
Entrepreneurship Processes and Small Farms Achievements: Empirical Analysis of Linkage

Temidayo Gabriel Apata*

Abstract

Entrepreneurship process has been argued as opportunity-driven, creative, and resource-efficient, that could influence income generation of small farmers that adopted entrepreneurial skills and innovation into their farming operations. This study examines entrepreneurship process strategies employed to income increase by small farmers, evidence from southwest of Nigeria. The sampling procedures entail three stages of samples selection of 240 farmers but only 200 data was useful. Descriptive statistical and inferential statistics were used to analyze and describe the data. Respondents' age ranges from 16 to 65 years old, mean age was 36.16 years. The study found out that 5 % of the samples had modest communication skills that aid adoption of effective entrepreneurial processes and about 83% have a strong belief in one's self to succeed. Successful farmers had multiple sources of related income generation business ventures. Targeting the entrepreneurs for support could make them even more effective.

Keywords: *agricultural entrepreneurship, entrepreneurial skills, effective management, small farms, entrepreneurial learning identity.*

INTRODUCTION

Entrepreneurship has been argued as a multifaceted notion, which has been defined in different ways by various investigators. It is a complex and holistic "fit and balance" of several factors (Timmons, 1999). Various investigators have given prominence to different blend of factors, but most would concur with Timmons (1999) and Kodithuwakku and Rosa (2002) that at its fundament, the entrepreneurial process is opportunity-driven, creative and resource-efficient.

Scott *et al.* (1997) argued that entrepreneurship is a "creative process of extracting social and economic value from the environment". The

* Temidayo Gabriel Apata, Department of Agricultural Economics and Extension, Federal University, Oye-Ekiti, Nigeria. Tel.: +2348060222394. E-mail: dayo.apata@fuoye.edu.ng.

entrepreneurship route to success is not just creative, but also opportunity-driven (Pieter *et al*, 2013; Fry, 1993). In his words Bryant (1989) argues that “entrepreneurs are characteristically people who go beyond the limits of resources over which they have direct control’.

Moreover, Bygrave (1994) reasoned that entrepreneurs looked for route of regulatory decisive resources without owning them. Alsos *et al*, 2011 maintained that the key quality of entrepreneurs is their capability to be innovative with limited resources. Allan *et al*. (2012) and Stevenson, (1997) argued that ownership of resources is not a mandatory requirement for entrepreneur to make use of and it is not necessary to provoke its movement or change of application but a process by which individuals pursue opportunities without regard to the resources they currently control. In the light of the above concepts and arguments, the study deduced that an entrepreneur is an individual who is inventive in finding ways that add value to his own wealth, produces influence, and reputation and who is not afraid to take a risk that could advance his belief. It is said that “entrepreneurial process provides an alternative way to efficiently manage resources than just following conventional or standard good management practice” (Pieter *et al*, 2013 and Allan *et al*. 2012).

Thus, an entrepreneur is an individual who is more resourceful in making use of what is available to create opportunities to advance growth. Agriculture is at the heart of the majority of rural households in developing countries like Nigeria. Past studies have indicated that a great mass of people in rural areas earn their livelihood from the land and see it as a way of life, operating mainly on small scale due to limited resources (Oyebola and Ajiboshin, 2013; Raimi and Towobola, 2011; Chu *et al.*, 2010; Onipede, 2003; Akin and Peter, 2002). It is also argued that these categories of people are efficient in the allocation of resources at their disposal (Fans *et al*, 2003; Babatunde and Qaim, 2010).

A small farm is defined as “operated units in which most labour and enterprise come from farm family, which puts much of its working time into the farm” (Gries and Nande, 2011; Wiggins, 2009; Nick, 2008; Cormia, 1985); The World Bank’s Rural Strategy defines smallholders as those with a low asset base, operating less than 2 hectares of cropland (UNECA, 2009). Also, small farms have been ascribed as “limited resource endowments, relative to other productive activities” (Bozzoli and Bruck, 2009; Cormia, 1985). Review of similar studies showed that a small farm is a subsistence farming operation where the family provides the majority of labour and the farm provides the principal source of income” (Pingali 2010, Nagayets, 2005; Hazell and Haggblade, 1993). From these lines of arguments it can be deduced that small farmers are already entrepreneurs in the sense that they seek out money-making prospects, manage costs of production and marketing, and aspire to

grow their business. Evidence from Africa and Asia revealed that small farms still dominate the country gross domestic product. Thus, the secret of their recorded successes are embedded in the entrepreneurial process adopted at various levels of production (Vik and McElwee, 2011; Discuo, *et al*, 2010).

Literature has shown that there is a positive linkage between small farmers that adopted entrepreneurial skills and innovation into their farming operations and increase income (Tilman *et al*, 2013; David, 2012; Chen and Ravallion, 2010). Evidence abounds in a substantial body of literature linking the value of entrepreneurial approaches and strategies by individual entrepreneurs to business growth (Rijkers and Costa, 2010; Bardassi and Sabarwal, 2009; Parker, 2009; Carter and Ram, 2003). Hypothetically, it can be seen that entrepreneur business growth stems from effective resource management through conventional management practice and fortunate access to resources (Jervell, 2011; Bruck *et al*, 2011; Bennet, 2010; Parker, 2008).

There is, however, a dearth of studies demonstrating the empirical vibrant operations of the entrepreneurial processes to business growth among small farmers. Therefore, this study empirically examined entrepreneurial processes and exploitation of small farms by exploring the subtleties of the entrepreneurial process in an all-inclusive socioeconomic background using both qualitative and quantitative methods of data analysis. This research was driven by the basic issue of why some rural entrepreneurs in Nigeria were much more successful than their fellow rural farmers who do not adopt such strategies. Also, giving the same level of opportunity and resources to rural household, what would be the factor (s) that will define economic success or entrepreneurial success, is it through their socio-economic characteristics and what are the factors that influence this? This study answers this question by looking at adoption of entrepreneurship processes and exploitation of small farms in Nigeria using empirical evidence from rural farming households in Southwest Nigeria.

