EFFECT OF SOCIAL CAPITAL ON PRODUCTIVITY OF CASSAVA FARMERS IN Ogun State, Nigeria

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Abstract: Nigeria is an agriculturally labor-intensive economy and the protection and utilization of the labor resource to guarantee the highest productivity are of immense vitality to the growth of the agricultural sector. This study assessed the relationship between the social capital and the productivity of cassava farmers in Ijebu North-East Local Government Area of Ogun State. A purposive sampling procedure was employed in the study. Data were collected from one hundred and thirty-nine cassava farmers by the use of a well-structured questionnaire. Data were analyzed using descriptive statistics, total factor productivity and ordinary least squares model. The mean age and household size of cassava farmers were 44.2±9.9 years and 6.0±3.1 respectively. The density of memberships in associations was 2.7±1.3. The average meeting attendance index by farmer was three out of four meetings (77.2%). The association membership was moderately diversified with a heterogeneity index of 59.2% and farmers participated in one out of four decision making processes of their associations. A monthly cash contribution of farmers to associations was low (₦132.04±₦107.67) and the trust index was 0.296. Farmers cultivated an average of 1.25 ha with total factor productivity of 0.096kg/ha.

Results show that age of the farmer, age squared (life cycle), household size, farm size, cash contribution and decision making significantly determined the productivity of cassava farmers in the study area. Social capital variables significantly influenced cassava farmers’ productivity. It is therefore suggested that policy makers interested in farmers’ production output should make active participation in local level institutions compulsory.

Key words: social capital, productivity, agricultural sector, cassava farmers, Nigeria.

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Introduction

The Nigerian agricultural sector contributes about 35% of Gross Domestic Product (GDP) of the economy and it employs over 70% of the population (Oxfam, 2007). Notwithstanding rapid levels of the rural-urban movement, poor rural inhabitants still account for about half of the Nigerian populace (ESA/UN, 2009; Akinbami and Fadare, 1997). This sector is still dominated by small-scale farmers accounting for over 90% of the total output of food crops, especially roots and tubers, for example cassava (IFAD, 2006).

Cassava (*Manihot esculenta*) is a staple food of most households in Nigeria and other developing countries. It is a critical factor in poverty alleviation and cultivation, processing and marketing of the crop provide employment opportunities for the rural and urban population. According to Nweke et al. (2002), the crop has the potential for bridging the food gap and famine rarely occurs where cassava is widely cultivated. Cassava farming is mainly practiced by small-scale farmers and their production is mainly characterized by low productivity.

A low agricultural output in Nigeria is due to an array of factors such as poor soil management practices, the adverse impact of climate change on the environment, non-availability and high cost of inputs, crude farm tools, and obsolete farming practices. The persistent welfare loss and food insecurity, as a result of the poor agricultural output, account for 70 percent of Nigerians who are food insecure (Orewa and Iyangbe, 2009). According to Akpabio (2008), small-scale farmers in Africa have remained the central focus of development efforts based on the belief that policies targeting at them will positively impact on their food production efforts and poverty reduction.

Despite efforts made by various past governments in Nigeria and aimed at improving agricultural productivity and efficiency of the rural farmers who are the major participants of agricultural production, the country is still food insecure (Simonyan, Olukosi and Omolehin, 2010). One of these efforts is Root and Tuber Expansion Program geared towards increasing root and tuber crop production. In 2002, the Presidential Initiative on Cassava Production and Export was introduced by the Nigerian government aimed at using cassava production as the engine of economic growth for the nation. Also in 2011, the Nigerian government unfolded Agricultural Transformation Agenda (ATA) with a specific goal to increase cassava production in Nigeria to 17 million metric tons from 20 million metric tons targeted for the production of staple food crops between 2011 and 2015 in the country (National Planning Commission, 2011).

The availability of production resources and use of these inputs in the right proportion are necessary to achieve increased output and productivity in Nigerian agriculture (CBN 1999; Balogun, 2011). In order to boost farmers’ productivity
and income of farmers, various past governments in Nigeria have been trying to encourage rural farmers in diverse ways to adopt modern production technologies at various levels. Nevertheless, there are some constraints impeding these efforts, for example the inability of rural farmers to secure the necessary collateral to enable access to loans from financial institutions.

