

FACTORS INFLUENCING ENTREPRENEURIAL ORIENTATION OF SMALLHOLDER FARMERS IN SOUTHWESTERN NIGERIA

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Abstract

Smallholder farmers have continued to thrive in Nigeria as they cater for immediate needs of families with little left for the market. Despite several challenges in the sector, smallholder farmers remain principal actors in the nation's agricultural production. Their entrepreneurial acumen has been displayed in their ability to survive regardless of harsh economic and technological environments. This paper provides information on factors influencing entrepreneurial orientation of smallholder farmers in Nigeria. The study was conducted among farmers who participated in the RUFIN initiative in Lagos and Oyo states. A total of 240 questionnaires were administered on smallholder farmers in the two states with 92.5% response rate, of which 90.8% were well completed and useful for analysis. The results showed that majority of the farmers were males (67.9%) and majority (72%) of the respondents were youths (21-50 years) and married (80.8%). Few farmers (19.3%) had university education and a small majority (29.4%) had no formal education. About 81.2% of the respondents engaged in core farming activities while few of them were into trading-related activities. The results further showed a medium rating of innovativeness, proactiveness and risk-taking potential. Farmers' innovativeness was influenced by their level of expenditure on new products cultivation, R&D spending, educational attainment and idea generation. Other factors which influenced proactiveness and ability to take risk were introduction of new technology and high-cost project investment. The paper concludes that entrepreneurial training and government interventions are required to enhance the entrepreneurial capability of the farmers for improved growth.

Keywords: Entrepreneurial orientation, innovativeness, smallholders, farmers, Nigeria

1. Introduction

Successful nations thrive on the generation and commercialisation of knowledge through apt efforts in innovation-engendered activities. The discovery of oil in the 70's left the indelible mark of 'resource curse' on Nigeria's economy and the agricultural sector was almost forgotten. However, smallholder farmers have continued to thrive in some parts of the country as they cater for immediate needs of families with little for the market. Despite several challenges in the sector, smallholder farmers remain principal actors in the nation's agricultural production. Therefore, supporting smallholder farmers would not only enhance world food security but would provide a significant succour from poverty. Leaving them out of the equation will push many into greater poverty and hunger (IFAD, 2009). Development of smallholder agriculture is part of the solution to the concerns about food prices and overall food security in Nigeria based on the experience of Vietnam (previously a food importer, but now a large exporter of rice) (IFAD, 2009).

With the emergence of rural development as a consolidated path for agricultural development, improvement on the agricultural practices along the line of the value chains has been considered part of the strategies for boosting productivities among the smallholders. Currently, direct selling enjoys strong synergies with agro-tourism and eco-tourism (Vesala & Jarkko, 2008). Direct-selling on the farm and at farmers' markets, which strengthens production and food consumption, are very widespread activities. Diversification of farming activities along value chains requires efforts which are determined by farmers' entrepreneurial orientation and interest. Entrepreneurial orientation (EO) refers to the processes, practices, and decision-making activities that lead to new entry; this is essential to entrepreneurship (Lumpkin & Dess, 1996). EO emerges from a strategic-choice perspective which asserts that new-entry opportunities can be successfully undertaken by 'purposeful enactment' (Van de Ven & Poole, 1995). This involves the intentions and actions of key players functioning in a dynamic generative process aimed at new-venture creation. The key dimensions that characterize EO include a propensity to act autonomously, a willingness to innovate and take risks, and a tendency to be aggressive toward competitors and be proactive relative to marketplace opportunities (Lumpkin & Dess, 1996). Farmers can be integrated vertically into a chain of value or they can diversify their economic activities (Carter, 2003; McElwee, 2006; Haugen & Vik, 2008; McElwee & Bosworth, 2010), depending on a range of factors which drive their entrepreneurial intentions.

It should be noted that farming is not a homogeneous sector; farmers operate in a complex, multi-faceted environment which is tightly constrained and regulated. This environment acts as a significant barrier to entrepreneurial activity (Carter, 2003; McElwee, 2008). Although it has been established that EO is positively correlated with overall farmers' performance (Kabiri & Mokshapathy, 2012), an important challenge for the agricultural sector is the facilitation and development of farmers' entrepreneurial and organisational capacities and attitudes which require economic support and a greater emphasis on education and training (McElwee, 2006). Therefore, this paper highlights specific factors influencing entrepreneurial orientation of smallholder farmers in Nigeria. The paper is divided into five sections. The next section addresses literature review followed by the methodology adopted for the study. The fourth section discusses the findings and the paper concludes with policy recommendations.

