a total of eighteen communities. From the LGAs, one village each was randomly drawn from each of the 18 communities. Within villages, 6 cassava farmers each was randomly selected which accounted for a sample size of 108 respondents used for the study.

Method of data collection: Well structured questionnaire was used to elicit information from the respondents administered with the help of well trained enumerators for the purposes of overcoming language barrier in some communities. Data were collected on the socio-economic characteristics of the respondents such as sex, age, education, marital status, farming experience, household size, land holding, degree of farming, annual income and constraints militating against the entrepreneurial

behaviour of cassava farmers and also on the various attribute of entrepreneurial behaviour.

Methods of data analysis: The objective of this study which is analysis of entrepreneurial behaviour of cassava farmers in Ebonyi state, Nigeria was realized by the use of Entrepreneurial Behaviour Index (EBI) and the model is specified below.

Development of Entrepreneurial Behaviour Index: Entrepreneurial behavior of farmers is operationally defined as the aggregate outcome of entrepreneurial components or attributes namely innovativeness, farm decision making, motivation, knowledge of farm enterprise, risk taking ability and leadership quality. Development of entrepreneurial behavior scale for farmers was attempted by using the normalized rank approach with the application of an index recommended by Guilford (1954). This involves a scientific process for computing the scale value by generating the average value of the rating scale of each of the entrepreneurial attributes. The index is stated thus:

Entrepreneurial Behaviour Index (EBI)

$$= \frac{\sum_{n=1}^6 T_n}{\sum_{n=1}^6 M_n} \times 100 \text{-----(1)}$$

That is,

$$\frac{(\frac{T_{n1}}{M_{n1}} \times Rcn1 + \frac{T_{n2}}{M_{n2}} \times Rcn2 + \frac{T_{n3}}{M_{n3}} \times Rcn3 + \frac{T_{n4}}{M_{n4}} \times Rcn4 + \frac{T_{n5}}{M_{n5}} \times Rcn5 + \frac{T_{n6}}{M_{n6}} \times Rcn6)}{(\sum Rcn1 + Rcn2 + Rcn3 + Rcn4 + Rcn5 + Rcn6)} \text{-----(2)}$$

Where

T_n = Individual obtained score of the “n” component (attributes)

M_n = Maximum obtainable score of the component “n”

Rcn = Scale value of the component “n” is the mean value of rating scale

n = Number of components which is six in this context

n_1 = Innovativeness

n_2 = Decision making ability

n_3 = Motivation

n_4 = Knowledge of farm enterprise

n_5 = Risk taking ability

n_6 = Leadership ability

3. Results and Discussion

The assessment of the entrepreneurial behavior index (EBI) of cassava farmers was entailed using the six major different EBI attributes viz innovativeness, decision making ability, motivation, knowledge of farm enterprise, risk taking ability and leadership ability. The results are presented in Table 1.

Innovativeness: The mean value of the innovativeness attribute was 3 and 52% which represent the majority of the farmers fell within the category of low innovativeness. This may be

attributable to the fact that majority of the farmers were not fully into cassava farming and also experience very little or no contact with extension agents who bring or teach them new innovations in farming. The finding is in contrast with Chandra (2005) whose result indicated that majority of farmers had medium innovativeness. The result further revealed that 5% of the farmers had medium innovativeness and 43% belonged to high innovativeness category.

Decision making ability: From Table 1, it could be vividly observed that majority of the farmers (88%) had high decision making ability, 22% had low decision ability and none belonged to the medium decision making ability category. This finding is in contrast to that of Nagesha (2005) who had that majority of the respondents (74.2%) belonged to intermediate decision making ability followed by 13.3 and 12.5 per cent of respondents belonging to less rational and rational decision making ability, respectively.

Motivation: As shown in Table 1, 69% of the farmers were highly motivated and 18% lowly motivated. However, only 13% of the farmers were averagely motivated. It is plausible to their high level of motivation to the fact that majority of the farmers belong to the high annual income category and as such earn reasonable profits from cassava farming. This has the capacity to enhance their level of satisfaction. More so, their large land holding capacity could also be a contributory factor.

Knowledge of farm enterprise: The results from Table 1 revealed that 69% of the farmers had high knowledge of farm enterprise with 31% claiming to have low knowledge of the farm enterprise. Increase in knowledge of the enterprise may be related to their high level of educational attainment and farming experience. This result is in contrast with the findings of Kalaskar *et al.* (2001) which revealed that majority of the respondents (67.25%) were moderately aware about different IPM practices in cotton and Suresh (2004) which reported that most of the respondents had medium level of knowledge regarding dairy enterprise followed by high and low level with 74.17, 16.66 and 9.17 per cent, respectively.