Social capital has increasingly gained facets in many aspects of agricultural production and rural development in most developing countries. This has led to perceived positive costs of social capital in development and opening of opportunities to those who lack access to financial, human or natural capital (Meinzen-Dick, DiGregorio and McCarthy, 2004). Rural areas are naturally bestowed with natural capital which includes land and water coupled with adequate human capital which is acquired as a result of years of experience in cassava production and are undermined by the other types of capital such as financial and social capital. These capital resources are therefore converted into physical assets for increased production (World Bank, 2007). To meet the increasing demand of production, farmers need financial assistance but unfortunately they cannot provide collateral required by financial institutions. The farmers are therefore hindered from making any approach to these institutions for credit to improve and increase production. This has given rise to alternative measures of raising financial capital (social networks) in order to transform available natural inputs into physical products. Credit is an essential factor for input acquisition by the rural poor. Credit access and proper usage have also been identified to enhance rural household production output in Nigeria (Okunmadewa, 2001; Okoruwa and Oni, 2002; Balogun, 2011). However, the difficulties created by formal credit sources such as high interest rates and terms for such loans are always discouraging (Balogun, 2011).

Limited accessibility to credit reduces productivity and income of rural small-scale farmers. Obisesan (2013) has revealed that farmers who are members of cooperatives have easier access to credit. Thus, association membership is a synonym for social capital and therefore provides the necessary collateral security that most formal credit institutions demand. Social capital is therefore perceived as a substitute for mobilizing financial capital needed for transforming of natural resources to physical assets and can be accumulated through active participation in local level institution activities (Baron et al., 2000). It has now become pertinent to investigate the effects of social capital on the productivity of cassava farmers in Ijebu North-East Local Government Area of Ogun State, Nigeria. The specific objectives are:

1. to profile the socio-economic characteristics and social capital dimensions of cassava farmers;
2. to determine the total factor productivity of cassava farmers, and
3. to examine the determinants of the productivity of cassava farmers.
Conceptual/theoretical framework and literature review

The term ‘social capital’ refers to elements like trust, civic spirit, solidarity and readiness to associate, build and maintain communities (Putnam, 1993). Social capital, as defined by Astone and McLanahan (1991), also refers to the relationship between different family members that determines how individual members can take advantage of whatever financial and human capital other family members possess. Social capital comprises informal forms of institutions and organizations that are based on an emotional attachment to a group, networks, and associations that create shared knowledge, mutual trust, social norms, and unwritten rules (World Bank, 1998; Putnam et al., 1993; Durlauf and Fafchamps, 2005).

The hypothesized relationship between social capital and agricultural productivity is synergistic and interrelated. Social capital impacts agricultural productivity indirectly by affecting the supply of labor, both household and hired, as well as by being a source of information for households. Households process this information to make technology adoption decisions that have direct impacts on their levels of productivity. Social networks may also indirectly influence agricultural productivity by impacting farming practices and household’s propensity to adopt new technologies through social networks (Katungi, 2007; Liverpool and Winter-Nelson, 2010). The concept of social capital as an important determinant of economic development is attracting increasing attention among development economists. Social capital in every sense is one of the fundamental factors of development. No country can achieve sustainable economic expansion without substantial investment in human capital. Social capital is an informal norm that promotes cooperation between individuals. Social capital enriches people’s understanding of themselves and the world.

Social capital manifested in community-based organizations or in personalized social networks has been found to play an important role in the adoption of crop technologies (Isham, 2002; Katungi, 2007) and production output of banana farmers (Odebode and Adetunji, 2010).

Van den Broeck and Dercon (2007) have analyzed whether agricultural information flows give rise to social learning effects in banana cultivation in Nyakatoke, a small Tanzanian village, using information on socio-economic characteristics and banana farmers’ families, neighbours and informal insurance group members. The results have shown that social effects are strongly dependent on the reference group and no effects of social networks are found in distance-based groups and only kinship related groups generate the endogenous social effects that produce positive externalities in banana output.
Materials and Methods

Area of study

The study was conducted in Ijebu North-East Local Government Area (LGA) of Ogun State, Nigeria. The LGA is one of the local governments in Ogun state. This area was chosen because of a high concentration of cassava farmers. The major economic activities of the inhabitants of LGA are farming and trading.