2. Literature Review

Farming techniques and environments affect farm businesses and lives of farmers. There is also a growing demand not only for changes in food production techniques but also in non-agricultural functions and services; indeed, increased farm diversification is seen as a necessary development. Diversification requires the application of new technology and it opens new markets or opportunities for farmers. This array of opportunities requires that farmers develop adaptation strategies and increased innovation through entrepreneurship for maximum benefits (Vik & McElwee, 2011). Within the context of this paper, a farmer is defined as someone who owns, rents, or manages a farm with more than 0.5 hectares (ha) of cultivated land (Vik & McElwee, 2011) and entrepreneurship is the process of establishing a farm venture and running it. The farm ventures vary in terms of operation ranging from animal rearing, land cultivation and being involved in its associated marketing activities. Though the extent to which farmers are entrepreneurial is contested, Carter (1998) observed that farmers have traditionally been entrepreneurial. Carter and Rosa (1998) further argue that farmers are primarily business owner-managers, and

farms therefore can be characterised as businesses. Carter draws parallels between portfolio entrepreneurship in non-farm (business) sectors and farm pluri-activity, suggesting that farmers have multiple business interests, and these foster employment creation and rural economic development. The necessity of entrepreneurial culture among farmers in the agricultural sector has been recently recognized as an important component of food production and venture creation (Bergeroet Giesen, Saatkamp, van Woerkum & Huirne, 2005; McElwee & Bosworth, 2010; Díaz-Pichardo, Cantú-González & López-Hernández, 2010; Díaz-Pichardo, Cantú-González, López-Hernández & McElwee 2012; and Kabiri & Mokshapathy, 2012). Agriculture and entrepreneurship are tools for reducing poverty, especially among agriculturally educated youths (Osikabor et al., 2011). It has been argued that spurring innovation and growth in the agricultural sector requires high entrepreneurial capabilities among farmers (Marsden & Smith, 2005; Pyysiäinen, Anderson, McElwee & Vesala, 2006). Policy makers and researchers have identified farmers' unions and advisory services as important mechanisms for improving farmers' entrepreneurial skills. So, small holders have been advised, like micro firms, to be entrepreneurial in their farming approach in order to increase production (Bjerke & Hultman, 2002).

Interest and research in entrepreneurship have risen over the past few years for the roles it plays in boosting economic growth and development (Green, David, Dent & Tyshkovsky, 1996; Morrison, 2000; Alstete, 2002; Rohaizat & Fauziah, 2002; and Frank, Korunka, Lueger & Mugler, 2005). Enterprises create and introduce new products and technologies which can generate extra-ordinary economic improvement and enhance standards of living (Schumpeter, 1934, 1954; Brown & Eisenhardt, 1998). The literature on entrepreneurship and development support the claim that entrepreneurship aims at the creation of new economic activities (Low & MacMillan, 1988; Shane & Venkataraman, 2000) and often results in the creation of new organisations, or the pursuit of innovation (Davidson, Low & Wright, 2001; Rocha, 2004).

The entrepreneurial process has attitudinal and behavioural components (Bird, 1988; Long, Tan & Robinson, 1995). The former is the willingness of an individual or enterprise to search new opportunities and take responsibility for effecting creative change (Miller & Friesen, 1982; 1984) while the latter includes the set of activities needed to evaluate an opportunity, define a business concept, access and obtain the necessary resources and then to take action and harvest the rewards through firm creation (Stevenson & Jarillo, 1990). Individuals and organizations with high EO distinguish themselves through: i) constant innovation in their products and markets; ii) proactive decision making and aggressive competition with other firms, and iii) risk taking in business (Miller, 1983; Covin & Slevin, 1988; 1989; Kreiser, Marino & Weaver, 2002a; 2002b; Basso, Fayolle & Bouchard, 2009). These have been recognized as important entrepreneurial attitudes in the agricultural sector (Nieuwenhuis, 2002; Lauwere, 2004; Pyysiäinen *et al.*, 2006; Rudmann, Vesala & Jäckel, 2008).

In addition, organizational competence is equally important in the agricultural sector. Majority of farmers in developing countries own between 1 and 3 hectares of land. They need to work together in order to present a united front for the defence of their interests, in dealing with intermediaries, and in achieving more efficient production models through the economies of scale (Cortés, 1993; McElwee, 2006; 2008). Social networks, often understood as the webs of interpersonal relations in which most actions of people or

entities are embedded (Granovetter, 1985), can be especially useful for agricultural entrepreneurs as they can help overcome weak institutions and attain the collective efficiency necessary to overcome infrastructure constraints and speed up market entries (Mesquita & Lazzarini, 2008; Svetlicic, Jaklic & Burger, 2007). Indeed, farmers should embrace inter-organizational networks in order to remain competitive in today's markets (Burt, 2000; Quatman & Chelladuri, 2008). This also contributes significantly to entrepreneurial capability development in farmers as they share ideas and resources.

