

**ajfand** SCHOLARLY, PEER REVIEWED  
AFRICAN JOURNAL OF FOOD, AGRICULTURE,  
NUTRITION AND DEVELOPMENT

PUBLISHED BY  
AFRICAN  
SCHOLARLY  
SCIENCE  
COMMUNICATIONS  
TRUST

ISSN 1684 5374

Volume 14 No. 2  
April 2014

**FARMERS' INVOLVEMENT IN CAPITAL MARKETS INVESTMENT AS  
AN ALTERNATIVE SOURCE OF FUNDING FOR AGRICULTURE IN  
ONDO STATE, NIGERIA**

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## ABSTRACT

Farming in Nigeria largely takes place in peasant and small scale physical labour-fed farms where productivity diminishes with age. Given depleting productivity accounted for by loss of agility due to advancement in age and general insufficiency of capital, avenues capable of sufficiently salvaging this dearth must, therefore, be explored. The study examined farmers' involvement in the capital markets as an alternative funding source for agricultural activities in Ondo State of Nigeria. It specifically examined farmers' awareness of the capital markets as well as the influence of their socioeconomic characteristics on their involvement in the capital market. Using a random sampling technique, a well structured questionnaire was used to collect data from 90 farmers selected for the study. Descriptive statistics like frequency tables were used to present the results of the study while the chi square analysis was used to test the study hypothesis. Results revealed that majority of respondents were males (86.7%). Nearly all were married (96.6%) and above 40 years of age (84.4%). Majority (82.2%) had one form of formal education or the other. Those with farming experience over 10years were 63.3%. Only thirty six percent of the farmers were aware of capital markets investment while only 8% actually had investment in the capital markets. The study also found that agricultural extension services had never disseminated any information on the capital market. A major constraint to respondents' investment was lack of adequate information. At  $p \leq 0.05$ , chi square analysis revealed that age of the farmers, their level of education, farming experience and awareness of capital markets investment were significantly associated with their investment in the capital market. The study recommended that agricultural extension agents should be mobilised to develop and disseminate information on the capital markets to farmers. Stock brokers should also visit farmer groups for enlightenment campaigns.

Key words: Capital market, awareness, investment, funding

## INTRODUCTION

Capital markets in their present form developed from age-old trade practices in agricultural and other commodities in Europe. The practices involved striking bargains in commodities at specified venues on appointed days, where trade frequently conducted in credit terms led to the emergence of instruments (such as bills of exchange and notes), which served as an evidence of credit and for purposes of effecting settlements. These documents soon became major trading items and were often discounted through processes of endorsement and negotiation [1].

Trading in these documents eventually birthed trading in other forms of securities. Exchanges for these securities were typically done in places such as coffee houses until a formal market was established as the London Stock Exchange in 1773. In New York, also, traders were also meeting regularly before a formal association of 25 based on the Buttonwood Trade agreement was established in May 17, 1792 to form the foundational structure of the New York Stock Exchange formed in 1817. To cater for the growing demands of economic activities of financial institutions of emerging economies at that period, capital markets (stock and commodity exchanges) became significantly involved in raising capitals for expanding business and government efforts at provision of social amenities as well as facilitation of other economic activities.

Capital markets as they are today function as a market for long-term funds, providing an avenue for fair pricing and resultant transactions on stocks and commodities. They also ensure capital mobilisation, uninterrupted market functions and collateral value allocations. The capital market satisfies the divergent needs of both providers and users of funds; while providers of funds usually desire safety, liquidity and growth in their funds, users of funds require long-term provision of funds to finance their fixed investment [2].

In a monetised economy where the size of enterprises and corporations have enormously grown beyond the capacity of sole proprietorships and partnerships to provide the magnitude of funds required for their corporations, it becomes necessary that a large number of participants drawn from across the economy be engaged in financing. Funds are then moved from a large number of individuals and corporations who participate as investors into the financing of business enterprises and economic efforts through financial intermediaries whose main role is to ensure a fair and smooth process. Moving from savings into investment, resources are then transferred from areas of surplus to areas of deficit. This is what the capital markets is all about [3]. A major engine of economic growth and development of any nation is its capital market. It impacts positively on the economy by providing financial resources through its intermediation process. Without an efficient capital markets, the economy may be starved of the required long term funds for sustainable growth [4]. Due to the unavoidable effects of old age and debility, for farmers and agriculture-related personnel with early retirement in mind as well as those wishing to increase income by the creation of wealth, investment in the capital markets becomes important.