Sampling procedure and size: The primary data employed for this study were gathered using a well-structured questionnaire. One hundred and thirty-nine cassava farmers were purposively selected. Data obtained from these farmers were based on socio-economic/demographic characteristics, local level institution activities, cassava productive activities (input and output), household consumption expenditure and income.

Analytical techniques: The tools employed included descriptive statistics, total factor productivity and regression model.

(i) Descriptive: Descriptive statistics which show the frequency, mean, standard deviation and percentage were used to profile the socio-economic characteristics of the cassava farmers.

(ii) Total factor productivity model: According to Key and McBride (2003), the total factor productivity model was adopted and used. The model was approximated by a linear relationship. The total factor productivity (TFP) was measured as the inverse of the average unit cost of production.

\[
\text{TFP} = \frac{Q}{AVC} \quad \text{or} \quad \frac{1}{AVC}
\]

\[
\text{TFP} = \frac{Q}{\sum_{i=1}^{n} P_i X_i}
\]

where \( n \) = Number of variables

\[
\text{TFP} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \ldots + \beta_{13} X_{13}
\]

where TFP = Total factor productivity (kg/ha);
\( X_1 = \) Gender of household head (male = 0, female = 1);
\( X_2 = \) Age (years);
\( X_3 = \) Age squared (years) \(^2\);
\( X_4 = \) Marital status (married = 1, otherwise = 0);
\( X_5 = \) Household size (persons);
X₆ = Farming experience (years);
X₇ = Farm size (hectares);
X₈ = Density of membership (persons);
X₉ = Heterogeneity index (%);
X₁₀ = Meeting attendance index (%);
X₁₁ = Cash contribution (₦);
X₁₂ = Decision making index (%);
X₁₃ = Trust index (%);
β₀ = Intercept;
β₁’s = Parameters to be estimated, and
µ = Error term.

The explanatory variables used in this study were drawn substantially from the works of Rahman (2007), Key and McBride (2003), Yusuf (2008) and Durojaiye et al. (2014). The selection of the variables for the total factor productivity model in this study was guided by findings in the literature (Rahman 2007; Key and McBride, 2003).

Results and Discussion

The summary statistics of some of the variables included in the regression are shown in Table 1. The results show that the mean age and household size of cassava farmers were 44.2±9.9 years and 6.0±3.1 respectively.

Table 1. Summary statistics of some variables used in the regression.

| Variable                        | Mean  | Standard deviation | Minimum | Maximum |
|---------------------------------|-------|--------------------|---------|---------|
| Age (year)                      | 44.2  | 9.92               | 25      | 72      |
| Household size                  | 6.0   | 3.05               | 1.0     | 15      |
| Years spent in school (year)    | 12.05 | 4.09               | 0       | 16      |
| Farm size (ha)                  | 1.25  | 0.56               | 0.11    | 5.0     |
| Membership density              | 2.67  | 1.33               | 1.00    | 6       |
| Heterogeneity index %           | 59.21 | 17.18              | 4.55    | 100.0   |
| Meeting attendance index %     | 77.23 | 25.06              | 25.06   | 100.0   |
| Cash contribution (naira)       | 132.04| 107.67             | 10.00   | 1000    |
| Decision making index %         | 31.75 | 16.95              | 11.11   | 70.11   |
| Trust index                     | 0.296 | 0.187              | 0.00    | 1.0     |

Farmers cultivated an average of 1.25 ha. The density of memberships in associations was 2.7±1.3. The average meeting attendance index by farmer was three out of four meetings (77.2%). The membership of the association was highly
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The socio-economic characteristics and social capital dimensions of cassava farmers are presented in Table 2. The results show that female farmers had the higher heterogeneity index of 60.2%, that is, they were more diversified in the associations they belonged to. Male cassava farmers had a slightly higher average value of meeting attendance in their association meetings in their local association than their female counterparts. The results show that farmers mostly attended two-thirds of their association scheduled meetings because of benefits and opportunities there.