2.1 Drivers of Entrepreneurship

2.1.1 Innovativeness

On the drivers of entrepreneurship among farmers, innovativeness, risk-taking and proactiveness have been identified as the core characteristics that qualify entrepreneurs. This section discusses these attributes in detail. Innovation is defined as the development and use of new ideas or behaviours in organizations manifested in terms of a new product, service, technology, or organizational structure (Damanpour & Wischnevsky, 2006). A firm adopting an innovative style relies on knowledge that is possessed by players of the market (Mahmood & Rufin, 2005). Innovativeness is the predisposition to support new ideas and favour change (Rauch, Wiklund, Freese & Lumpkin, 2009). It embraces creativity in technology adoption and in internal processes (Baker & Sinkula, 2009). Keh, Nguyen & Ng (2007) defined innovativeness as a firm's tendency to engage in creative processes or experimentation of new ideas, which may result in the institution of new methods of production or bringing new products or services to current or new markets. As a firm specific, valuable and socially complex resource that is neither easily transferable nor imitable by other firms, innovation could confer a unique competitive advantage to exporting small firms (Hult & Ketchen, 2001) or small farms. Also, innovativeness refers to a firm's effort to acquire opportunities and introduce new technological processes in firm or farm operations. It sometimes involves expenditure on research and development activities (R&D) in developing new products or services and new markets. Innovative firms emphasize new methods and employ a large number of skilled workers (Dess & Lumpkin, 2005). Farmers' innovativeness is reflected in their attitude of finding creative, unusual or novel solutions to problems they encounter and of meeting production needs. These solutions take the form of new technologies and processes, as well as new products and services (Vesper, 1980; Schumpeter, 1934). Most farmers in developing countries do not have the financial capacity to invest in formal R&D because of their low investment capabilities. In some instances, government provides improved seeds for them at subsidised rates. Even at that, it takes a farmer with good entrepreneurial orientation to show interest in the seeds and other techniques that may be provided by the extension workers.

2.1.2 Pro-activeness

Pro-activeness is a forward looking, opportunity seeking feature of an entrepreneur (Ahuja & Lampert, 2001; Rauch *et al.*, 2009). It reflects a posture of anticipating and acting on future changes in the market and pioneering new processes and products (Lisboa, Skarmas & Lages, 2011). Pro-activeness is defined by entrepreneurial willingness to dominate competitors through aggressive moves, such as introducing new products or services ahead of competitors and acting in anticipation of future demand to

create change and shape the environment (Keh *et al.*, 2007). Demanding customers that expect innovation, continuous improvement of the products and better understanding of their requirements, together with enhanced products is becoming the nexus of competition for many firms (Yli-Renko & Janakiraman, 2008). Pro-activeness is associated with striving for first mover advantages by devoting efforts to environmental monitoring in order to spot new trends and stay abreast of the competition (Sciascia, Naldi & Hunter, 2006). Evidence suggests that proactivity is associated with the number of innovations generated; hence, the greater the proactivity of the firm, the greater the tendency to favour innovation generation (Pérez-Luño, Wiklund & Cabrera 2011).

Pro-active firms try to be ahead of others in using new technologies, selling new product or service in the market. They seize opportunities and focus on new product or service development, exploiting trends to suit future needs of customers and anticipate changes in demand or emerging problems that lead to new venture opportunities (Dess & Lumpkin, 2005). First mover advantage is gained when pro-active firms are the first to enter new markets and establish brand identity, implement administrative techniques or adopt new operating technology in an industry (Lieberman & Montgomery, 1988), thus gaining an edge over their competitors (Kerin, Varadarajan & Peterson, 1992; Golder & Tellis, 1993). In general, pro-activeness is the propensity to anticipate and act on future market needs and opportunity (Schwartz, Teach & Birch, 2005; Kouriloff, 2000; Lumpkin & Dess, 1996).

2.1.3 Risk taking

Risk taking propensity involves the willingness to commit significant resources to exploit opportunities or engage in business strategies in which the outcome may be highly uncertain (Keh, Foo & Lim, 2002; Keh *et al.*, 2007). A risky orientation is defined as the extent of riskiness reflected in various resource allocation decisions as well as choice of products and markets (Pérez-Luño *et al.*, 2011). Risk taking behaviour tends to underestimate exporting obstacles and ensures ready effort towards the pursuit of new opportunities in overseas market. Rauch *et al.* (2004) found that the risk taking dimension is positively related to performance, even if significantly smaller than other aspects of EO. The link between risk taking and performance is less obvious than the one between pro-activeness or innovativeness and performance (Rauch *et al.*, 2004). Risk taking is considered as an independent dimension and positively associated with the other dimensions of EO (Naldi, Nordqvist, Sjöberg & Wiklund, 2007). Pérez-Luño *et al.* (2011) stated that risk taking is positively associated with the number of innovations generated by a firm and that the greater the risk taking ability of a firm, the greater the tendency to favour innovation generation.

Risk-taking shows a firm's commitment to high cost projects and taking bold and prompt actions to reduce losses. It also involves large amounts of investment in new technology and selling new products or services in new market (Dess & Lumpkin, 2005). Risk taking orientation means that firms have to take risks to obtain high financial returns by assuming high levels of debt, committing large amount of firms' resources, introducing new products into new market and investing in unexplored technologies and opportunities (Shapiro, 1994). A risk taking firm would be willing to commit large resources to opportunities which have a probability of costly failure (Stewart, 2001; Gasse, 1982).