METHODOLOGY

Area of study

The area of study is South West Nigeria. There are six major zones in Nigeria of which South West is one of them and it comprises of six states. The states are Lagos, Ogun, Osun, Oyo, Ondo and Ekiti States respectively. Osun and Ondo States were purposively selected for the study because of wide range of entrepreneurs that are springing up every day. In addition, there are visible government support and international organization presence to develop and

encourage entrepreneurship in the two states selected. Ondo State is the only oil-producing state in the zone and enjoys attention from the Federal Government. This state receives on average N450 million monthly (i.e. about 3.6 million US dollars) in addition to monthly subvention. This state is also regarded as the food basket of the zone. Osun State was selected based on the information of United Nation Human Development Reports (UNECA, 2009) as the poorest state in the South West Nigeria and currently enjoys attention both from local, national and international agencies to support growth of small and medium scale businesses.

Sampling procedure and data collection

The study adopted sampling procedure in three stages in which both purposive (non-probability sampling) and simple random sampling techniques (probability sampling) were used to pick the villages/towns that have been economically active for the past five years (NBS, 2013). The first stage of sampling selection entails the choice of Idoani and Ilara towns in Ondo State. Idoani town was strategically picked based on literature reviewed that this town enjoys support from Leventis Foundation, state government micro-agencies and International Fund for Agricultural Development (IFAD). While Ilara town also enjoys State government support couple with IFAD funding. Similarly, in Osun State, Owena and Okuku towns were also strategically picked because these towns are economically active, enjoy support from local, state and federal government. In addition, these towns enjoy Federal Government of Nigeria (FGN) special programme on poverty alleviation; Youth Empowerment Scheme (O-YES), SURE-P (a special intervention by FGN that encourage entrepreneurship development among the youth). Osun state selected towns also enjoy support of funding from United States Agencies for International Development (USAID).

To identify the sampling frame for the study, in the second stage, list of households' heads having access to these supports were extracted from extension section of the Ministry of Agriculture and Rural Development (MARD) of the selected states. Help was also sourced from Agricultural Development Programme (ADP) offices to verify and augment some of the data collected from MARD. While a list of farmers (cassava growers) compiled from these agencies were 2500 from Ondo State and 2350 identified farmers (cassava growers) were also sourced from Osun State. In the final stage of selection, 60 respondents were sampled randomly from each town to get a total of 240 farmers (cassava growers), but only 200 data (80% response rate) were useful for subsequent analysis (Table 1).

Table 1. Distribution of sampled respondents in the study area

Cassava Farmer Villages / Towns	Sampling Frame	Sampling Distribution	Final selection of sample (n)
Idoani	1350	60	52
Ilara	1150	60	48
Owena	1025	60	46
Okuku	1325	60	54
Total	4850	240	200

Source: Field Survey (2013).

The data collection for this research were quantitative and qualitative data. Data collection was done through various mechanisms which include interviews schedule, Focus Group Discussions (FGD) and observations. The quantitative data were personal characteristics, socio-economic factors, and situational factors. While qualitative data were based on key informants, extension officials, village leaders, Libraries/librarians, NGO workers and, groups of farmers. Observations on the choice of the study area revealed equal opportunity of access to productive resources and services (extension and government support) to all cassava growers.

METHODS OF DATA ANALYSIS

The study used descriptive statistics such as means, percentages, frequencies, and standard deviations to analyze the quantitative data, while the qualitative data were used to validate responses gathered from quantitative data. In addition, qualitative data were partly analyzed on spot during data collection to avoid omission and to be able to fill the gaps in the quantitative data collection. The use of Multiple Linear Regression (MLR) analysis was used to examine factors influencing entrepreneurial success/failure among the cassava growers. This was captured by their level of income/asset of the identified respondents. The use of this specialized MLR was adopted by the study of Hair *et al*, 1998 who argued that independent variables are known to predict the single dependent value.

According to Browen and Starr (1983), the regression equation takes the form of

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_{16}X_{16} + u_1 \tag{1}$$

Where:

Y= Dependent variable

X₁₋₁₆ = Independent variables

a = intercept

b = the slope of the line

a and b are parameters to be estimated.

u_1 = error term (unexplained variables)

Estimation procedure

Due to the nature of the data, Ordinary Least Square (OLS) method was adopted for estimation technique. Other techniques used to reduce measurement errors are in the use of Dublin Watson test to assess multi-co linearity among the explanatory variables to avoid co linearity problem and the use of Best Linear Unbiased Estimation (BLUE) method. Data were coded into SPSS version 17 for analysis.

Variables and their definitions

Dependent variable

The dependent variable used for this study is the entrepreneurial success/failure of the respondent's outputs in terms of knowledge and it is captured by their assets/income or losses accrued. This is to serve as function of knowledge of farmers on daily good farm management practices and their level of utilization of resources at their disposal. To capture farmers' level of knowledge about effective farming practices the use of 'teacher - made type' test was developed. This method was developed and used in consultation with the concerned ADPs Office, key informants representative and officials of the Ministry of Agriculture. Appropriate questions were developed to collect appropriate responses from the farmers about the selected salient features of their entrepreneur ability. The various items were developed for the knowledge test in respect of operative farming practices and these were given weights as per their prominence.

Independent variables

For this study, 16 independent variables (see Table 2) were identified and hypothesized to influence the dependent variable. From these 16 variables 10 were continuous and 6 were discrete. The independent variables include the personal characteristics, socio-economic factors, situational factors and psychological factors of farmers that may influence the dependent variables. Selection of these independent variables used in the study was logically taken from the review of past research and published literature related to the scope of the study (Renwick, 2010, and Aina, 2004).