Table 2. Socio-economic characteristics and social capital dimensions of cassava farmers.

|                        | Heterogeneity index % | Meeting attendance index % | Cash contribution (Naira) | Decision making index % | Trust index % | Membership density | Social capital |
|------------------------|-----------------------|-----------------------------|---------------------------|-------------------------|---------------|-------------------|---------------|
| Gender                 |                       |                             |                           |                         |               |                   |               |
| Male                   | 56.5(17.7)            | 77.3(24.5)                  | 137.9(75.8)               | 34.2(10.9)              | 0.297(0.143)  | 2.9(1.5)          | 57.3(34.9)    |
| Female                 | 60.2(16.9)            | 77.2(23.4)                  | 124.9(80.1)               | 30.8(13.3)              | 0.296(0.134)  | 2.6(1.1)          | 50.7(37.3)    |
| Age (year)             |                       |                             |                           |                         |               |                   |               |
| Less than 30           | 64.8(3.9)             | 53.0(11.0)                  | 156.3(65.6)               | 25.0(20.8)              | 0.35(0.15)    | 1.5(0.5)          | 31.1(32.9)    |
| 30–40                  | 56.3(13.9)            | 80.2(23.8)                  | 137.4(93.7)               | 30.4(8.8)               | 0.27(0.13)    | 3.0(1.1)          | 51.9(29.2)    |
| 41–50                  | 59.4(12.3)            | 76.7(21.6)                  | 140.0(67.7)               | 30.7(13.3)              | 0.31(0.16)    | 2.5(1.2)          | 40.1(35.3)    |
| More than 50           | 62.4(13.3)            | 76.7(21.9)                  | 110(68.8)                 | 35.9(16.7)              | 0.32(0.12)    | 2.5(0.9)          | 62.1(43.3)    |
| Education level        |                       |                             |                           |                         |               |                   |               |
| No formal              | 60.6(11.4)            | 67.6(32.4)                  | 121.1(73.2)               | 23.3(16.7)              | 0.30(0.04)    | 2.8(1.3)          | 54.3(37.6)    |
| Primary                | 55.6(19.1)            | 80.6(42.9)                  | 121.8(71.1)               | 27.8(8.1)               | 0.23(0.09)    | 3.1(1.1)          | 49.9(29.9)    |
| Secondary              | 59.4(10.6)            | 69.1(22.0)                  | 132.6(73.7)               | 30.3(17.4)              | 0.33(0.16)    | 2.3(0.9)          | 47.1(39.6)    |
| Tertiary               | 59.7(12.4)            | 82.7(19.8)                  | 360.0(32.0)               | 34.1(10.4)              | 0.29(0.15)    | 2.8(1.3)          | 57.1(34.6)    |
| Marital status         |                       |                             |                           |                         |               |                   |               |
| Married                | 66.5(9.9)             | 80.9(24.4)                  | 136.3(80.6)               | 32.5(13.1)              | 0.29(0.14)    | 2.8(1.1)          | 54.6(37.2)    |
| Otherwise              | 58.1(13.3)            | 76.7(22.4)                  | 105.0(60.0)               | 26.9(8.8)               | 0.29(0.19)    | 2.1(2.1)          | 38.5(21.9)    |

Source: Field survey (2014). Figures in parentheses are standard deviations.