Risk taking ability: As shown in Table 1, it is evident that majority (90%) of the farmers possesses very risk taking ability while 6% had medium risk taking ability. However, only 4% had low risk taking ability. The very high risk taking ability of the farmers could be as a result of age bracket of majority of the farmers which ranged between 18 years to 45 years as those within this age bracket are high risk takers and have thriving entrepreneurial spirit which is droved by their ability

to take risks (Hisrich, 2005). The educational attainment could also be a contributory factor to the high risk taking ability of the farmers.

Leadership ability: From the findings in Table 1, it is apparent that 73% of the farmers belonged to the high leadership ability category while 13% possess medium leadership ability. However, 14% have low leadership ability. This high leadership ability could be attributed to the high decision making ability and high knowledge of the farm enterprise which is as a result of high education attainment and high level of farming experience by the farmers as leadership could be innate or acquired (Hellriegel, 1996).

Overall Entrepreneurial Behavior of the Cassava Farmers: The aggregate scores of all the six attributes of entrepreneurial behavior were computed and the results presented in Table 2.

As contained in Table 2, the mean value of the EBI was 0.4529 implying that the entrepreneurial behaviour is adjudged below average. About 57% of the overall entrepreneurial behavior attributes operate within the range of 0.41 to 0.70. The estimates seemed to be evenly distributed. The minimum EBI is 0.17, which indicates gross underutilization of entrepreneurial attributes by the farmers while the maximum EBI is 0.70. The possible reason for high (57%) EBI of the farmers is probably due to their sound decision making ability, risk taking ability and leadership ability. The results are in conformity with the findings of Patil *et al.* (1999), Nagesha (2005) and Chandra (2005) who recorded a similar outcome in their research. Furthermore, the mean EBI of the best 10 farmers is 0.6462 and that of the worst 10 farmers is 0.2389 and this implies that there is room for the farmers to enhance their entrepreneurial behaviour.

Table 1. Entrepreneurial behavior (EBI) of cassava farmers

S/No	Attributes	Categories	Frequency	Percentage
1	Innovativeness	Low (<3)	52	52%
		Medium (= 3)	5	5%
		High (>3)	43	43%
2	Decision making ability	Low (<1.5)	22	22%
		Medium (= 1.5)	0	0%
		High (>1.5)	83	83%
3	Motivation	Low (<1)	18	18%
		Medium (= 1)	13	13%
		High (>1)	69	69%
4	Knowledge of farm enterprise	Low (<0.5)	31	31%
		Medium (= 0.5)	0	0%
		High (>0.5)	69	69%
5	Risk taking ability	Low (<0.5)	4	4%
		Medium (= 0.5)	6	6%
		High (>0.5)	90	90%
6	Leadership ability	Low (<1)	14	14%
		Medium (= 1)	13	13%
		High (>1)	73	73%

Table 2. Overall entrepreneurial behaviour of cassava farmers

EBI	Frequency	Percentage
0.00-0.20	2	2%
0.21-0.40	41	41%
0.41-0.60	45	45%
0.61-0.70	12	12%
Total	100	100%

Maximum EBI = 0.70 Minimum EBI = 0.17 Mean EBI = 0.4529
 Mean of Best 10 = 0.6462 Mean of Worst 10 = 0.2389

4. Conclusion and recommendation

The study concludes that all round development of agriculture is possible with the effective exploitation of human as well as material

resources. In our country, where human resources are found to be plenty, we can identify individuals in all segments of population who have the requisite entrepreneurial skills. To all these groups however,

entrepreneurship stands as a vehicle to improve the quality of life for individuals, families and communities and to sustain a healthy economy and environment.

In the light of the findings of this research, the following policy recommendations are made for effective improvement of the entrepreneurial behavior of cassava farmers:

Call for government at various levels to intensify educational efforts and policy support to the farmers through field extension workers of agricultural development programme of the state, and various development departments of government, NGOs and private organizations to make them more enterprising through improvement in their entrepreneurial behaviour attributes and hence, achievement of Millennium development goals and vision 2020.

There is a serious need to expose the farmers to recent developments in agricultural technologies, inputs and management and motivate them to adopt these developments in agriculture through group discussions, meetings, study tours and field trips sponsored by government and/or NGOs.

As a veritable means of reducing unemployment, government should establish programmes that will promote the entrepreneurial skills of the farmers and further attract the attention of the teeming population of unemployed youth to explore entrepreneurship in agriculture.