Table 2. List of independent variables and measurements

s/n	Variables	Measurements	Expected signs
1.	Age (X_1)	Measured in terms of number of years of age.	negative relationship
2.	Marital Status (X_2)	This indicates whether respondents are married, unmarried, single, or widowed. This data was operationalized through scoring system labelled from questionnaire	positive relationship among married respondents
3.	Educational Level (X_3)	Education refers to the level of formal and non-formal education and this was scored in terms of ability to read and write and enrolment in primary, secondary schools or post-secondary.	Educational level positively affects use of information.
4.	Communication Skills (X_4)	Communication skills are referred to as the ability to express ideas effectively in written or spoken form, and the ability to listen attentively. This variable was measured using list of items selected through systematic procedure.	Communication skill was anticipated to have positive relationship
5	Positiveness (X_5)	Defined as a person's quality that is characterized by displaying certainty, acceptance, or affirmation. It was measured by respondents' willingness to discuss agricultural matters with other farmers. Also, despite the harsh environment, their belief in one's self to succeed. It was operationalized as low, medium and high.	The variable was assumed to have positive relationship
6	Income (X_6)	Operationally defined as the value of the products of the household after home consumption and income obtained from off-farm and non-farm activities that are expressed in Naira per year.	The income level was anticipated to have a positive relationship
7	Size of land holding (X_7)	This refers to the area of cultivated land owned by the respondents or their families. It was assumed that the larger the farm size, the better access the farmer has to use combination of technological packages on the land.	Therefore, it was hypothesized that land size has a positive relationship
8	Family size (X_8)	The size of the family of the respondent measured in terms of total number of members in the family including the elderly and children.	family size was assumed to have positive relation
9.	Radio Ownership (X_9)	The farmers who own the radio and listen to programmes or news have the opportunity of getting more agricultural information. Radio ownership by respondents was 1 for Yes and 0 otherwise	Information network has positive relation.
10	Social participation (X_{10})	This refers to the involvement in social activities and membership of the respondent in various formal and informal organizations, either as member or as an office bearer. It was measured in terms of membership or official status in any formal or informal organizations, along with the frequency of participation and type of organization of which the farmer is a member using the scale developed by Trivedi (1963) with slight modifications.	Social participation was expected to have positive relationship with the dependent variable
11	Information Seeking behaviour (X_{11})	This was defined as the degree to which the respondent was eager to get information from various sources on different roles he performs. This was measured in terms of how much information was sought, how frequently and from where the information was sought.	Information seeking behaviour was assumed to have positive relationship

s/n	Variables	Measurements	Expected signs
12	Cosmopolitaness (X ₁₂)	This is the degree of orientation of the respondent towards outside of the social system to which he belongs. It is measured in terms of frequency of visits to outside his village and the purpose of such visits.	Expected to have positive relationship
13	Attitude towards development agent (X ₁₃)	Defined as the degree of positive or negative attitude of farmers towards Development Agent. This variable was measured using the Likert scale model.	anticipated to have a positive relationship
14	Sharing of available information (X ₁₄)	Defined as the extent to which the respondent shared the information with others, including family members, friends or neighbours, extension agent, etc.	anticipated to have a positive relationship
15	Access to credit (X ₁₅)	Access to credit has impact on the level of utilization of recommended technological packages and this in turn will expose respondents to divergent information.	variable was assumed to have a positive relationship
16	Extension participation (X ₁₆)	It was measured using a weighted index.	variable was assumed to have a positive relationship

Source: Field Survey (2013).

RESULTS AND DISCUSSIONS

Descriptive statistics

The study examined individual features of respondents as they influenced their entrepreneur ability and these are educational attainment, communication ability, marital status, age, household size, attitude to change, and positiveness among others. Table 3 describes individual features of the sample respondents.

Table 3. Distribution of sample respondents based on their personal characteristics (N = 200)

Personal characteristics	Features	Frequency	Percent
Age of Respondents	15-29 (Younger)	45	22.5
	30-49 (Middle)	122	61.0
	50-65 (Older)	33	16.5
	Total	200	100.0
Marital Status	Single	57	28.5
	Married	103	51.5
	Widowed/Separated	40	20.0
	Total	200	100.0
Level of Education	Illiterate	32	16.0
	Can read and write	43	21.5
	Primary School	41	20.5
	Secondary School	62	31.0
	Post-secondary School	22	11.0
Total	200	100.0	
Communication Skills	Low	17	8.5

Personal characteristics	Features	Frequency	Percent
Family Size	Medium	93	46.5
	High	90	45.0
	Total	200	100.0
	1-3	47	18.8
	4-6	141	56.4
	7-9	39	15.6
Radio Ownership	Above 9	23	9.2
	Total	200	100.0
	No	77	38.5
	Yes	123	61.5
Size of land holding in Acres	Total	200	100.0
	0.1-1.99	59	29.5
	2.0-3.5	115	57.5
	Above 3.5	26	13.0
	Total	200	100.0
Positiveness	Low esteem in one's self to positiveness	34	17.0
	Medium esteem in one's self to positiveness	129	64.5
	High esteem in one's self to positiveness	37	18.5
	Total	200	100.0

Source: Field Survey, 2013

Respondent's age

The study revealed that respondents' ages ranges from 16 to 65 years old. The mean age was 36.16 years with the standard deviation of 13.04 years. Analysis of the arrays showed that respondents in the age bracket 30-49 years were the majority (61.0%), age bracket 15-29 years (22.5%) and age cluster 50-65 years (16.5%). Analysis of the age distribution reflected the active age bracket of the respondents to be in the mean distribution. Thus indicating that innovation or adoption of technology could easily be embraced and could also be hostile to disagreeable innovation or technology adoption.

Respondent's marital status

The results of the analysis of marital status of the respondents revealed that majority (51.5%) of the respondents were married and living together with their spouses. Those not married or engaged were 28.5% of the sampled population, while the widowed and separated respondents were the minority. Implication of this finding could signify that stable income generation and decent living among respondents could be useful in their togetherness as husband and wife, as the study showed that high proportion existed between stable families than others. In other words, joint deliberations and evaluation

on issues and information can be jointly considered and best decisions could be adopted.

