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Full Length Research Paper

Analysis of Agricultural business risks management strategies among rural Farmer entrepreneurs in Imo State, Nigeria

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The study was aimed at identifying sources of agricultural risks faced by entrepreneurial farmers in their changing environment and the coping strategies employed. Multi stage sampling technique was used to select 250 farmers affected by risks and uncertainty in agribsiness. Questionnaire was used to collect data and descriptive tools such as percentage and mean were used to analyze the data. The study revealed that farmers faced myriads of risks in food production business. These risks were grouped into production/environmental risks, marketing risks, financial risks, legal risks, and human/personnel risks. The production risks faced by farmers included crop damage with a high mean of 3.63, flooding (M = 3.44), drought (M = 3.35), poor yield (M=3.59), pests/diseases outbreak (M=2.70). The human/personnel risks included equipment breakdown (M = 3.89), illness (M = 3.2.90), poor quality control (M = 3.56), poor farm planning (M = 2.78) among others. The financial risks were insufficient cash to start business, low profit, increased input cost, higher interest rates, among others. To cope, the farmers employed the following strategies – use of drought resistant varieties, diseases resistant variety, production diversification and many more. Government should subsidize inputs and make farming attractive to young ones.

Key words: Agribusiness, risks, weather, management, entrepreneur

INTRODUCTION

Farming is risky. Farmers live with risk and make decisions every day that affect their farming operations. Many of the factors that affect the decisions that farmers make cannot be predicted with 100 percent accuracy: weather conditions change; prices at the time of harvest could drop; hired labour may not be available at peak times; machinery and equipment could break down when most needed; draught animals might die; and government policy can change overnight (Khan, 2013). All of these changes are examples of the risks that farmers face in managing their farm as a business. All of these risks affect their farm profitability.

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While farmers have always faced risk, farming has over the years, as a result of market liberalization and globalization, become increasingly risky. Smallholder farmers have become especially vulnerable. A casual approach to farming, even if it is for household food consumption, is no longer viable. Farmers need to acquire more professional skills, not only in basic production but also in farm business management. Among these are risk management skills.

Skilful farmers and other business people generally do not become involved in risky situations unless there is a chance of making money. Higher profits are usually linked with higher risks. These risky but potentially profitable situations need to be managed as carefully as possible. Good risk management involves anticipating potential problems and planning to reduce their

detrimental effects. Simply reacting to unfavourable events after they occur is not good risk management. In order to succeed, farmers need to generate more profit and become competitive. They must have a good understanding of the farming environment and be skilled at managing risk. By dealing with risk more effectively, better farming opportunities arise(Khan, 2013).

Nigeria being prone to a lot of environmental inconsistencies requires high degree of risk aversion strategy to break the circle of poverty which engulfed over 70% of its population and also to achieve increased food production to meet 3.18% population growth (NIPC, 2007; Ojo, 2003; FRN, 2009; Alimi and Ayanwale, 2005). Risk which investment economists describe as the variation from expected outcomes due to imperfect knowledge of investor in decision making is inherent in every form of enterprise but is more intensive in input-output relation among agribusiness productions (Kuyrah et al., 2006). Alimi and Ayanwale (2005) opined that a situation of imperfect knowledge is more common in agribusiness enterprises. Hence, investors in agribusiness enterprises face the danger that what they expect ex-ante may not be realised ex-post (Ndugbu, 2003). For instance, each time an investor borrows money for investment in agribusiness enterprise, there is the possibility that return on investment is less than cost of borrowed fund. Also, in this era of global climate change, an investor cannot predict with certainty the degree of fluctuation in prices of input and output. Risk sources to agribusiness enterprises can be grouped into social, market, political, financial, production and foreign exchange risk,(Njavro, 2009; NIPC2006; CN, 2008; Dercon,2002; Mikhaylova, 2005). Social risk is suggestive that the risks or hazards have their origin from man. The risk could be due to fire outbreak, burglary or theft, kidnapping of investors/workers for ransom, embezzlement, strike, civil commotion and changes in social structure e.g. divorce and dissolution of partnership which can lead to unexpected decline in efficient operation of enterprise. Market risk arises due to fluctuation in input and output prices. Political risk is due to changes in government machineries and policies. The use of debt in financing agribusiness investment exposes the firm to financial risk. Foreign exchange risk is borne out of the firm's dependence on foreign currency. Production risk occurs because agribusiness enterprise is affected by many uncontrollable events that are often related to weather, drought, physical hazard to the factory

site and techno- logical failure of the firm. This risk affects the efficient conversion of input to output (Bauer and Bushe, 2003; Aneke, 2007). Thus, empirical studies have produced varieties of sources of risk. According to Alimi and Ayanwale(2005), in a study conducted on risk in onion production in Kebbi State, Nigeria, reported that the most important sources of risk are technical-drought, market and financial.