The commitment of male farmers over the female counterparts in their associations is reflected in slightly higher cash contributions and involvement in decision making regarding association matters. The results also show that male cassava farmers had some level of trust than female farmers; however, male farmers had the higher density of membership in associations. Table 2 also shows...
that cassava farmers aged less than 30 years and more than 50 years had high percentages of diversity in their social institutions with values of 64.8% and 62.4% respectively. This could be due to the fact that some of the farmers were young and not mature enough to take some decisions or too old and already experiencing weakness or reduction in active farming activities. The results related to meeting attendance reveal that members of all age categories with the exception of those aged less than 30 years attended three out of four scheduled meetings of their various associations. However, the highest representation of 80.2% for meeting attendance was recorded for the group of members aged 30–40 years. The highest cash contribution (₦156.30) was recorded for the group of farmers aged under 30 years while the least, ₦110.0, was contributed by farmers aged above 50 years. The reason could be attributed to a reduction in income as age increases or to a reduction in their income generating activities due to health reasons. These results support the findings reported by Adepoju and Oni (2012) that cash contribution to association by household’s head declines as age increases. The majority (35.9%) of the farmers aged above 50 years participated in decision making in their associations, while those aged under 30 years participated least (25%). The results reveal that all the age groups participated in less than half of decision making processes in their various associations. The result shows that the highest level of trust was observed in the group of farmers aged less than 30 years and the lowest level was recorded in the group of members aged 30–40 years. Table 2 reveals that the 30–40 age group accounted for the density of membership (3 members) in local level institutions, followed by farmers aged 41–50 years and above 50 years. Those aged under 30 years had the lowest membership density. The overall social capital dimensions show that most cassava farmers (62.1%) were within the age group of 50 years and above and had the highest aggregate social capital. The results indicate that the farmers with no formal education were the most diversified with 60.0% while the least diversified were those with primary education. These results are in line with the findings of Adepoju and Oni (2012) that uneducated households are more diversified than educated ones. Meeting attendance across the educational categories shows that all the farmers had at least 67% meeting attendance. The quest to augment their earnings from other sources might have made attending meetings impossible for them. However, cassava farmers who received tertiary education had the highest value of contribution with an average of ₦360.0 as their monthly contribution to their various associations. Farmers with no formal education accounted for the least cash contribution with ₦121.10 as a cash contribution to their associations. This can be attributed to the fact that these people belong to the least paid group, which will likely reflect in their contribution capability to the local level institution. The results reveal that all the educational level categories claimed to partake in a decision making process in their various associations. Farmers with no formal education had the least average value in the
decision making processes in their associations. It is observed that as an individual farmer became more educated, the extent of involvement in the decision making process in the associations he/she belonged to increased. The highest social values of more than 50% were observed for farmers educated to tertiary level and farmers with no formal education while the values for those with secondary and primary education were lower. Married farmers were more diversified in their respective association than single, divorced or separated farmers. The results show that they had higher values for meeting attendance (80.9%) and contributed more to their local associations in terms of cash (₦136.30) than their single counterparts. The implication is that they would be more committed and would always be ready to do anything to protect their investments in their association. Married cassava farmers contributed more to their local associations in terms of cash (₦136.30) than their single counterparts because their wives were always there for processing and marketing operations required for the output. However, as for decision making, married farmers participated slightly more than single farmers in the decision making process in their association. Regarding their marital status, members trusted one another and membership density was slightly higher in the households of married farmers than in the households of single, divorced or separated farmers. The result reveals that the level of trust in married and single cassava farmers was the same. In all, the married farmers had a higher aggregate social capital than the single in the study area.

The average variable cost and the average quantity of output are depicted in Table 3. The total factor productivity was calculated by dividing average output of cassava produced by farmers by the average variable cost. The results show that the average output of cassava farmers was 15,285.71kg while the average variable cost in naira was ₦158,500.

Table 3. The average variable cost and the average output of cassava farmers.

| Variable input                      | Average quantity | Price/Unit | Total amount (₦) |
|------------------------------------|------------------|------------|------------------|
| Planting materials                 | 100 bundles      | ₦250       | ₦25000           |
| Total labor used                   | 130 man-days     | ₦850       | ₦110,500         |
| Quantity of herbicide              | 10 liters        | ₦800       | ₦8000            |
| Quantity of organic fertilizer     | 2 bags/kg        | ₦7,500     | ₦15,000          |
| Total cost                         |                  |            | ₦158,500         |
| Quantity of cassava harvested      | 15,285.71kg      | ₦28.0      | ₦427,999.88      |
| Total factor productivity          |                  |            | 0.096kg/₦        |

Source: Field survey 2015.

The results suggest that for every ₦1 incurred in the cassava production there was approximately 0.096kg of cassava produced.
The results of the determinants of the productivity of cassava farmers are presented in Table 4. The results show that age of the farmer, age squared (life cycle), household size, farm size, cash contribution and decision making significantly determined the productivity of cassava farmers in the study area. The results show that a unit increase in cassava farmer’s age increased his/her productivity by 0.448 unit. Age had a quadratic relationship with respect to productivity and it was positive for age and negative for age squared. These results imply that as a cassava farmer advanced in age, his/her productivity decreased. The relationship between the age of a cassava farmer and his/her productivity suggests that the older the farmers, the lower the productivity. An additional age to a farmer decreased his/her productivity by 0.517 unit. Therefore, as a farmer grows older the ability to do rigorous farming activities decreases and negatively affects his/her production output. On the other hand, household size was positive and significantly affected farmer’s productivity. A 100% increase in the variable increased production output by 12.9%.