Respondent's educational attainment

It has been argued that an important factor which can influence the ability of a farmer/person to understand innovation is education. Also, underdevelopment occurring in most developing countries like Nigeria is the low level of education and high illiteracy rate among the people. Aina (2006) argued that poor education among Nigerian farmers has deprived them of the ability to make good use of agricultural innovation available to them. Consequently, this study deduced that education plays a great role in the entrepreneurial ability of the respondents and thus examined.

As indicated in Table 3, the description of the respondents showed that 16.0% were uneducated, while 11.3% were able to read, and write and 41.5% had post-primary school education. This indicates that for innovation to be appreciated and useful it must come in a language people will be able to understand, digest and use.

Respondent's communication skills

This study deduced communication skills to be the ability of a person to be able to express ideas effectively in written or spoken form, and also understand the language directed at his person. The study outlined three types of communication skills levels as low, medium and high communication skills. Table 3 showed that about 91.5 % of the respondents had medium and high level of communication skills, respectively. This finding foretells that active information can be easily diffused and exchanged with another.

Respondent's positiveness

The study inferred positiveness as the disposition of a person towards acceptability, belief and certainty about an idea or innovation that will bring a positive change. Positiveness was captured in the study among respondents as readiness to discuss agricultural innovations they believe in with other farmers and seek necessary information and help with its adoption. Also, despite the harsh environment there is the belief in one's self to succeed. Adopting and use of agricultural innovations in the study was operationalized as low, medium and high. The study revealed that respondents who indicated low esteem in one's self to succeed are about 17.0%, while about 83% have a strong believe in one's self to succeed. The implication of this finding is that agricultural innovation success among adopters is tied to their esteem on the innovations. Thus scientists, agricultural extensions need to raise esteem

of farmers on innovation brought to them through demonstrations of such innovation so that their positiveness could be high on such innovation.

Entrepreneurial process strategies and options

Level of Entrepreneurial Process Strategies and Options that were employed by the household heads in order to cope with the effect of low income received from primary occupation are quantified. Due to low income earned from farming livelihood activities, household heads adopted entrepreneurial process strategies and options and diversified into other sources of income generating activities so as to improve household income and meet their basic needs. To assess entrepreneurial process strategies and options, the study adopted composite Entropy Index (CEI). Composite Entropy Index (CEI) was expended firstly by Chand (1995) and Shiyani and Pandya (1998). It was modified by Anna, (2002) and Daniel and Johnson, (2004). The Composite Entropy Index (CEI) is used to determine various levels of livelihood activities engaged in by the households.

This index possesses desirable properties that impart uniformity and fixity to the scale used as norm to examine the extent of diversification across the households. It is used to obtain entrepreneurial process strategies and options in this study. This connotes the degree of distribution and attention of activities by a singular quantitative pointer. It is expressed as

$$CEI_j = \left[\sum_{i=1}^n P_i \log_N P_i \right] \left[1 - \left(\frac{I}{N} \right) \right] \tag{2}$$

Where $P_i = \frac{A_i}{\sum Y_i}$

P_i = Proportion of the income of i^{th} activity relative to all activities

The results of the findings are presented in Table 4.

Table 4 revealed that majority of the single activity had been successfully undertaken by numerous cases, while most cases with several deeds had a unique combination of activities (see Table 5). Thus, successful farmers were able to purposefully pursue a unique combination of activities, hence minimizing overall competition within the village. The study indicated that about 12 % of the respondents’ families in this category had a reasonable income for a decent living. Also, the study indicated that 81% of this category of families had multiple sources of livelihood support as they were involved in several business ventures (26 out of 30 farming and 4 out of 7 non-farming families). The study further indicated that 15.5% of these families see “farming” as foremost income-generating activity.

Table 4. Livelihood activities apart from crop farming found in the area of study

s/n	Type of activity	Households number (%)	Entrepreneurial success or failure (N = 200)
1.	Trading of manufactured goods	105 (52.5)	Failure and successive success
	Cassava processing		
	Garri	138 (69%)	
2.	Starch	71 (35.5)	Successful farming household/family
	Garri + Starch	46 (23.0)	
	Garri + Livestock feed	64 (32.0)	
	Garri + Starch + Livestock feed	23 (11.5)	
3.	Selling cassava raw tuber	81 (40.5)	Successive failure
4.	Money lending	53 (26.5)	Successful farming household/family
5.	Casual labour	62 (31.0)	
6.	Household head engaged in paid employment	83 (41.5)	Successful farming household/family
	Artisans		
	Tailoring	31 (15.5)	
7.	Vulcanizer	18 (9.5)	Failure and successive success
	Mason	13 (6.5)	
	Carpentry	11 (5.5)	
8.	Selling of agro-chemicals/farming inputs	42 (21.0)	Successful farming household/family
	Animal husbandry		
	Keeping dairy cattle	17 (8.5)	
9.	Goat and sheep keeping	52 (26.0)	Successful farming household/family
	Poultry	76 (38.0)	
	Piggery	23 (11.5)	
10.	Fishing	08 (4.0)	Successive failure
11.	Hunting	15 (7.5)	Failure and successive success
	Total	1032*	

Source: Field Survey (2013).

Note * denotes multiple responses occurred as one household/family may carry out more than one activity.

Moreover, the study revealed that about 97% of those families that do not have a reasonable income for a decent living depend mainly on farming and do not engage in other income generating activities but sometimes sell their physical labour which hardly earned them a judicious income. Besides, about 4.5% of these families engaged in farming on profit-making scale while the others had subsistence farming. Furthermore, 89% of the non-farming families (i.e., 72 out of 81) were greatly dependent on selling their labour (as hired labourers) to farmers in the village.