References

- 1) Chandra, M. P. (2005). A study on entrepreneurial behavior of farmers in Raichur District of Karnataka. M.Sc. Thesis University of Agricultural sciences, Dharwad, India.
- 2) Ezeibe, A. B. C., Diogu, G. O., Eze, J. U. Chiaha, G. U. and Nwokenna, E. N. (2013), Women Entrepreneurship as a Cutting Edge for Rural Development in Nigeria, International Institute for Science, Technology and Education, 3(5): 156-162.
- 3) FAO (Food and Agricultural Organisation). (2011). A Cassava Industrial Revolution in Nigeria. www.fao.org/doi/ep/007/y5548e/y5548e0b.htm (Accessed on January 8, 2014).
- 4) Federal Ministry of Agriculture and Rural Development (FMARD). (2006). National Programme for Food Security, Expansion Phase Project 2006 (2010) (Main Report).
- 5) Guilford, J. P. (1954). Psychometric Methods. Tata McGraw Hill Pub. Co., Bombay, India.
- 6) Hellriegel, D. and Slocum J. W. (1996). Management. 7th Edition. Cincinnati: South Western College Publishing.

- 7) Hisrich, R. D. (2005), Entrepreneurship: New Venture Creation. 5th Edition. Tata McGraw Hill, New Delhi.

- 8) Kalaskar, A. P., Shinde, P. S., Bhole, R. S. and Geeta, M. H. (2001). Factors influencing knowledge of cotton growers about integrated pest management practices in cotton. Maharashtra Journal of Extension Education, 16: 386-399.

- 9) Nagesha, P. N. (2005) study on entrepreneurial behavior of vegetable seed producing farmers of Haven District. M.Sc. thesis University of Agricultural Sciences, Dharwad, India.

- 10) Narayana Swamy, B. K. (1996). Small Farmers Development: Co-operative as a Desirable Model. Paper presented in the seminar on re-discovering co-operation held during November, 19-21, 1996, At IRMA, Anand.

- 11) Nicholas, D. C., Mulangu, F and Porto, G. (2012). Food Production and Consumption Trends in Sub-Saharan Africa: Prospects for the Transformation of the Agricultural Sector. United Nations Development Programme (UNDP) Working Paper 2012-011, Regional Bureau for Africa.

- 12) Nomes Kumar, N. and Narayanaswamy, B. K. (2000). Entrepreneurial behaviour and socio-economic characteristics of farmers who adopted sustainable agriculture in India. Karnataka Journal of Agricultural Sciences, 13(1) : pp. 83-90.

- 13) Palmurugan M, Jhamtani A and Padaria R N. (2008). Entrepreneurial behaviour of vanilla growers of Tamil Nadu and Kerala, Indian Journal of Extension Education, 44: pp. 58-65.

- 14) Patil, V. G., Mahadik, R. P. and Patil, A. S. (1999). Entrepreneurial behaviour of little gourd growers. Maharashtra Journal of Extension Education, 18 : 240- 243.

- 15) Petrin, T. (1994). Entrepreneurship as an economic force in rural development, Keynote Paper presented at the Seventh FAO/REU International Rural Development Summer School, Herrsching, Germany, 8-14 September, 1994.

- 16) Rao, M. S. and Dipak, D. (2003). Entrepreneurial behaviour of vegetable growers. Journal of Research. ANGRAU, 31(1): 101-104.

- 17) Rao M. S. and De, D. (2009). Dimensions of Entrepreneurial behaviour, Indian Journal of Extension Education, 45(1 and 2): pp.16-20.

- 18) Shoji, L. B., Kerobim, L., Kushwaha, S., Meena, L. K. and Kumar, P. (2014). Agripreneurship Development as a Tool to Upliftment of Agriculture, International Journal of Scientific and Research Publications, 4(3): 1-4.

- 19) Subrahmanyeswari, B. and Veeraraghava Reddy K. (2003), Entrepreneurial Behavioral of Rural Dairy Women, Madras Agricultural Journal, 30(1-3): 173-175

20) Subrahmanyeswari, B., Veeraraghava Reddy, K and Sudhakar Rao, B. (2007). Entrepreneurial behavior of rural women farmers in dairying: a multidimensional analysis. *Livestock Research for Rural Development*. Available: [website://lrrd.org/lrrd19/1/subr19015htm](http://lrrd.org/lrrd19/1/subr19015htm) [April, 14, 2012].

21) Ukpata, S. I. and Onyeukwu, P. E. (2014). Empowering Women in Agri-business and Agri-preneurship: The Dialectics of Socio-cultural Impediments on Economic Development in Nigeria, *European Journal of Business and Management*, 6(6): 68-77.

22) Usman, B. U., Ibrahim, A. M., Salihu, S. (2013). Achieving National Transformation Agenda in Nigeria through Entrepreneurship (A Review), *Journal of Management and Corporate Governance*, 5(2): 1-11.

23) Vijay Kumar, K. (2001). Entrepreneurship behaviour of floriculture farmers in Ranga Reddy district of Andhra Pradesh. M. Sc. (Agri.) Thesis, Acharya N. G. Ranga Agricultural University, Hyderabad.