Table 4. Determinants of productivity of cassava farmers.

| Determinant                  | Coefficients | Standard error | T value | (P-value) |
|------------------------------|--------------|----------------|---------|-----------|
| Constant                     | 9.01892**    | 4.953384       | 1.82    | 0.071     |
| Gender                       | 0.660565     | 0.5029001      | 1.31    | 0.191     |
| Age                          | 0.447859**   | 0.2026791      | 2.21    | 0.027     |
| Age squared                  | -0.516553*   | 0.2804118      | -1.84   | 0.065     |
| Marital status               | -0.1959962   | 0.4165314      | -0.47   | 0.639     |
| Household size               | 0.129611*    | 0.0776058      | 1.67    | 0.097     |
| Farming experience           | 0.02003      | 0.0493321      | 0.41    | 0.685     |
| Farm size                    | 0.13274***   | 0.0426845      | 3.11    | 0.007     |
| Density of membership        | 0.3028322    | 0.1945991      | 1.56    | 0.122     |
| Heterogeneity index          | 0.0033015    | 0.0133989      | 0.25    | 0.806     |
| Meeting attendance index     | 0.0034193    | 0.01014        | 0.33    | 0.745     |
| Cash contribution            | 0.00449**    | 0.0022098      | 2.03    | 0.044     |
| Trust index                  | 0.8024189    | 1.339908       | 0.60    | 0.550     |
| Decision making index        | 0.5803**     | 0.2291795      | 2.53    | 0.013     |

R²= 0.2964
Adj R²= 0.2238
F-value= 4.08
Prob> F= 0.0000

NB: *Significant at the 10% level, **Significant at the 5% level, ***Significant at the 1% level. Source: Field survey, 2014.

The positive relationship between household size and total factor productivity suggests that a household with a larger family size tended to have higher productivity than those with a small household; this can be related to the amount of
family labor available for farming. The results agree with Atagher (2013) that a large family size leads to an output increase if the members help in the farm. The results indicate that farm size was positive and significantly related to farm productivity. The results further show that a hectare increase in cassava farm increased productivity by 0.133 unit. This is because in a large farm, there are greater opportunities to use modernized tools and skilled laborers that invariably will increase productivity of the farmer. The results indicate there was a positive relationship between a cash contribution of farmers in their local associations and productivity. It therefore suggests that donations, levies, fees and other contributions paid by households in their local institutions went a long way in accessing loans for production and consumption purposes and thereby resulted in increased farm productivity. The results agree with Ajani and Tijani (2009) and Balogun and Yusuf (2011) that a cash contribution to association is presumably a sign of greater interest in the association and serves as a collateral effect for farmers demanding credit from formal credit institutions. However, participation in decision making of the farmers in their various associations reveals that farmers participating in all their association decision making processes increased productivity by 58.0%. This is an indication that farmers who participated actively in decision making in their local level institutions were better positioned to enjoy the benefits coming to their association concerning how to run the farm efficiently.

**Conclusion**

The study focuses on the effect of social capital on the productivity of cassava farmers in Ijebu North-East Local Government Area of Ogun State, Nigeria. The study reveals that the average age of a cassava farmer in the area was 44.2 years. Household size was 6 members. The results have shown that most cassava farmers had large family sizes. However, farmers in the study area cultivated an average area of 1.25 ha. This study further reveals that the average total factor productivity of the cassava farmers in the study area was 0.096kg/N. The study further shows that socio-economic, farm specific and social capital variables (age, age squared, household size, meeting attendance, farm size, cash contribution, decision making index) significantly influenced cassava farmers’ productivity. The results of this study have revealed that there was a need for more investment in social networks in order to improve productivity of farmers and boost cassava production. Based on the findings of this study, the following recommendations have been made to improve cassava farmers’ productivity in Ogun State. It is therefore suggested that policy makers interested in improving the living conditions of farmers and their production output should encourage them to increase their participation in their association activities. Farmers should be encouraged to join associations to be able to benefit from programs and training targeted at improving food production in the country.
References

Adepoju, A.A., & Oni, O.A. (2012). Investigating endogeneity effects of social capital on household welfare in Nigeria: A control function approach. *Quarterly Journal of International Agriculture, 51*(1), 73-96.