Table 5. Pursuing opportunities by mobilizing resources through social networks and other sources

s/n	Capitalized opportunity	Nature of resource mobilization
1.	Commencement of buying and selling of manufactured goods	Friends and neighbour's experience (knowledge) about market conditions and also his contacts with buyers
2.	Commencement of the agrochemical and important farming inputs like fertilizer-selling business	Using a social contact (i.e., a trader) to purchase these inputs on long-term credit
3.	Money lending	Borrowing money from banks at a lower rate and lending them at high interest rates, which provides the opportunity to invest one's own money in other gainful activities (i.e., to avoid resource conflicts) Exchanging (a) each other's experience on credit worthiness of new customers and (b) trustworthy customers
4.	Introduction of motorcycle spare parts and repairs and tyre inflation to the motorcycle customers	Using a social contact (i.e., a trader) to purchase expensive spare parts on long-term, interest-free credit (overcoming capital constraints)
5.	Commencement of the cassava processed goods like, garri, cassava starch and livestock feed business (introduction of a modern technology to the area)	Using a social contact to obtain cassava processing on a no-obligation loan (with the promise of transferring the ownership with the success of the venture), which also helped them to overcome the capital constraints and collateral requirements
6.	Exchange casual labour	(1) Use of family labour: Family labour is used often to overcome hired cost incurred in the used of foreign (hired) labour and also to overcome time constraints in getting required labour for agricultural production, (2) Social contacts with Extension officials to obtain subcontracts in adjoining village. (3) Presence of physical labour of needy farmers. Inhabitants with low opportunity cost are always available for labour in respective villages in order to overcome labour shortages and working capital requirements. (4) Coordination of needy friends mainly to overcome the working capital requirements for cassava cultivation, later diversified into (a) cost reduction strategies such as bulk purchasing of fertilizer and agrochemical at a discounted rate with free transportation facility and (b) shock absorbing mechanism by forming a cooperative to assist in fund transfer
7.	Contracting cassava harvesting and processing activities in the village	Coordinating a group of needy villagers (i.e., non-farming families) to contract cassava harvesting and processing. This helps (a) to curtail the cost of own cassava harvesting and processing and (b) to increase the income also by avoiding resource conflicts with hiring out the tractor (exchange of values also within the family)
8.	Delayed selling of cassava products in order to take a higher price	Use of social contacts (i.e., traders) to overcome (a) lack of storage facilities and/or the risk of pest attacks (i.e., rat infestation) and (b) middlemen exploitation

s/n	Capitalized opportunity	Nature of resource mobilization
9	Starting wholesale business to retailers of manufactured goods in the village	Using existing contacts (with wholesale traders) to obtain goods (at a wholesale scale) on interest-free credit in order to sell to newly emerged village retailers (this also helped him to overcome competition, i.e., extracting value from competitors)
10	Introducing the new products to the existing retailers.	Thus, exploiting social contacts to obtain these materials on interest-free credit and obtain the transport facilities free of charge from another contact.

Source: Field Survey (2013).

Table 5 indicated major livelihood activities of the respondents in the study areas by pursuing opportunities through mobilizing resources of social networks to influence income generation. It was observed in the course of data collection that debt is a major problem faced by the people as a result of seasonal fluctuations in income earnings from farming produce. To remedy this situation some of the people however, add value in a diverse way to basic cassava production. This is done either by planting early cassava or add value by processing cassava to Garri or other related products. This activity has helped most people to avoid the harvest surplus, and negotiate higher prices. Another option adopted was the use of cassava farms intercropped with other crops (like vegetables, melons) to add value to the land. Thus, it is reasoned that entrepreneurship is a method in which people see opportunities not identified by others (Oyebola and Ajiboshin, 2013).

Hence, activities listed in Table 5 indicates pursuit of opportunities the respondents were investigating and engaging in those new activities. These pursuits were equally familiar to all the farmers in the village, either successful or unsuccessful. The vital point, however, is that most of these pursuits needed capital financing, which was usually out of reach of these farmers. However, successful farmers incorporated coping strategies for survival, like hiring cassava processing machine in the first place before acquiring one, also mobilizing family labour for cassava processing. Once successful in this, they had an increasingly wide choice of opportunities to aim for next. The study deduced that there are multiple sources of business ventures that farmers could engage in, thus implicating that there exists a potential combination of activities, allowing much more scope for creativity and with the right education and positiveness these could improve their livelihood.

The study observed that about 53.5 % of the respondents who thrived on good harvests from farming operations did not recycle substantial part of the proceeds into farming operations. Thus, to meet the following year farming operations they are left with little for farming operations. In order to augment this shortfall, these categories of farmers resorted to borrowing to

finance next cropping season and thus the cycle of poverty ensues. Therefore, to prepare for the next farming season, borrowed funds were used and most of the time farmlands were used as a collateral. When these loans were not redeemed at the appropriate/stipulated period, farmers eventually lost control of their farmland. The study found that about 55% of this category of people lost control of their farmland, either completely or partially.

It was also observed that those families that are tagged “successful” spend their farms’ proceeds effectively, as these families evaded strategies of not consuming too much of unreasonable goods, and not running into debt. These families thus displayed shrewdness and patience as well as capability in mastering the skills of cassava farming and its management. They also preferred to invest their surpluses into their business rather than lifestyle. Moreover, these categories of “successful” farmers can be tagged entrepreneurs because they shunned pointless debt, and slowly accrued capital, spotting opportunity and having capital to develop range of business at their disposal. The study found out that, at the time of the study, most of the successful farmers were engaging in an average of 3 business ventures.

In addition, their positiveness also helped to overcome the risk of defaults and sustain a thriving business venture. Furthermore, the study also observed that most of the successful farmers had the ability and the readiness to seize and explore opportunities. The study also noted that successful farmers had combined effectively entrepreneurial and managerial abilities in the running of the business ventures. These functions have been argued as necessary and complementary prerequisites for success and interdependent components in the entrepreneurial matching process.