The capital markets has also come to be recognized as the pillar in every strong and dependable economy all over the world, owing to its vital role in creating avenues for investors and companies to raise long-term funds for their investment purposes [3]. The capital market has proved adequate in increasing individual income streams and ensuring efficient food pricing and marketing through commodity exchanges. Apart from serving as a source of raising long-term funds, agricultural practitioners can also approach the market to create wealth through investment in instruments traded in the market.

In 1999, 4.0 billion shares were traded on the Nigerian Stock Exchange, 13.1 billion in 2003, 26.5 billion in 2005 and 36.7 billion in 2006. In 1999 trading value was ₦ 14.1 billion, ₦ 113.8 billion in 2003, ₦ 254.7 billion in 2005 and ₦ 468.6 billion in 2006. At the end of the first week of November 2010, despite the economic meltdown, a turnover of 1.6 billion shares worth ₦11.1 billion in 29,001 deals was recorded, in contrast to a total of 1.8 billion shares valued at ₦ 43.43 billion exchanged the week before in 31,904 deals (\$1 = ₦160) [5].

These figures show an increase in the value of securities in the capital markets, the positive effects of which accrue to investors. The benefits which investors derive from investing in the capital markets include:- capital appreciation, dividend payment, bonus issue, collateral for obtaining loans from banks and preparation towards personal pension plan.

Nigerian farmers face numerous problems hindering them from attaining their full potential in food production; these include fragmentation of farm land, high input price, low mechanization, high transportation cost, infertile land, pest and diseases, unstable policies, general poverty and above all, inadequate funds. Farmers have tried to solve the problem of funding through cooperatives. It seems to have proved to be the most effective investment platform among agricultural practitioners in Nigeria to raise funds [6]. It has also been reported that members of co-operative societies performed better in terms of gross margin than individual farmers who were not members of cooperative societies. The most important economic obligation of members of a farmer co-operative society is savings. Farmers are expected to save a specified amount of money daily, weekly, monthly or quarterly as it is convenient for the group and individual [7]. Members contribute equitably to the capital and personnel requirement of their co-operatives and accept their fair share of the risks and benefits of their undertakings [8]. The volume of investment was also found to depend on income, cost of procuring investible fund, and entrepreneurs' expectations on the trend of the business in future [9].

The nature of Nigerian agriculture as observable is seasonal and dependent on fluctuating weather and climatic conditions, instability in profits as well as the preponderant use of physical labour and crude tools. Farming in Nigeria still largely takes place in peasant and small-scale physical labour-fed farms where productivity diminishes with age. Given depleting productivity accounted for by loss of agility due

to advancement in age, and general insufficiency of capital, avenues capable of sufficiently salvaging this dearth must, therefore, be explored. The biggest problem of agriculture in Nigeria is under-funding. Lofty ideas and sound business cannot be brought alive because of financial handicaps. This results in the under-utilization of available resources as well as prevalence of poverty among farmers and other agricultural practitioners. The need exists throughout places where agriculture is practiced, as programmes and packages currently on the ground to help ameliorate this condition seem to be insufficient in catering for the all-time high need of agricultural practitioners.

It, therefore, becomes important that new schemes for raising capital be explored. Having proved highly beneficial to other sectors of the Nigerian economy, the capital market provides an ample opportunity for agriculture and its practitioners to generate funds for businesses. Resources pooled by farmers and other agricultural personnel under collective co-operative bodies, mutual benefit associations, and farmers' or investment clubs can be aptly directed into capital market investment towards generating stocks-profit funded capital for their activities and businesses. An inquiry into the awareness of capital market investment and their current level of capital market investment among agricultural practitioners as well as the factors accounting for such thus become highly necessary in assessing the current state of things as well as the existing gap between the current and desired levels of investment. This will enable agriculture and its practitioners to maximally benefit from the capital market.