Many small-scale farmers and extension organisations understand that there is little future for farmers unless they become more entrepreneurial in the way they run their farms. They must increasingly produce for markets and for profits. Becoming more entrepreneurial can be a challenge for small-scale farmers (Khan, 2013). They will need help from extension workers and other institutions. Yes. Small-scale farmers all over the world have shown a remarkable ability to adapt. They look for better ways to organise their farms. They try new crops and cultivars, better animals, and alternative technologies to increase productivity, diversify production, reduce risk – and to increase profits. They have become more market-oriented and have learned to take calculated risks to open or create new markets for their products. Many small-scale farmers have many of the qualities of an entrepreneur. For small-scale farmers to become entrepreneurs they need all of these qualities and more. They need to be innovative and forward-looking. They need to manage their businesses as long-term ventures with a view to making them sustainable. They need to be able to identify opportunities and seize them.

Some small-scale farmers do have these qualities, but they still focus on maintaining their traditional way of life. Their production decisions are based on what they need -- not on what is possible. The farmer-entrepreneur produces a clear picture in his mind of what is possible and the future he wants. He knows that what is possible is determined by the market (Khan, 2013). The farmer-entrepreneur is always looking for new opportunities. He knows that new opportunities are found in the market. The farmer-entrepreneur wants to make profits. He knows that profits are made in the market. An entrepreneurial farmer has the initiative, drive, capacity and ability to take advantage of opportunities.

Agribusiness therefore, is the sum total of all the operations involved in the manufacture and distribution of farm supplies, production operations on the farm and the strong processing-distribution of commodities and items. Tersoo (2013), views agribusiness as dividing the structural components of the production process into substructures which are capable of being administered integratively. Three substructures of this sector are the input; farm productions and the marketing section for processed products. This concept implies the process by which corporate firms supply agricultural inputs or purchase farm outputs and process them for onward distribution in an integrated pattern. Agribusiness is grouped into three primary tri-aggregates:

(i) Farm supply
(ii) Farm production
(iii) Processing distribution.

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, 2013; 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 in terms of risk management in the study area. Therefore, this study empirically examined risk sources in agribusiness and entrepreneurial small farmers management strategies of risks in the study area. The specific objectives were to a). describe the socioeconomic characteristics of the respondents; b) identify perceived sources of risks faced by farmers in the area; c. examine perceived risk management strategies employed by the respondents.

METHODOLOGY

The study was carried out in Imo state, Nigeria. Imo State lies within latitudes 4°45'N and 7°15'N, and longitude 6°50'E and 7°25'E with an area of about 5,100 sq km. It is bordered by Abia State on the East, by the River Niger, and Delta State on the west, by Anambra State to the north and Rivers State to the south. The state is rich in natural resources including crude oil, natural gas, and economically exploitable flora like the iroko, mahogany, obeche, bamboo, rubber tree and oil palm predominate. However with a high population density and over farming the soil has been degraded and much of the native vegetation has disappeared. This deforestation has triggered soil erosion which is compounded by heavy seasonal rainfall that has led to the destruction of houses and roads. The rainy season begins in April and lasts until October with annual rainfall varying from 1,500mm to 2,200mm (60 to 80 inches). The state an average annual temperature above 20 °C (68.0 °F) with an annual relative humidity of 75%, reaching 90% in the rainy season. The dry season experiences two months of Harmattan from late December to late February. The hottest months are between January and March. The estimated population is 4.8 million and the population density varies from 230-1,400 people per square kilometer.