Results of the multiple regressions

The study adopted the use of Multiple Linear Regression (MLR) analysis to examine factors influencing the entrepreneurial processes strategies of the respondents. MLR model was fitted to assess the influence of the hypothesized independent variables on entrepreneurial processes of the respondents. SPSS version 17 was used for the analysis.

The study hypothesized 16 independent variables of 10 continuous and 6 discrete variables respectively. These variables were included in the model and used in MLR analysis. These variables were selected on the basis of theoretical explanation, reviews of similar studies and the results of various empirical studies (Morgan *et al*, 2010). Table 6 revealed that 7 variables of the 16 hypothesized independent variables were found to be significant. These hypothesized variables are: Education (X_3), Income (X_8), Radio Ownership

(X_9), Information seeking behaviour (X_{11}), Attitude towards DAs (X_{13}), Access to credit (X_{15}) and Development agents/extension participation (X_{16}).

Table 6. Coefficients of regression function

Variables	Coefficients		T	Sig.
	B	Std. Error		
Constant	-4.01	1.03	3.91	.001
X_3 – Educational level	.19*	.04	5.40	.000
X_8 – Family size	.71*	.16	4.35	.000
X_9 – Radio ownership	.18**	.06	2.95	.003
X_{11} – Information seeking behaviour	.19**	.07	2.70	.004
X_{13} – Attitude towards development agent	.72**	.27	2.66	.005
X_{15} – Access to credit	.65***	.29	2.27	.019
X_{16} – Extension participation	1.47***	.67	2.18	.021

* Significant at 0.01, ** Significant at 0.05, *** Significant at 0.10

$R = 0.715$, $R^2 = 0.665$, adjusted $R^2 = 0.614$, $F = 28.61$ $P = 0.000$

The Multiple Correlation Coefficient ($r = 0.715$) indicates that the entrepreneur ability of the respondents, as explained by these hypothesized variables, are quite strong and positive. The results of the MLR value of coefficient of determination ($R^2 = 0.665$) and the adjusted R^2 of 0.614 implies that about 61% of the hypothesized 16 independent variables variation explained the entrepreneur ability of the respondents. Past studies have argued that income is an important variable explaining the qualities of good households (Carter and Justis, 2009). Thus, this study hypothesized that farmers whose earnings are relatively high could be participating in technology packages and innovativeness which, in turn, will expose them to new business opportunities. Findings from this study indicated that income was positive and significant in explaining the entrepreneur ability of the respondents. The output of regression analysis ($X_3 = .19$) thus indicated that 1 unit increment in educational level would bring about 0.2 increments in the knowledge of good farm management.

The other significant variables that were positive and significant include Radio Ownership (X_9), information seeking behaviour (X_{11}), attitude towards DAs (X_{13}), access to credit (X_{15}) and Development agents/extension participation (X_{16}). The implication of this finding is that one unit increment in Radio ownership, Information seeking behavior and attitude towards DAs would bring about 0.18, 0.19 and 0.72 improvement in the entrepreneur ability of the respondents. This result implies the positiveness of farmers towards innovation and market, could raise the income potentials of such

farmers and thus increase their entrepreneurial ability. Access to credit regression coefficient of $X_{15} = 0.65$ suggest that access to credit was positive and a significant determinant of entrepreneur ability of farmer's, thus, a unit increase in access to credit would be accompanied by an increase in the entrepreneur ability of farmers. This means that increased access to credit increases utilization of recommended technological packages which expose farmers to different new information and can raise awareness on value addition.

Similarly, the output of the regression analysis ($X_{16} = 1.47$) of Development Agents/Extension participation revealed that a unit increment in extension participation would bring about 1.469 units increment in the entrepreneur ability of farmers. This infers that, frequency of contacts or visits of development agents/extension agents to a farmer is very important for updating the knowledge and skills of farmers on farm technologies, practices or activities and the market. Thus, the availability of development agents/extension participation in the rural areas is of a paramount importance to entrepreneurial process.

CONCLUSION

The study hypothesized that “even poor resource-starved environments are potentially diverse in economic opportunity for potential entrepreneurs, providing a diversity of choices and options.” Despite the few resources available, the respondents had taken advantage of the opportunities for entrepreneurial advancement. Successful farmers had diversified into other business ventures. Nevertheless, the study observed that the choice and multiplicity of these business activities was small in such a resource-limited environment, but the combination of activities was much greater. Each respondent was observed, especially those that had created a unique blend of successful business ventures. These attributes have shown that, for a business venture to be successful, each individual must demonstrate positiveness and pursue different strategic choices based on his or her unique perception of the available opportunities. As resources slowly accumulated, the practical range and choice of opportunities available also increased. If this diversity of opportunities can exist in such a poor rural environment, how much greater diversity of opportunities might there be in a more favoured environment?

The result of the qualitative analysis indicated that most of the unsuccessful farmers were partly unsuccessful because of lack of their positiveness in taking advantage of innovation and ideas around them. In addition, these categories of people appeared to lack the drive and motivation to systematically pursue opportunities, and, once in debt, found it almost impossible to reverse their fortune. This basic lack of managerial

and organizational acumen tended not to be fatal when the range of business activities was low. Successful farmers combined both entrepreneurial and managerial skills to survive. This finding supports the work of Gasse (1985) that business efficiency must also be complementary with entrepreneurial processes.

An important question arises from this study: How far can we generalize from such an apparently unique context? Observations in the study areas showed that all the areas surveyed were poor by world standards, but within the town/village context, some farmers were better off than others in terms of status and wealth. These tended to be the minority of entrepreneurial farmers, who are most likely to make the best use of any subsidies and support that are available, but also, are least likely to need help. Targeting these categories of successful farmers who had adopted entrepreneurial process in their farm management for technical support from agricultural extension/scientists could make them even more effective, and increase the “trickle down” effect to the poorer and less successful farmers.