Having proved sufficiently reliable for retirement benefit schemes, agri-business leveraging, corporate and individual investment purposes, the capital market qualifies as an effective tool for changing the *status quo*. Furthermore, the need to ensure a steady stream of income for practicing farmers when old age comes and their agility and ability decreases is an issue that makes investment of farmers in the capital markets a novel idea. Ensuring increased involvement in capital market investment by farmers, however, largely depends on extension efforts. How well the idea will be promoted by extension agents is factored on how much they are persuaded of its novelty, practicality and workability. An inquiry into the current level of capital markets investment, the level of persuasion and attitudes towards it as well as the factors accounting for these thus become a critical area of focus.

### **Objectives of the Study**

The general objective of the study was to determine the involvement of farmers in the capital market in Ondo State, Nigeria. It specifically:

1. examined the socio-economic characteristics of respondents;
2. examined the awareness of capital market investment amongst respondents;
3. examined capital market investment amongst respondents and;
4. identified constraining factors to involvement in capital market investment.

### **Hypothesis**

The hypothesis tested in the study at the 0.05 level of significance was:

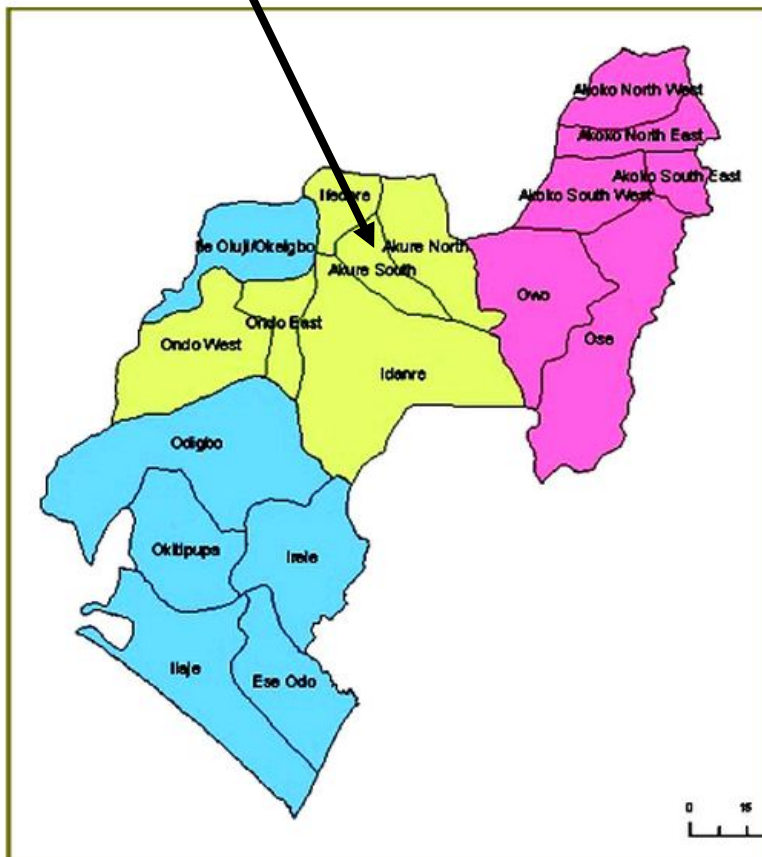
There is no significant relationship between selected socio-economic characteristics of respondents and their involvement in capital market investment.

## **METHODOLOGY**

### **Study Area**

Ondo State, with its capital in Akure was created in February 3, 1976. The state is made up of 18 local government areas and located in the Southwestern Zone of Nigeria. Lying entirely in the tropics, it is between 5°45' and 7°52'N and longitudes 4°20' and 6°5'E. Ondo State is bounded in the North by Ekiti and Kogi States; in the East by Edo State; in the West by Osun and Ogun States, and in the South by the Atlantic Ocean. The State has a land area of 14,788.723 square kilometres including the mangrove-swamp forest near the Bight of Benin, the tropical rain forest in the central part, and wooded savanna on the gentle slopes in the north. The State has a population of 3,441,024 comprising 1,761,263 males and 1,679,761 females according to the 2004 census. Having a total state GDP estimate of \$8.41 billion in 2007, the per capita GDP of the state was \$2,392 in 2007. The ethnic composition of Ondo State is largely of the Yoruba ethnic groups of the Akoko, Akure, Ikale, Ondo, Ile-Oluji/Oke-Igbo, Owo and the Ilaje and Apoi of the Ijaw extraction who are mostly located in the riverine areas of the state [10].