2.1.4 Autonomy

Another key component of an EO is a tendency toward independent and autonomous action. Start-up firms must exercise intentionality to carry forward the specific actions required to launch new ventures (Bird, 1988; Katz & Gartner, 1988). Layers of bureaucracy and organizational tradition rarely contribute to new-entry activities in existing firms (Kanter, 1983). Instead, it requires the exercise of autonomy by strong leaders, unfettered teams or creative individuals who are disengaged from organizational constraints to lead to new entry. This was the conclusion of Burgelman (1983) who found that in the case of internal corporate venturing, “the motor of corporate entrepreneurship resides in the autonomous strategic initiative of individuals at the operational levels in the organization.”

Autonomy also involves a firm’s effort to encourage employees to participate in the firm’s planning. Employees are given the freedom to make decisions about new ideas without referring to higher authority. Firms promoting autonomy would also encourage employees to generate or implement new ideas even though they have to break the firm’s rules or regulations (Shane, Venkataraman & MacMillan, 1995). Thus, Dess & Lumpkin (2005) noted that new ideas have to cross two critical stages, the project definition (a promising opportunity has to be justified in terms of whether it will be attractive in the marketplace and how well it fits with the firms’ other strategic objectives) and project impetus (its strategic and economic impact must be supported by senior managers who have experience with similar projects as an embryonic business with its own organization and budget).

3. Methodology

Purposive sampling technique was used to select smallholder farmers from the six participating local government areas (LGAs) of Lagos and Oyo states of Southwestern Nigeria using Rural Finance Institution Building Programme (RUFIN) implementation model as access point. RUFIN is a donor-funded programme under the Nigerian Federal Ministry of Agriculture and Rural Development (FMARD) which was implemented in two selected states of the six geo-political zones of Nigeria. The RUFIN programme was implemented in Lagos and Oyo states of Southwestern Nigeria (Figure 1) which gave easy access to the smallholder farmers in the study area. In all, two hundred and forty (240) smallholder farmers made the sample and the research instrument was designed to capture the socio-economic background, entrepreneurial orientation and factors influencing them. Out of the 240 questionnaire administered, two hundred and twenty-two (222) representing 92.5% were retrieved (Table 1).

Table 1: Questionnaire administered and retrieved in the study area

States	Local Government Area	No. of Questionnaires Administered	No. of Questionnaires Retrieved	% Retrieved
Lagos	Badagry	40	37	92.5
	Epe	40	38	95.0
	Ikorodu	40	30	75.0
Oyo	ATISBO	40	37	92.5
	Akinyele	40	40	100.0
	Ibarapa-east	40	40	100.0
Total		240	222	92.5

Source: Field Survey (2014)

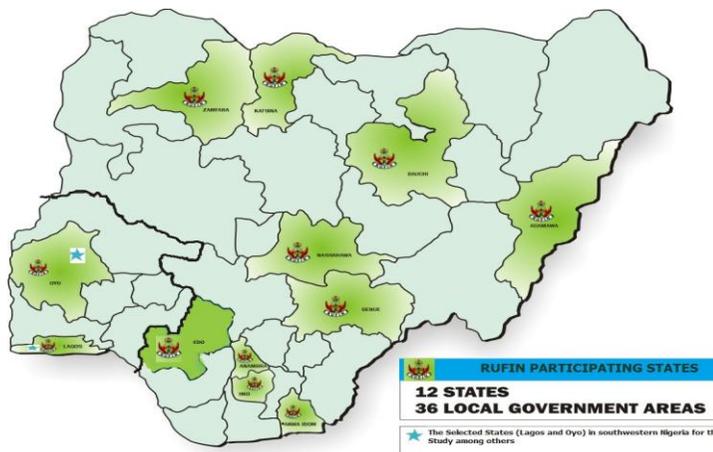


Figure 1: RUFIN participating states in Nigeria

Source: Adapted from RUFIN (2012)

This was possible because of the close engagement of researchers with the programme coordinator in the South West. Only 4 of the retrieved questionnaires were not useful due to incomplete information provided. Therefore, 218 properly completed questionnaires (90.8%) were found to be useful for analysis and were used for this paper. Data were analysed using descriptive and inferential statistics such as ANOVA. The results are presented in the next section.

4. Results and Discussion

4.1.0 Socio-Economic Characteristics of Smallholder Farmers

The socio-demographic characteristics of respondents were divided into four parts. These include the background characteristics, farming characteristics, farming activities and farming motivators of the smallholder farmers with frequencies and percentages. This section illustrates the distribution of the respondents by age, gender, marital status, literacy level, level of education and family size, as shown in Table 2. Mugo (2012) found a positive and significant influence of age of farmer, education level, farm size, frequency of contact with extension agents and participation in field days on factors influencing smallholder farmers' decision to adopt conservative agriculture while family size, gender and experience did not affect adoption.