Ajani, O.I.Y., & Tijani, G.A. (2009). The role of social capital in access to micro credit in Ekiti Nigeria. *Pakistan Journal of Social Sciences, 6*(3), 123-132.

Akinbami, J., & Fadare, S. (1997). Strategies for sustainable urban and transport development in Nigeria. *Transport Policy, 4*, 237-245.

Akpabio, I.A. (2008). Significant predictors of social capital in farmers organisations in Akwa Ibom, Nigeria. *Journal of International Social Research, 1*(3), 61-70.

Astone, N., & Mclanahan, S. (1991). Family structure, parental practices and high school completion. *American Sociological Review, 56*, 309-320.

Atagher, M.M. (2013). *Effects of the Benue ADP’s cassava production technologies on the productivity and incomes of women farmers in Benue State, Nigeria*. PhD Thesis, University of Nigeria, Nsukka, Nigeria.

Balogun, O.L. (2011). *Influence of social capital and micro-credit on household poverty in south-west, Nigeria*. PhD Thesis, University of Ibadan.

Balogun, O.L., & Yusuf, S.A. (2011). Determinants of demand for microcredit among the rural households in south-western states, Nigeria. *Journal of Agriculture and Social Sciences, 7*(2), 41-48.

Baron, S., Field, J. & Schuller, T. (2000). Social capital critical perspectives. Oxford University Press Central Bank of Nigeria. (1999). Poverty alleviation in Nigeria 1999, *Bulletin Vol. 23, No. 4 Oct./Dec.*

Durlauf, S.N., & Fafchamps, M. (2004). “Social capital”. NBER Working paper series no 10485. National Bureau of Economic Research Retrieved 02-02-15 http://www.nber.org/papers/w10485

Durojaiye, A.M., Yusuf, S.A. & Balogun, O.L. (2014). Determinants of demand for microcredit among grain traders in southwestern states, Nigeria, *IOSR. Journal of Agriculture & Veterinary Science, 7*(11), 01-09.

ESA/UN (Population Division of the Department of Economic and Social Affairs Of The United Nations Secretariat). (2009). *World Urbanization Prospects: The 2009 Revision* Retrieved 05-02-15 http://Esa.Un.Org/Wup2009/Unup/

International Fund for Agricultural Development (IFAD) (2006). *Rural poverty report 2001: the challenge of ending rural poverty*. Oxford University Press Inc., New York.

Isham, J. (2002). The effect of social capital on fertilizer adoption: evidence from rural Tanzania. *Journal of African Economics, 11*(1), 39-60.

Katungi, E.M. (2007). Social capital and technology adoption on small farms: the case of banana production technology in Uganda. Ph.D Thesis, University of Pretoria, South Africa.

Key, N., & Mcbride, W. (2003). Production Contracts and Productivity in the U.S. Hog Sector. *American Journal of Agricultural Economics, 85*(1), 121-133.

Liverpool, S.L.O. & Winter-Nelson, A. (2010). Poverty status and the impact of social networks on smallholder technology adoption in rural Ethiopia. *IFPRI Discussion Paper 970*. Washington, D.C. IFPRI.

Meinzen-Dick, R., Di Gregorio, M. & McCarthy, N. (2004). Methods for studying collectiveaction in rural development. *Agricultural Systems, 82*(3), 197-214.

National Planning Commission (NPC) (2011). The transformation agenda: key priority policies, programmes and projects of the Federal Government of Nigeria (2011-2015). Volume I. Retrieved 12/01/13www.npc.gov.ng/...the transformationagendafinal1.do. 30-10-2012.
Effect of social capital on productivity of cassava farmers in Ogun State, Nigeria

Nweke, F.L., Spencer, D.S.C. & Lynam, J.K. (2002). The cassava transformation. Michigan State University Press, Michigan.

Obisesan, A.A. (2013). Credit accessibility and poverty among smallholder cassava farming households in south-west, Nigeria. *Greener Journal of Agricultural Sciences, 3* (2), 120-127.