Multi-stage sampling technique was employed in selecting sample for the study. The first stage involved the selection of three agricultural zones in the state, namely, Owerri, Orlu and Okigwe Agricultural zones. The second stage involved the purposive selection of 2 local government areas from each zone with cases of disasters affecting crop production, making six (6) area councils. The third stage involved the purposive selection of the affected communities in the areas with cases of natural disaster. The final stage was the proportionate random selection of 250 entrepreneurial farmers from the lists of 2,505 households affected by the disasters obtained from the various community leaders of the affected areas. Data were analyzed descriptively. Objectives 1 was achieved using percentages, while objective 2 was achieved on a 4 point likert – type scale measurement of highly serious, serious, moderately serious and not serious assigned weight of 4,3,2 and 1. The weight was added and divided by 4 to give 2.50. And mean 2.50 and above was regarded as serious risks, while mean less than 2.50 was not regarded as serious. Again, objective 3 was also achieved on a 4 point likert – type scale measurement of strongly agree, agree, disagree and strongly disagree assigned weight of 4,3,2 and 1. The weight was added and divided by 4 to give 2.50 and mean 2.50 and above was regarded as risk management strategies used, while mean less than 2.50 was not regarded as use management strategies.

RESULTS AND DISCUSSION

Socio-economic Characteristics of Respondents

Table 1 shows the socio-economic characteristics of the respondents. The result revealed that 12.4% of the respondents were between 21 – 30 years, 31.6% were within 31 – 40 years, 24% were within 41-50 years, while 42% were 51 years and above. The implication here is that age of the respondents plays an important role since it reveals one's knowledge and understanding of a phenomenon under study and other happenings in the society. Majority (81.2%) of the respondents were men, while 18.8% were women. Men are family heads, husbands and fathers who own the farming business and takes vital decisions for the family. The table also shows that 82.8% of the respondents were married, 10% were single and 7.2% were widows.

On number of dependents, the table also shows that 34% had 1 – 5 persons who depended on them, 36.8% had 6 – 10 persons depending on them and 29.2% that had 11 – people and above that depended on them. On education, 22% had no formal schooling, 31.2% had primary education, 37.6% had secondary education, only about 9.2% had tertiary education. Education levels of an individual helps in knowledge acquisition and transfer. Agwu and Anyanwu (1996) reported that increase in educational status of farmers positively influence their perception and adoption of improved technologies and practices. Furthermore, majority (43.6%) have been in agribusiness for more than 21 years, 33.6% had put in 11 – 20 years, while 22.8% had put in 1- 10 years. Again, the table revealed also that 41.6% of the respondents

Table 1: Socio – economic Characteristics of Farmers.

Parameters	Frequency	Percentage
Age		
21 – 30	31	12.4
31 – 40	54	31.6
41 – 50	60	24.0
51 and above	105	42.0
Sex		
Male	203	81.2
Female	47	18.8
Marital status		
Single	25	10
Married	207	82.8
Widow	18	7.2
Household size		
1 – 5	85	34
6 – 10	92	36.8
11 and above	73	29.2
Educational level		
No formal education	55	22.0
Primary	78	31.2
Secondary	94	37.6
Tertiary	23	9.2
Farming experience	57	22.8
1 – 10	57	22.8
11 – 20	84	33.6
21 and above	109	43.6
Extension Visits		
Non	104	41.6
Once monthly	91	36.4
Twice	45	18.0
Three times	10	4.0

Field survey, 2016

had no visit of extension worker at all, 36.4% had one such visit monthly, only 4.0% had the visit three times.

Sources of Risks faced by Farmer Entrepreneurs

Table 2 shows the various risks faced by the farmers in the study area. The risks were in 5 categories: Production/environmental risks, marketing risks, institutional /legal risks, human management/personnel risk, and financial risks. The high mean scores show the seriousness of each to the farmers productive life. The production/environmental risks included weather condition with a high mean of 3.53, pest/disease attacks with a mean score of 2.70, crop damage(M = 3.63), flooding (M =3.44), Drought (M= 3.35), poor yield (M = 3.59), climate change menace (M = 3.53), quality of inputs (M=3.60), technological change (M=2.90), among others. Again, the marketing risks were changes in supply (M = 2.85), which occurs regularly in the market depending on the season. Changes in demand (M = 2.62), price changes /fluctuations (M=3.30), irregular/untimely delivery systems (3.26), and food safety regulations (M=2.66), all constitutes risks in food production as it puts farm people out of business. Institutional/legal risks included changes in provision of services (M=3.45), unfavourable trade policy (M = 3.34), land tenure system (M = 3.70), corruption/breach of contract (M = 3.00), war/communal conflict (M = 2.95) among others. Human/personnel risks identified were poor management decision (M = 2.65), poor quality control (M = 3.56), poor farm planning/forecasting (M = 2.78), illness/dearth (M = 3.90), equipment breakdown (M = 2.89), and use of outdated seeds (M = 3.27). Finally, financial risks identified were low profit generation (M = 2.78), insufficient cash to start business (M = 3.65), increased input cost (M=3.53), higher interest rates (M=3.05), excessive borrowings (M=3.04) were risk faced by the respondents. The findings agrees with Zhang, et al., (2007) who posited that Private sector investors in SSA face significant economic risks due to the instability of political and financial institutions, uncertainty about government policy, incomplete or non-existent markets, war, corruption, and social issues in the region, among other factors. Conflicts diminish investment in African economies through reduced investment in physical capital and destruction of assets, including institutional