4.1.1 Distribution of respondents by age

Table 2 shows the spread of respondents' age. Very few respondents (1.8%) were below the age of 21 years, 17% were between age 21 and 30 years, 22.5% were between the age of 31 and 40 years, 30.7% were between age 41 and 50 years while 28.0% were aged 50 years and above. The respondents of this study were typically the elderly (58.7%) which is an indication that young people are not attracted to farming. Akudugu, Guo and Dadzie (2012) report that there is contention on the direction of the effect of age on adoption of technology with some researchers finding it positively influencing the rate of adoption and others finding a negative correlation or no significant influence at all. The youth have

shown little concern, and only a few initiatives are in place for replacing the declining and ageing farmer population in the rural farm households (Amadi, 2001).

4.1.2 Distribution of respondents by gender

Table 2 reveals the gender ratio of males to females and shows that majority (67.9%) of the smallholder farmers were males and 32.1% of them were females. The implication is that the views of both males and females are incorporated in the study findings.

Table 2: Background Characteristics of the Smallholder Farmers (N=218)

Parameters and Classifications		Frequency	Percentage
Age group (in years)	Below 21	4	1.8
	21-30	37	17.0
	31-40	49	22.5
	41-50	67	30.7
	50 and Above	61	28.0
Sex	Male	148	67.9
	Female	70	32.1
Marital Status	Single	31	14.2
	Married	176	80.8
	Separated/Widowed	11	5.0
Household Size	Below 5	71	32.6
	5-9	120	55.0
	10 and Above	27	12.4
Literacy Level	Read and write easily	33	15.1
	Read and write with difficulty	11	5.1
	Not at all	20	9.2
	Educated	154	70.6
Level of Education	None	64	29.4
	Primary	21	9.6
	Secondary	63	28.9
	Post-secondary/OND	23	10.5
	Bachelor/HND	42	19.3
	Masters	5	2.3
	Others	0	0

Source: Field Survey (2014)

This is crucial because women have been found to contribute 66% of all the hours worked throughout the world and that men and women do not adopt new technologies at the same rate or benefit equally from their introduction (Sulo, Koech, Chumo & Chepng'eno, 2012). Therefore, important views of both male and female farmers in the sampled region were captured in this study.

4.1.3 Distribution of respondents by marital status

Table 2 shows that 14.2% of the respondents were single (never married), 80.8% were married and 5.0% were either separated or widowed. This indicates that the people of various marital statuses show interest in farming as a source of livelihood.

4.1.4 Distribution of respondents by household size

Table 2 shows that majority (55.0%) of the households have between 5 and 9 members, 32.6% had less than 5 and 12.4% had more than 10 household members respectively. This explains how farms engage household members in farming as farm assets (Chaplin, Davidova & Gorton, 2004).

4.1.5 Distribution of respondents by literacy level

Table 2 also reveals that 29.4% of the respondents were not educated while the remaining (70.6%) were educated. Although 15% of the smallholder farmers were able to read and write easily, 5.1% were able to read and write with difficulty and 9.2% were not able to either read or write at all. Levels of education (especially literacy and numeracy) may influence developing and using knowledge. Farmers who have less formal education can still be effective learners and acquire and use knowledge to make their farms more profitable (David, 2012).

4.1.6 Distribution of respondents by education level

From Table 2, out of the 70.6% educated respondents, 9.6% had primary education, 28.9% had secondary education, 10.5% had post-secondary/Ordinary National Diploma (OND), 19.3% had bachelors degree or Higher National Diploma (HND) and 2.3% only had acquired masters degree while 29.4% of the smallholder farmers had no formal education. Majority (67.9%) of the smallholder farmers had secondary education and below. Formal education can contribute significantly to nurturing entrepreneurial knowledge, skills, attitudes and behaviour. Basic and higher education can help young people think in terms of profitability, creating work and creating wealth instead of simply finding a job and living a less dynamic life (David, 2012).

4.2 Farmers Operations and Activities

This section shows the distribution of respondents by areas of primary and secondary activities (on-farm and off-farm), position in farm, farmland size, type of labour used on farm (self, family and/or employed).

4.2.1 Distribution of respondents by area of primary activity

Table 3 shows that majority (81.2%) of smallholder farmers' primary activities was on-farm and little (18.8%) were off-farm. Of the total 41 off-farm smallholder farmers'

primary activities, 51.2.2% were into processing and production of farm produce such as cassava flour (*garri*, *lebu* and other forms), cassava chips, yam flour, maize flour, dried fish and fish pepper-soup, herbs (*agbo*), manure and fertilizer making etc. About 39% were into trading and marketing of either their farm produce/inputs or other farmers' or organizations' produce/inputs and the remaining 9.8% were into other off-farm activities such as consultancy.