The outcome of the respondents’ entrepreneurial ability constituted the growth differentials of entrepreneurial process and also points to the strategies and options employed. Explaining the disparity in successes or failures of business operations is not swift. Factors that have influenced economic success or entrepreneurial success include the level of respondent’s positiveness, information seeking behaviour, access to credit and Development agents/extension and participation in seminars/workshops on good farming management practices. Thus, the availability of development agents/extension participation in the rural areas is of a paramount importance to entrepreneurial process.

References

- Aina, L.O. (2006). Information provision to farmers in Africa: The library-extension service linkage. *World Library and Information Congress: 72nd IFLA General Conference And Council 20-24 August*. Seoul, Korea.
- Aina, L. O. (2004). Library and information services to the neglected majority in Africa: The need for a restructuring of LIS curriculum in Africa. In *Towards a knowledge society for African development. Proceedings of the 16th Standing Conference of Eastern, Central and Southern African Librarians*. Kampala: Uganda Library Association.
- Akin, F. and Peter , R. (2002). Entrepreneurship and illegality: insights from the Nigerian cross-border trade. *Journal of Business Venturing*, 17, 397-429.
- Allan, C., Eleanor, H. and Sarah, L. (2012). Understanding entrepreneurial cultures in family businesses: A study of family entrepreneurial teams in Honduras. *Journal of Family Business Strategy*, 3, 147-161.

- Alsos, G.A., Carter, S., Ljunggren, E. and Welter, F. (2011). *The Handbook of Research on Entrepreneurship in Agriculture and Rural Development*. UK: Edward Elgar.
- Babatunde, R. O. and Qaim, M. (2010). Impact of off-farm income on food security and nutrition in Nigeria. *Food Policy*, 35(4), 303-311.
- Bardasi, E. and Sabarwal, S. (2009). *Gender, Access to Finance, and Entrepreneurial Performance in Africa*. World Bank Mimeo.
- Bennett, J. (2010). Informal firms in developing countries: entrepreneurial stepping stone or consolation prize?. *Small Business Economics*, 34(1), 53-63.
- Bozzoli, C. and Brück, T. (2009). Agriculture, poverty and post-war reconstruction: micro- level evidence from Northern Mozambique. *Journal of Peace Research*, 46(3), 377-97.
- Brück, T., Naudé, W. and Verwimp, P. (2011). Small business, entrepreneurship and violent conflict in developing countries. *Journal of Small Business and Entrepreneurship*, 24(2), 161-78.
- Bryant, C.R. (1989). Entrepreneurs in the rural environment. *Journal of Rural Studies*, 5(4), 337-348.
- Bygrave, W.D. (1994). *Portable MBA in Entrepreneurship*. New York: John Wiley and Sons.
- Carter, S. and Ram, M. (2003). Reassessing portfolio entrepreneurship. *Small Business Economics*, 21, 371-380.
- Cater, J. J. and Justis, R. T. (2009). The development of successors from followers to leaders in small family firms. *Family Business Review*, 22(2), 109-124.
- Chand, R. (1995). *A critique on the methods of measuring economic diversification*. Paper presented for the training course on Quantitative Techniques for Policy Analysis in Agricultural Economics (pp. 214-242). New Delhi Nov.27-Dec.9.
- Chen, S. and Ravallion, M. (2010). The developing world is poorer than we thought, but no less successful in the fight against poverty. *The Quarterly Journal of Economics*, 125(4), 1577-1625.
- Chu, H. M., Kara, O. and Benzing, C. (2008). An empirical study of Nigerian entrepreneurs: success, motivations, problems, and stress. *International Journal of Business Research*. 8(2). Retrieved from http://findarticles.com/p/articles/mi_6773/is_2_8/ai_n31121252/.
- Cornia, G. A. (1985). Farm size, land yields and the agricultural production function: An analysis for fifteen developing countries. *World Development*, 13, 513-534.
- Daniel, S. and Johnson, S. (2004). *Livelihood options? The Political Economy of Access, Opportunity and Diversification*. Overseas Development Institute (ODI) Working, 233, 112-216.
- David, J. (2012). A new institutional approach to entrepreneurship and inequality in rural Russian villages: Survey findings from 1991 to 2006. *Journal of Eurasian Studies*, 3, 41-48.
- Discua, C., Howorth, C. and Hamilton, E. (2010). *Portfolio entrepreneurship as a solution to the succession crisis: A case study of women successors*