Table 2: Sources of Agric-business Risk.

Sources of Agribusiness Risk	MEAN	SD
Production/Environmental Risk		
Weather	3.53	0.716
Diseases/ Pests infestation	2.70	0.516
Crop damage	3.63	0.530
Poor yield	3.59	0.538
Theft of produce	2.61	0.576
Fire out break	2.78	0.709
Climate change menace	3.53	0.567
Technological change	2.90	0.490
Quality of inputs	3.60	0.566
Machinery efficiency	2.66	0.506
Flood	3.44	0.638
Drought	3.35	0.697
Marketing Risk		
Changes in supply	2.85	0.772
Changes in demand	2.62	0.575
Price changes and fluctuations	3.30	0.626
Irregular/untimely delivery system	3.26	0.733
Food safety regulations	2.66	0.615
Credit risk	2.60	0.756
Uncertainty of investment returns	3.43	0.650
Institutional/ Legal Risk		
Changes in provision of services	3.45	0.678
Uncertain monetary/fiscal policies	2.56	0.564
Unfavorable trade policy	3.34	0.677
Land tenure system	3.70	0.564
War, communal conflict	2.95	0.763
Corruption, breach of contract	3.00	0.563
Uncertain regulatory/legal policies	2.56	0.656
Human Management/ Personnel Risk	3.87	0.786
Poor management decision	2.65	0.671
Poor quality control	3.56	1.345
Poor farm planning/forecasting	2.78	0.897
Illness/death	3.90	1.570
Use of outdated seeds	3.27	0.786
Equipment breakdown	2.89	0.876
Financial Risk	2.74	0.654
Insufficient cash to start business	3.65	0.546
Low profit generation	2.78	0.675
Increased input cost	3.53	0.654
Higher interest rates	3.05	0.543
Excessive borrowings	3.04	1.564
Lack of adequate credit reserve	2.97	0.654

Source: Field data, 2016

capacity (Ndulu, and Chakraborti, 2007). Investment ratios and stocks of human capital in civil war companies are at least 50 percent lower than the average for countries without civil war. Agribusiness investors face considerable financial risks because of a lack of financial institutions, weak links to global financial systems and risks related to liquidity of financial investments (Miguel, et al., (2004).

The standard deviation values of the mean distribution of farmers entrepreneurs perceived agricultural business risk were less than one in most cases. This shows that the responses of the farmers on the perceived risks did not very much.

Risk Management Strategies of Farmer Entrepreneurs

Risk management could be in the form of prevention, mitigation and coping. Table 3 shows the strategies employed by the respondents in managing risks. The strategies included use of drought resistant variety with mean response of 3.33, use of diseases resistant seeds (M=3.33), fertilizer/organic manure application (M=3.41), production diversification (M=3.68), spreading sales

Table 3: Risk Management Strategies Used by Farmer Entrepreneurs.

Management strategies	MEAN	SD
Use of drought-resistant varieties	3.33	0.716
Use of bird-resistant seeds	2.80	0.516
Use of diseases resistant varieties	3.63	0.530
Irrigation for high-value crops	2.39	0.538
Fertilizer/organic manure application	3.41	0.576
Production diversification	3.68	0.709
Spreading sales	3.53	0.567
Direct sales to consumers	3.20	0.490
Advance contract sales	3.60	0.566
Price forwarding	2.66	0.506
Market price information	3.44	0.638
Cooperative formation	2.78	0.697
Credit mobilization	3.35	0.772
Pooling resources together	2.52	0.575
Regular communication	2.70	0.626
Ensuring safety of labourers	3.26	0.733
Adequate farm supervision	3.32	0.615
Careful labour planning	2.80	0.756
Use of experienced skill manpower	3.43	0.650
Proper cash spending	3.17	0.677
Controlled spending	3.04	1.908