4.2.2 Distribution of respondents by area of secondary activity

Table 3 shows that 57.3% of the respondent smallholder farmers had farming-related tasks as their secondary activity and the other 42.7% were into off-farm secondary activities. About 31.2% of the total 93 off-farm secondary activity smallholder farmers were into processing and production of various farm produce, 51.6% were into trading and marketing of farm produce and inputs while 17.2% took to other off-farm secondary activities. The varying ratios of primary and secondary activities indicated that majority of the smallholder farmers diversified their activities. It shows that smallholders diversified production and trading interests across different crops or diversified their income sources (rather than increasing fixed investments in any particular crop) (Njeru, 2003). Farm diversification is not a new phenomenon; indeed, such 'pluri-activity' has always been a feature of the farm sector (Hill, 1982; McInerney *et al.*, 1989).

4.2.3 Distribution of respondents by position in the farm

Table 3 reveals that majority (96.3%) of the respondents were farm owners or employers while a tiny majority (3.7%) were labourers or employees, some of whom were immigrants from neighbouring countries close to the study area. Indeed, Carter and Rosa (1998) argue that farmers are primarily business owners and managers and that farms can be characterized as businesses, a position which is corroborated by the result of this analysis.

4.2.4 Distribution of respondents by years of relevant farm experience

Table 3 reveals that 48.6% of the smallholder farmers had relevant farm experience of 10 years or less, 25.2% had between 11 and 20 years, 12.4% had between 21 and 30 years and 13.8% had relevant experience of 31 years or more. David (2012) explains how farmers obtain knowledge through experience and observation and from written, verbal or visual information. Some of their knowledge had been handed down from their parents, grandparents, learnt from other farmers, or acquired by observing how things were done and then practicing it themselves.

4.2.5 Distribution of respondents by farmed farmland (Hectares)

On the hectares of land cultivated, 39% utilized less than one hectare of their farmland, 39.4% farmed between 1 and 2 hectares and 21.6% farmed more than 2 hectares as shown in Table 3 validating the result of Chamberlin (2008) which observed that more than 60% of farmers operate less than the average landholding size (2.27 Hectares). Many of the smallholder farmers claimed to have huge farmland especially in Oyo state but farmed a little portion. They claimed that lack of input resources and high level of risk hinders them from farming on a larger scale. As in many African countries, agriculture in Nigeria is dominated by smallholder farmers who cultivate an average of

one hectare of land (Nuweli, 2013). If the characteristics of their production processes (farm size/productivity) are increased to cause a decrease in the cost of their unit output, they will achieve economies of scale.

4.2.6 Distribution of respondents by type of labour on the farmland

Table 3 also shows the distribution and combination of farm labour types used on the farm. Only 4.1% of the smallholder farmers handled their farming activities by self, another 8.7% utilized their household members as family labour, and only 15.1% engaged employed labour alone. Most used mixed labour types: 12.8% utilized self and family labour, 6.4% utilized self and employed labour, and 22.9% engaged family and employed labour while 29.8% utilized all the three kinds of labour on their farmland. It was also observed that almost all of the smallholder farmers in the study area engaged about 10 active employees on their farms.

4.3 Farming activities of the smallholder farmers

This section presents the distribution of the respondents' farming activities which were gathered as multiple response sets. The sets were then analyzed as cases by grouping the various responses. Table 4 shows the five cases to which the smallholders had multiple response to. It shows that 17 (5.8%) of the 218 smallholder farmers were farming cash crops (such as cocoa, cashew, rice, beans, cowpea, vegetables, herbs, pepper, tomatoes, okro, sugarcane, oil-palm, palm kennel, groundnuts, water-melon, cucumber, and timber), 58.6% were farming food crops (such as cassava, maize, yam, plantain, banana, and coconut), 16.3% were into fish farming (fish rearing and fish hunting and trapping), 17.6% were into poultry and livestock (rearing different poultry birds and producing eggs, snail farming, cattle, and piggery).

4.4 Motivation for farming among smallholders

This section presents the distribution of the respondents according to their motivational factors which was also gathered as multiple response sets and then interpreted as cases by grouping like responses. Table 4 shows the various farming activities of the respondents and the factors motivating the smallholder farmers to farm. Most (43.5%) were farming to feed themselves, their families and relatives, followed by 40.3% which were farming for business purposes or source of income. About 3.2% were farming because they felt it was an easy task; 0.5% were farming through family or friends' encouragement and recommendation; 4.5% were farming because they could not get paid employments (this applies mostly to the young smallholder farmers; 3.7% were farming because of personal interest (such as clothing, shelter, passion, learning) and (4.3%) took to farming as family heritage or norms as was usual in their localities.

De Janvry and Sadoulet (2006) found that production of food for household consumption is a strategy to mitigate risks of price volatility, effectively increasing small farmers' preference to produce food crops over cash crops with potentially better markets. It was observed that most of the smallholder farmers were farming for food and selling the excesses to generate income and some were basically farming to earn income or for business purposes.