Agriculture constitutes the major occupation of the state. Ondo State, the leading producer of cocoa in Nigeria is involved in the cultivation of other agricultural products such as yam, oil palm, rubber, cassava amongst others. Commercial fishing is also a predominant feature of the state.



**Figure 1: Map of Nigeria and Ondo State (expanded) showing Local Government Areas**

### **Sampling Procedure**

This study was carried out in four of the 18 local government areas of the state namely, Idanre, Akure North and South Local Government Areas [10]. Thirty farmers were randomly selected from among members of the farmer associations, which focused on cocoa, arable crop and poultry farmers. A total of 90 respondents were used for the study.

Both primary and secondary data were utilized for this study. Primary data were collected through the use of well structured questionnaires administered to randomly selected farmers in the study area through personal interview. Secondary data were collected from relevant published research works, textbooks, journals and electronic sources.

Descriptive statistics such as frequency distribution, percentages and means were employed to present results of the study. Chi-square analysis was employed to test the association of selected socioeconomic characteristics and involvement of farmers in the capital market investment.

### **Gender**

Table 1 shows that majority of the respondents cutting across poultry, cocoa, and arable crop farmers, were male (86.7%) while the remaining (13.3%) were female. This shows that there are probably more men involved in the practice of agriculture than women in the study area [11].

### **Age**

Table 2 shows that only 2% of the farming population were between ages 20 and 29 years, 13.3% were between ages 30 and 39 years, 20% were between ages 40 and 49 years, 30% were between ages 50 and 59 years and 34.4% for ages 60 and above. This shows that the farming population of Ondo State cuts across various age brackets, with farmers 50 years and above constituting the larger percentage (64.4%). This further confirms the fact that an ageing farming population exists whose welfare needs to be pursued.

### **Marital Status**

Among the farming population, 96.6% were married, 1.1% were single while 2.2% were widowed.

### **Educational level**

Table 1 shows that among the farming population, 17.8% had no formal education, 4.4% had some form of Adult Education, 31.1% had Primary School Education, and 22.2% had Secondary School Education while the remaining percentage had some form of post secondary school education. Respondents with an Ordinary National Diploma (O.N.D.) or a National Certificate in Education (N.C.E.) were 15.6%, 4.4% had either a Higher National Diploma (H.N.D) or a University First Degree, and the remaining 4.4% have a post First Degree University Education. These results indicate that the level of literacy among the farmers is high (82.2%) and actually higher than



the national level of literacy, which may likely enhance their understanding of the capital market activities.

### **Farming Experience of Respondents**

Table 2 reveals that respondents who had been farming for about 1 – 5 years were 8.9% and 27.8% had been farming for 6 – 10 years. Those who had been farming for 11-15 years were 15.6% while 8.9% had been farming for 16 -20 years. The largest percentage (38.9%) had been farming for above 20 years. This shows that the larger portions of those involved in agriculture in Ondo State had been farming for quite a while and were well experienced. This is reflected in the age distribution of the farmers as the majority were above 40 years of age.

### **Farm Size**

As shown in Table 2, 35% of cocoa and arable crop farmers cultivated between 1 – 5 hectares of land, 46.7% cultivated between 6 - 10 hectares, and 16.7% cultivated land above 10 hectares. This confirms that majority of farmers were either small or medium scale farmers as categorized by Olayide for Nigerian farmers [12].

### **Stock size and stock breed**

Stock size varied for the poultry farmers. Just 10% of the poultry farmers had a stock size in excess of 3,000 birds. Those who had a stock size lesser than 500 were 56.7%, while the remaining 33.3% had a stock size ranging from 500 – 3,000 birds. It was found that 31% of the farmers raised broilers, 20.7% raised layers while the remaining 48.3% raised both broilers and layers.

### **Income**

In Table 2, farm-based income for 1.1% of the farmers ranged from less than ₦20,000, 7.8% of the farmers earned between ₦ 20,000 - ₦ 50,000, 16.7% of the farmers earned between ₦ 50,000 – ₦ 100,000 while the largest percentage (74.4%) earned above ₦ 100,000 all on an average of 3 months.