- in Honduras*. In: Family Business Casebook Annual 2008-2009. USA: Kennesaw State University, 25-48.
- McMillan, S. T., Pieper, M. and Poutziouris, Z. (Eds.) (2009). Family business casebook annual 2008–2009 (pp. 25–48). USA: Cox Family Business Centre, Kennesaw State University.
- Fan, S. and Chan-Kang, C. (2003). Is small beautiful? Farm size, productivity and poverty in Asian agriculture. Plenary paper prepared for the 25th International Conference of Agricultural Economists, July 17. Durban, South Africa.
- Fry, F. (1993). *Entrepreneurship: A Planning Approach*. New York: West Publishing.
- Gries, T. and Naudé, W. (2011). Entrepreneurship and human development: A capability approach. *Journal of Public Economics*, 95(3), 16-24.
- Hazell, P. and Haggblade, S. (1993). Farm-nonfarm linkages and the welfare of the poor. In M. Lipton and J. van der Gaag (Eds.). *Including the Poor*. Washington, DC: World Bank.
- Jervell, A.M. (2011). The family farm as a premise for entrepreneurship. In: G.A. Alsos,
- S. Carter, A.E. Ljunggren, F. Welter (Eds.). *The Handbook of Research on Entrepreneurship in Agriculture and Rural Development*. USA: Edward Elgar.
- Karatas, -Özkan, M. (2011). Understanding relational qualities of entrepreneurial learning: towards a multi-layered approach. *Entrepreneurship and Regional Development* 23, 877-906.
- Kodithuwakku, S. and Rosa, P. (2002). The entrepreneurial process and economic success in a constrained environment. *Journal of Business Venturing*, 17, 431-465.
- Morgan, S.L., Marsden, T., Miele, M. and Morley, A. (2010). Agricultural multi-functionality and farmers' entrepreneurial skills: a study of Tuscan and Welsh farmers. *Journal of Rural Studies*, 26, 116-129.
- Nagayets, O. (2004). *Small farms: current status and key trends*. Research Workshop on The Future of Small Farms organized by IFPRI, Imperial College and ODI, Wye, June 2005.
- Nicks, L. (2008). The History of Entrepreneurship in Nigeria. Retrieved from <http://bizcovering.com//history/the-history-of-entreprenership-in=-Nigeria>.
- Onipede, S. (2003). Towards Creating an Environment for Sustainable Economic Growth in Nigeria International Experience. Retrieved from: <http://www.economist.com/countries/Nigeria/profile.cfm?folder=profile-Economic%20structure>.
- Oyelola, O. T. and Ajiboshin, I. O. (2013). Entrepreneurship for Sustainable economic growth in Nigeria. *Journal of Sustainable Development Studies*, 2(2), 197-215.
- Raimi, L. and Towobola, W. L. (2011). Open Distance Learning (ODL): A catalyst for educational and entrepreneurship development in Nigeria. *Continental Journal of Education Research*, 4(3), 1-11.
- Rijkers, B and Costa, R. (2010). Gender and rural non-farm entrepreneurship. *World Development* 40(12), 2411-2426.

- Parker, S. (2008). Entrepreneurship among married couples in the United States: a simultaneous probit approach. *Labour Economics*, 15(3), 459-481.
- Parker, S. (2013). Moving beyond entrepreneurial skills: Key factors driving entrepreneurial learning in multifunctional agriculture. *Journal of Rural Studies*, 32, 208-219.
- Pingali, P. (2010). *Who is the smallholder farmer?* Norman E. Borlaug International Symposium, the World Food Prize, October 13-15, 2010, Des Moines, Iowa.
- Renwick, S. (2010). Current Trends in Agricultural Information Services for Farmers in Trinidad and Tobago/Caribbean. Paper presented at the World Library and Information Congress: 76th IFLA General Conference and Assembly, 10-15 August 2010, Gothenburg, Sweden.
- Scott, M., Fadahunsi, A. and Kodithuwakku, S. (1997). Tackling adversity with diversity. In S. Birley, D.F. Muzyka (Eds.). *Mastering Enterprise: Your Single-Source Guide to Becoming an Entrepreneur (FT Mastering Series)*. London: Pitman.
- Shiyani, R.L. and Pandya, H.R. (1998). Diversification of agriculture in Gujarat: A spatio-temporal analysis. *Indian Journal of Agricultural Economics*, 53(4). 627-639.
- Stevenson, H.H. (1997). The six dimensions of entrepreneurship. In S. Birley, D.F. Muzyka (Eds.). *Mastering Enterprise: Your Single-Source Guide to Becoming an Entrepreneur (FT Mastering Series)*. London: Pitman.
- Tilman, B., Wim, K. D. and Philip, V. (2013). Entrepreneurship and violent conflict in developing Countries. *WIDER Working Paper No. 2013/28*.
- Timmons, J. (1999). *New Venture Creation: Entrepreneurship for the 21st Century*. Boston: McGraw-Hill.
- UNECA. *Economic Report on Africa 2009. Challenges to Agricultural Development in Africa*. Addis Ababa, Ethiopia: United Nations Economic Commission for Africa and African Union.
- Vik, J. and McElwee, G. (2011). Diversification and the entrepreneurial motivations of farmers in Norway. *Journal of Small Business Management*, 49, 390-410.
- Wiggins, S. (2009). *Can the smallholder model deliver poverty reduction and food security for a rapidly growing population in Africa?* FAC Working Paper No. 08. London: Overseas Development Institute.

Abstrakt (in Polish)

Proces przedsiębiorczości jest prezentowany jako stymulowany przez szanse, kreatywny, eksploatujący zasoby w efektywny sposób i mogący wpływać na tworzenie dochodów drobnych rolników, którzy wykorzystują umiejętności przedsiębiorcze i innowacje w swojej działalności. Artykuł analizuje strategie przedsiębiorcze w oparciu o dane empiryczne zebrane w południowo-zachodniej Nigerii. Badania opierały się na próbie 240 rolników, z których wykorzystano odpowiedzi 200 respondentów. Do analizy i opisu danych stosowano statystyki opisowe i techniki wnioskowania sta-

tystycznego. Przedział wiekowy respondentów wahał się od 16 do 65 lat, a średnia wieku wynosiła 36,16 lat. Badania wykazały, że 5% uczestników próby posiadało umiarkowane kompetencje komunikacyjne, wspomagające skuteczność procesów przedsiębiorczości, a około 83% wykazywało się silną wiarą w siebie i własny sukces. Rolnicy z powodzeniem prowadzący gospodarstwa, podejmowali też wiele powiązanych aktywności zarobkowych. Precyzyjne ukierunkowanie wsparcia publicznego dla przedsiębiorców może przyczynić się do zwiększenia ich efektywności.

Słowa kluczowe: przedsiębiorczość rolna, umiejętności w zakresie przedsiębiorczości, efektywne zarządzanie, małe gospodarstwa rolne, identyfikacja potrzeb szkoleniowych.

Biographical note

Dr. Temidayo Gabriel Apata has been an AGRODEP member since November 2012. At present, he is a Senior Lecturer at the Department of Agricultural Economics and Extension, Federal University, Oye-Ekiti, Ekiti State, Nigeria. He holds a Ph.D. in Agricultural Economics from the University of Ibadan, Nigeria. He specializes in economic modeling. His research interests include climate change, small-scale farms, poverty, and food security.