Table 3: Farming Characteristics of Respondents (N=218)

Variables		Frequency	Percentages
Area of primary activity	On-farm	177	81.2
	Off-farm	41	18.8
Off-farm primary activities	Processing/production	21	51.2
	Trading/marketing	16	39.0
	Others	4	9.8
Area of secondary activity	On-farm	125	57.3
	Off-farm	93	42.7
Off-farm secondary activities	Processing/production	29	31.2
	Trading/marketing	48	51.6
	Others	16	17.2
Position in the farm/organization	Owner/Employer	210	96.3
	Labourer/Employee	8	3.7
Years of relevant farm experience	Below 10 (Inclusive)	106	48.6
	11-20	55	25.2
	21-30	27	12.4
	31 and above	30	13.8
Farmed farmland(Hectares)	Less than 1	85	39.0
	1 – 2	86	39.4
	2.1 and above	47	21.6
Type of labour used on the farm	Self labour only	9	4.1
	Family labour only	19	8.7
	Employed labour only	33	15.1
	Self and Family only	28	12.8
	Self and employed labour	14	6.4
	Family and employed labour	50	22.9
	Self, family and employed labour	65	29.8

Source: Field Survey (2014)

4.4 Relationship between EO and socio-demographic characteristics of smallholder farmers

T-Test was employed to show the relationship between two mean levels for gender (male and female), education (educated and non-educated), educational level (secondary and

lower education and tertiary education) and primary farm activity (on-farm and off-farm). Analysis of variance (ANOVA) was used to show the relationship between more than two mean levels for location (Akinyele, ATISBO, Ibarapa-East, Badagry, Epe, and Ikorodu LGAs). The result of the ANOVA was significant but did not show the exact location of the difference which was the essence of employing post-hoc test for further analysis. The post-hoc test showed the exact location of the difference for multiple or paired comparison.

Table 4: Farming Activities and Motivational Factors of Respondents

Activities		Frequency	Percentages
Farming activities*	Cash crop farming	17	5.8
	Food crop farming	173	58.6
	Fishing	48	16.3
	Poultry/Livestock	52	17.6
	Trading and Marketing	5	1.7
Motivational factors*	Feeding of family	163	43.5
	Income/Business	151	40.3
	Ease of farming	12	3.2
	Family /friends	2	0.5
	Unemployment	17	4.5
	Personal Interest	14	3.7
	Usual Occupation / Family heritage	16	4.3

Source: Field Survey, 2014. *Multiple Responses

Table 5 shows that there was a positive and significant difference between male and female farmers' level of innovativeness ($t = 2.324$; $p < 0.05$), pro-activeness ($t = 2.800$; $p < 0.05$) and risk taking ($t = 1.982$; $p < 0.05$). There was a positive and significant difference between educated and non-educated farmers' level of risk taking ($t = 2.023$; $p < 0.05$) only, while innovativeness ($t = 0.227$; $p > 0.05$) and pro-activeness ($t = 0.702$; $p > 0.05$) had positive but insignificant difference. Innovativeness and pro-activeness had significant values of 0.821 and 0.483 respectively.

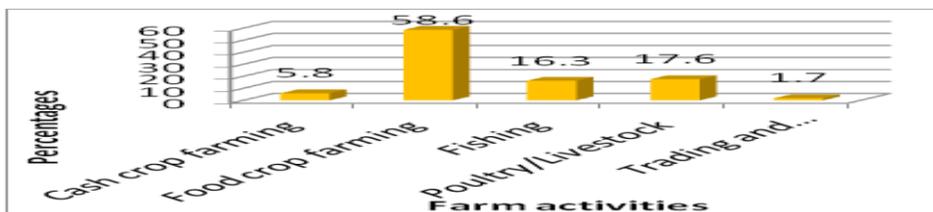


Figure 2: Farmers' Activities

Source: Field Survey (2014)

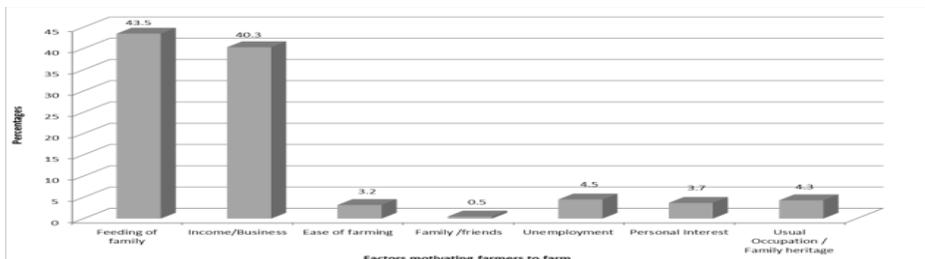


Figure 3: Farmers' Motivating Factors

Source: Field Survey (2014)