Non-farm based income for 63.2% was less than ₦ 20,000, 34.2% earned between ₦ 20,000 and ₦ 50,000, while only 2.6% earned above ₦ 100,000 on a monthly average (\$1 = ₦162).

### **Capital Markets Investment Awareness and Involvement among Respondents**

From Table 3, only 36% of farmers were aware of investment opportunities in the capital market while the remaining 64% were totally oblivious. This reveals a low level of awareness of capital market investment among the respondents, despite their older age status with regard to their farming experience.

Table 3 shows that only 8% of farmers had investments in the capital market. This shows that involvement in capital market investment among farmers is at a fairly low level. Thus, farmers are not fully maximizing the gains inherent in capital market investment. Results reveal that respondents' investment portfolio in the capital markets accrues to a mean of N273, 333.00 with a minimum of N30,000 and a

maximum of N500,000, while their savings in the cooperative societies amounted to a mean of N13,503 monthly with a minimum of N2,500 and a maximum of N40,000 (\$1 = ₦162). Respondents' cooperatives that invested in the capital market were only 1.6%. This shows that farmers' cooperatives rarely invested in the capital market.

### **Constraints identified for non-involvement in Capital Markets Investment among Respondents**

According to Table 3, 57.3% of respondents who have at least once heard of investment in the capital market, attributed lack of adequate information as being responsible for them not participating in capital market investment. This shows that there is a dearth of information regarding investment in the capital market among farmers. Other reasons were inadequate capital (26.8%) and investment in other areas (15.9%). Results show that 73.3% were members of cooperative societies and they all contributed on a monthly basis. This further corroborates the assertion that cooperative societies are the current major sources of credit for farmers [6]. This finding could, however, be useful to the capital market as whole cooperatives could invest substantial sums of money in the capital market and the dividends of such shared among members.

### **Agricultural Extension Activities in the Area of Capital Markets Investment**

Farmers indicated that information had been disseminated to them on various issues, ranging from drugs and chemicals to seeds and seedlings, fertilizers. This shows that extension officers are capable of efficiently disseminating information, ideas, innovation, to farmers when required. However, no respondent had at any time heard about investment in the capital market from the extension agents. This shows why involvement in capital markets investment is probably low among farmers. This is an indication that extension organizations, agencies, boards, and others have not developed messages in that area for dissemination to farmers. Alternative secure sources of finance for agricultural activities should, therefore, be explored by extension organizations and disseminated to farmers for patronage. More so, investment in capital market could be a form of social security in old age.

### **Test of hypothesis**

Table 4 shows the result of the chi square analysis for relationship between selected socio-economic characteristics of respondents and their involvement in capital market investment. At  $p \leq 0.05$ , age, level of education, farming experience and awareness of the respondents was found to be significantly related to their involvement in capital markets investment. Age as revealed in the study is on the high side that is above 50 years for majority which will make many to be considering the issues of retirement from active farming. This could be a reason why age is significant to involvement in the capital markets ( $\chi^2 = 10.42$ ,  $p \leq 0.05$ ). The significance of education is likely as a result of the enlightenment it brings about issues of life ( $\chi^2 = 17.41$ ,  $p \leq 0.05$ ). Thus, education exposes people to what they would otherwise have been ignorant about. It is, thus, an empowerment tool and an important factor in getting involved in certain issues like the one in question- capital markets investment. Education creates exposure and better understanding of how things work. The significance of farming

experience of respondents with the involvement in capital markets ( $\chi^2 = 19.78$ ,  $p \leq 0.05$ ) underscores the fact that the longer an individual has been involved in a particular occupation with interaction with their colleagues, the better opportunity to become knowledgeable of coping mechanisms as well as ways of doing things. Awareness of investment opportunities in the capital markets is also a significant factor to getting involved in it ( $\chi^2 = 10.14$ ,  $p \leq 0.05$ ). No one can get involved in what he or she is not aware of. Furthermore the first stage in adoption of any technology or knowledge is awareness of such a technology. It is, thus, imperative for agricultural extension services to create awareness on the capital markets if farmers will ever see the need to get involved.