Field Survey Data, 2015.Mean > 2.50 =Strongly agree (SA) Mean < 2.50 = Disagree (D)

(M=3.53), and market price information (M=3.44). Other strategies were cooperative formation (M=2.78), direct sales to consumers (M=3.20), regular communication (M=2.70), careful labour planning (M=2.80), use of experienced skilled labour (M=3.43), proper cash spending (M=3.17), controlled spending (M=3.04) among other strategies.

In a study by Sekumade and Ogunro (2013) on Risk Assessment and Management for Agribusiness Enterprises Investment in Ondo State, Nigeria, it was observed that majority (85%) of the firms adopted diversification strategy as a way of reducing risks. This involves investment in more than one portfolio. Some of the agribusiness operators also engaged in non-agribusiness activities. Engagement in and earning of non-agribusiness income lowered the variants of incomes from agribusiness operation. Some of the agribusiness investors engaged in diversification of products produced, that is, they are involved in the production of two or more agribusiness products or output simultaneously. Alimi and Ayanwale (2005), Akinsulire (2006), Pandey (2004) and Van Horne (2004) noted that diversification served the best by spreading risk across a number of enterprises. Diversification acts as a strategy to stabilise firms' incomes, revealed that significant proportions (80%) of the firms used integration to reduce agribusiness risks. Integration is a contracting agreement between different actors in agribusiness chain. Integration helps to overcome the disruption of the supply of inputs or evacuation of output in the agribusiness chain. This result is consistent with several studies (Ndugbu, 2003; Akinsulire, 2006). Hence, integration is used to reduce risk associated with fluctuation in input and output supply through the encouragement of backward and forward integration. Fifty five percent of the agribusiness firms adopted forward contracting as a strategy to reduce risks. In this case, the firms reduce price risk by allowing agribusiness firms to agree and be sure of the price they want to sell their commodities in future before they are ready for disposal.

The essence of such arrangement is the commitment to provide agribusiness commodity of a type, at a time and a price and in quality required by a known buyer. Alimi and Ayanwale (2005) and Varangis et al.(2002) added that forward contracting also involves entering into forward contract for the exchange of one currency for another at a specific future date and at a specific exchange rate by multinational firms. Hence, forward contracting is used to reduce foreign exchange related risk by multinational agribusiness companies. Though the result is contrary to the report of Nwaru et al.(2007) that forward contracting is virtually non-existent for most agribusiness firms except brewery and flour mill industries, because of weak legal system to enforce contract. Furthermore, the results indicate that 50% of the firms used insurance strategy to reduce their risk.

CONCLUSION

This study makes a significant contribution to the existing literature on agriculture business risk management among rural farm entrepreneurs in Imo state. The study revealed that the major risk sources in the area were

environmental/production, marketing, institutional, human/ personnel and financial. The farmers use drought resistant varieties, diseases resistant varieties, direct sales, credit mobilization among others.

REFERENCES

Akinsulire, O. (2006). Financial management (4th edition) Ceemol Nigeria Ltd, Lagos

Alimi, T. and Ayanwale, A.B. (2005). "Risk and Risk Management Strategies in onion Production in Kebbi State of Nigeria" J. Soc. Sci. 10(1).

Aneke, J.I. (2007). "Agricultural Insurance" In Reading in Agricultural Economics and Extension, Akubuilo CJC, Umebali EE, Mgbada JU, Ugwu DS, Egwu WE, Awoke MU (eds). Computer Edge Puplishers.Enugu. pp. 221-244.

Bardasi, E. and Sabarwal, S. (2009). Gender, Access to Finance, and Entrepreneurial Performance in Africa. World Bank Mimeo

Bauer, L., Bushe, D. (2003). Designing Risk Management Strategy, Managing the Modern Farm Business, third edition, university of Alberta

Bennett, J. (2010). Informal firms in developing countries: entrepreneurial stepping stone or consolation prize?. Small Business Economics, 34(1), 53-63.

Brück, T., Naudé, W. and Verwimp, P. (2011). Small business, entrepreneurship and violent conflict in developing countries. J. Small Bus. Entrepreneurship, 24(2):161-78.