Table 5 also shows that there was a positive but insignificant difference between smallholder farmers who have attained tertiary education and those who attained secondary and lower education in the level of innovativeness ($t = 0.019$; $p > 0.05$) and risk taking ($t = 0.184$; $p > 0.05$). Pro-activeness ($t = -0.401$; $p > 0.05$) had negative and insignificant difference. Innovativeness, pro-activeness and risk taking had significant values of 0.985, 0.689 and 0.854 respectively. There was also a significant but negative difference between smallholder farmers with on-farm and off-farm primary activities in their level of innovativeness ($t = -3.039$; $p < 0.05$), pro-activeness ($t = -2.457$; $p < 0.05$) and risk taking ($t = -3.379$; $p < 0.05$). The ANOVA statistics shows the difference in the mean values of location which had more than two variables. It reveals that there is significant difference in the level of innovativeness ($F = 5.506$; $p < 0.05$), pro-activeness ($F = 3.836$; $p < 0.05$) and risk-taking ($F = 3.669$; $p < 0.05$) of respondents in the various farm locations.

Table 5: Differences in the level of EO variables among smallholder farmers using socio-demographic characteristics

Variables/Test		Innovativeness	Pro-activeness	Risk taking
Gender	Male	66.9±15.0	62.2±16.3	68.6±15.3
	Female	61.8±15.4	55.1±19.5	63.5±18.7
	<i>t-value</i>	2.324*	2.800*	1.982*
	<i>P</i>	0.021	0.006	0.050
Literacy level	Educated	65.4±15.6	60.5±18.0	68.4±14.6
	Non-Educated	64.9±14.7	58.6±16.8	63.4±20.2
	<i>t-value</i>	0.227	0.702	2.023*
	<i>P</i>	0.821	0.483	0.044
Education level	Tertiary education	65.5±15.0	59.8±18.1	68.6±14.5
	Secondary and lower education	65.4±16.1	61.0±18.0	68.2±14.9
	<i>t-value</i>	0.019	-0.401	0.184
	<i>P</i>	0.985	0.689	0.854
Primary farm activities	On-farm	63.8±15.0	58.5±17.3	65.2±16.0
	Off-farm	71.7±14.9	66.0±17.7	74.6±16.9
	<i>t-value</i>	-3.039*	-2.457*	-3.379*
	<i>P</i>	0.003	0.015	0.001
*-Significant at < 0.05				

Source: Field Survey (2014)

The level of EO and its effect on performance is moderated by various factors such as years of relevant work experience, gender, age, education, institutional and organizational factors, attitudes and culture among others (Covin & Slevin, 1989; Marino *et al.*, 2002).

5. Conclusion and Policy Recommendations

The study revealed that the smallholder farmers were into on-farm, off-farm and diverse (including plural-activity) activities. They were mostly food crop farmers (58.6%) and were motivated to farm for food (43.5%) and income (40.3%) in essence to feed themselves and family members. It also revealed other peculiar characteristics of smallholder farmers in the study area which may serve as inputs to providing future workable models for improving smallholder farmers' personal and economic performance.

The level of EO (innovativeness, pro-activeness and risk taking) among smallholder farmers was presented after validating the construct. A general neutral level was revealed

to be possessed by majority of the smallholder farmers. This research work also revealed the variation in the level of EO among smallholder farmers' socio-demographic characteristics (gender, literacy level, education level, primary farm activities and locations). It revealed that innovativeness had the highest mean score while pro-activeness had the lowest. The items with highest mean scores were: "farmers consider new ideas as very important", "farmers act promptly to reduce losses" and "farmers treat usage of new ideas as very important". Items with the lowest mean scores were "farmers are always the first to introduce new technology", "farmers frequently change products / services since last five years" and "farmers employ many skilled workers". Due to the present status and despite initial efforts by the individual farmers and organizations (research, educational, financial, private, government and non-governmental) and based on the results obtained from this research, the following are recommendations made.

In order to build up a technical entrepreneurial culture in the society, enterprise related factors must be developed by creating technical awareness and by conducting different technical workshops and training programmes through a proper technical support system for farm business development. It is crucial to provide agricultural and technical support policies that will enhance smallholder farmers' access to and use of technological resources such as farming technologies, bio-inputs and finance to facilitate and improve their activities.

It is also very important to provide technical support policies and develop technical programmes that will promote young and educated farmers in the sector in order to complement the elderly farmers and foster a higher level of technical entrepreneurial characteristics such as innovativeness, pro-activeness, risk-taking, competitive aggressiveness and autonomy among them. Graduate and undergraduate youths should be encouraged to participate in agriculture through technical support policies as well. It is important that smallholder farmers and the general populace be properly oriented towards support for research and development through adequate and proper awareness and sensitization mechanisms.

These recommendations will influence agricultural and technical growth which is vital for stimulating growth and development in other parts of the economy, and smallholders are at the core of this strategy. These may ensure the effectiveness of all individual and organizational efforts in enhancing farm productivity, leading to agricultural and economic development in the country.

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