## CONCLUSION AND RECOMMENDATIONS

The study has revealed that there is a generally low awareness about investment in the capital markets. Though there is a high level of involvement and investment in cooperatives, which reveals a good investment habit, there is a fairly low level of investment in the capital markets. Agricultural extension services have also not disseminated any message on capital market investment to farmers in the study area. Most farmers also indicate that lack of information on capital markets as well as inadequate finances were constraints to their involvement in the capital market. Finally, age of farmers, level of education, farming experience and awareness of capital market investment were found to significantly affect involvement of farmers in the capital markets.

It is, therefore, recommended that agricultural extension services in the study area consider involvement in the capital market as a good welfare package for farmers in their old age. They should, thus, create awareness and develop messages on it which should be disseminated to farmers. Given the age of farmers and level of education, such a message will be a welcomed idea. Government and non governmental agencies should give soft loans to cooperatives so that individual members as well as the cooperatives as a whole can acquire shares in the capital markets. Stock brokers should also be mobilized to create awareness of their activities among farmer groups and cooperative societies.

**Table 1: Distribution of Respondents According to Personal Characteristics**

<b>Variable</b>	<b>Frequency (n = 90)</b>	<b>Percentage</b>
<b>Age</b>		
Ages 20-29	2	2.2
Ages 30-39	12	13.3
Ages 40-49	18	20.0
Ages 50-59	27	30.0
Ages 60 and above	31	34.4
<b>Marital status</b>		
Married	87	96.7
Single	1	1.1
Widowed	2	2.2
<b>Level of education</b>		
No formal education	16	17.8
Adult education	4	4.4
Primary school education	28	31.1
Secondary school education	20	22.2
O.N.D./N.C.E.	14	15.6
H.N.D./B.SC.	4	4.4
M.SC./PH.D.	4	4.4

**Source: Field survey 2010**

**Table 2: Distribution of Respondents According to Agricultural Characteristics**

<b>Farming Experience</b>	<b>Frequency (n = 90)</b>	<b>%</b>
1 - 5 years	8	8.9
6 - 10 years	25	27.8
11 - 15 years	14	15.6
16 - 20 years	8	8.9
Above 20 years	35	38.9
<b>Farm Size</b>		
1 - 5 hectares	21	35.0
6 - 10 hectares	28	46.7
above 10 hectares	10	16.7
<b>Poultry Stock size</b>		
≥3000 birds	3	10.00
500-3000 birds	10	33.30
<500 birds	17	56.70
<b>Farm based income (N)</b> <b>(\$1= ₦162)</b>		
0 - 20,000	1	1.1
20,000 - 50,000	7	7.8
50,000 -100,000	15	16.7
Above 100,000	67	74.4
<b>Nonfarm based income (N)</b>		
0 - 20,000	24	63.2
20,000 - 50,000	13	34.2
50,000 -100,000	-	-
Above 100,000	-	-

**Table 3: Distribution of Respondents According to Capital Market Investment Characteristics**

<b>Variable</b>	<b>Frequency (n=90)</b>	<b>Percentage</b>
<b>Capital markets investment awareness</b>		
Those aware	32	36.0
Those unaware	58	64.0
<b>Involvement in capital markets investment</b>		
Yes	8	8.9
No	82	91.1
<b>Respondents cooperatives with investment in capital markets</b>		
Yes	1	1.11
No	89	98.89
<b>Constraints to investment in capital markets</b>		
Lack of adequate information	47	57.3
Inadequate capital	22	26.8
Investment in other channels	13	15.9

**Source: Field survey 2010**

**Table 4: Result of the Chi Square Analysis for Relationship between Selected Socio-Economic Characteristics of Respondents and Their Involvement in Capital Markets Investment**

Variable	Calculated value	X <sup>2</sup>	df	p-value	Decision
Age	10.42		4	0.03	Significant
Sex	0.01		1	0.94	Not significant
Marital status	0.31		2	0.23	Not significant
Level of Education	17.41		6	0.01	Significant
Farming experience	19.78		4	0.00	Significant
Farm size	6.23		3	0.10	Not significant
Awareness	10.14		1	0.00	Significant

**Source: Field survey 2010**

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