Carter, S. and Ram, M. (2003). Reassessing portfolio entrepreneurship. Small Bus. Econ. 21: 371-380.

Chen, S. and Ravallion, M. (2010). The developing world is poorer than we thought, but no less successful in the fight against poverty. The Quart. J. Econ. 125(4): 1577-1625.

David, J. (2012). A new institutional approach to entrepreneurship and inequality in rural Russian villages: Survey findings from 1991 to 2006. J. Eurasian Stud., 3: 41-48.

Dercon, S. (2002). "Income Risk; Coping Strategies and Safety Nets" The World Bank Research Observer, 17(2): 141-166

Federal Republic of Nigeria official Gazette (FRN) (2009) "Legal Notice on Publication of 2006 Census final result" 2nd February, 96(2).

Jervell, A.M. (2011).The family farm as a premise for entrepreneurship. In: G.A. Alsos,

Kuyrah, J.N., Obare, G, Herrero, M, Waishaka, M. (2006). "Agricultural Income Risk and Rural Poverty Dynamics Strategies of smallholder producers in Kenya" Contributed paper, presented at the international Association of Agricultural Economics Conference; Gold Coast, Australia, August, pp. 12-16.

Miguel, E., Satyanath, S., & Sergenti, E. (2004). Economic Shocks and Civil Conflicts: An Instrumental Variables Approach. J. Pol. Econ. 112 (4).

Mikhaylova, L.I (2005). "Risk Management in International Agricultural Markets" IAMO-Forum,Agricultural and Food Markets in Central and Eastern Europe, Seminar Paper 16-18 June, Halle (Saale).

Ndulu, B.J. and Chakraborti, L. (2007). Challenges of African Growth: Opportunities, Constraints and Strategic Directions. World Bank Publications

Nigeria Investment Promotion Commission (2006). Consolidated Annual Report (2004-2006),Nigerian Investment Promotion Commission, Billy Comms and Co Ltd, Abuja.

Nigerian Investment Promotion Commission (2007). Newsletter. The Nigerian Investment Promotion Commission (NIPC) Publication October.

Njavro, M. (2009). "Risk Management in Agribusiness." Paper presented at Zagreb School of Economics and Management, June 5.

Nwaru JC, Onyenweaku CE. and Njoku SC (2007). Rural Risk management Strategies in Imo State of Nigeria: The case of Insured and uninsured Arable Crop Farmers. Int. J. Agric. Rural Dev., 10(2): 18-24

Ojo, S.O. (2003). "Productivity and Technical Efficiency of Poultry Egg Production in Nigeria", Int. J. Poult. Sci. 29(6): 459-464.

Pandey, I.M. (2004). Financial Management (9th ed). Vikas Publishing House PVT Ltd New delhi.

Parker, S. (2008). Entrepreneurship among married couples in the United States: a simultaneous probit approach. Labour Econ. 15(3): 459-481.

Parker, S. (2013). Moving beyond entrepreneurial skills: Key factors driving entrepreneurial learning in multifunctional agriculture. J. Rural Stud. 32: 208-219.

Rijkers, B and Costa, R. (2010). Gender and rural non-farm entrepreneurship. World Development 40(12): 2411-2426.

Sekumade, A.B. and Ogunro, V.O. (2013) Risk Assessment and Management for Agribusiness Enterprises Investment in OndoState, Nigeria. European J. Bus. Manage. 5(1):,204-206.

Tersoo, P. (2013) Agribusiness as a Veritable Tool for Rural Development in Nigeria. Mediterranean J. Soc. Sci. 4(8):.17-26

Van-Horne, J.C. (2004). Financial Management and Policy (12th edition). Pearson Education (Singapore Pte Ltd.) Delhi.

Varangis P, Larson D. and Anderson JR (2002). Agricultural Markets and Risk: Management of the Latter, not the Farmer," Paper Presented in a Seminar Held to Honour Ronald C. Duncan on the Occasion of his Retirement as Executive Director of the National Centre for Development Studies and Director, Asia Pacific School of Economics and Management, Australian National University, Caribbean in July 2001

Zhang, X.,, Rockmore, M. and Chamberlin, J. (2007). A Typology for Vulnerability and Agriculture in Sub- Saharan Africa (Discussion paper 00734). Int. Food Policy Res. Institute.