Odebode, S.O. & Adetunji, T.A. (2010). Social capital and banana/plantain production for income generation in Osun state: Rural dwellers experience. *Journal of Agricultural Extension, 14* (2), 138-150.

Okoruwa, V.O. & Oni, O.A. (2002). Agricultural inputs and farmers’ welfare in Nigeria. In F Okunmadewa (Eds), *Poverty reduction and the Nigeria agricultural sector*, pp 7-16 Elshaddai Global Ventures Ltd, Ibadan.

Okunmadewa, F.Y. (2001). Poverty Reduction in Nigeria: A four-point demand. An annual lecture of the House, University of Ibadan. Ibadan.

Orewa, S.I. & Iyangbe, C.O. (2009). Household food insecurity in Nigeria: An assessment of the present status of Protein – Energy malnutrition among rural and low-income urban households. *Journal of Applied Sciences Research, 5* (10), 1615-1621.

Oxfam (2007). Nigeria strategic plan for 2007-2010 Oxfam Novib 2007 Edition pp3 Putman, R. (1993): The prosperous community: social capital and public life - *The American Prospect*, No. 13w.

Putnam, R., With, Leonardi, R. & Nanetti, R. (1993). *Making democracy work: civic traditions in modern Italy*. Princeton: Princeton University Press.

Rahman, S. (2007). Regional productivity and convergence in Bangladesh agriculture. *The Journal of Developing Areas, 41* (1), 221-236.

Simonyan, J.B., Olukosi, J.O. & Omolehin, R.A. (2010). Socio-economic determinants of farmers’ participation in Fadama II project in Kaduna State, Nigeria. *Journal of Food Fibre Production, 3* (1), 592-593.

Van den Broeck, K. & Dercon, S. (2007). Social interactions in growing bananas: Evidence from a Tanzanian village *Discussion Papers 07-08*, University of Copenhagen.

World Bank (2007). *World Development Report 2008*: Agriculture and Development, the World Bank. Washington D.C.

World Bank (2008). Gender in Agriculture Sourcebook. Washington, DC: World Bank.

Yusuf, S.A. (2008). Social capital and household welfare in Kwara State, Nigeria. *Journal of Human Ecology, 23* (3), 219-229.

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UTICAJ SOCIJALNOG KAPITALA NA PRODUKTIVNOST PROIZVOĐAČA MANIOKE U DRŽAVI OGIN, NIGERIJA

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Rezime

Nigerija je poljoprivredno radno-intenzivna privreda, te zaštita i korišćenje resursa rada koji garantuju najvišu produktivnost su od vitalnog značaja za rast poljoprivrednog sektora. Ovim istraživanjem je procenjivan odnos između socijalnog kapitala i produktivnosti poljoprivrednih proizvođača manioke u severoistočnoj oblasti lokalne uprave Ijebu u državi Ogin. U istraživanju je korišćen ciljani postupak uzorkovanja. Podaci su prikupljeni od sto trideset i devet poljoprivrednih proizvođača manioke uz pomoć dobro strukturiranog upitnika. Podaci su analizirani korišćenjem deskriptivne statistike, ukupne faktorske produktivnosti i običnog modela najmanjih kvadrata. Prosečna starost i veličina domaćinstava poljoprivrednih proizvođača manioke bili su 44,2±9,9 godina odnosno 6,0±3,1. Gustina stanovanja u udruženjima iznosila je 2,7±1,3. Prosečan indeks prisutnosti sastancima po poljoprivrednom proizvođaču bio je tri od četiri sastanka (77,2%). Članstvo u udruženju bilo je mereno diversifikovano sa indeksom heterogenosti od 59,2%, a poljoprivredni proizvođači su učestvovali u jednom od četiri procesa odlučivanja svojih udruženja. Mesečni gotovinski doprinos poljoprivrednih proizvođača udruženjima bio je nizak (N=132,04±N=107,67), a indeks poverenja iznosio je 0,296. Poljoprivredni proizvođači su obrađivali u proseku 1,25 ha sa ukupnom faktorskom produktivnošću od 0,096kg/N. Rezultati pokazuju da starost poljoprivrednog proizvođača, kvadrat godina starosti (životni ciklus), veličina domaćinstva, veličina gazdinstva, gotovinski doprinos i odlučivanje značajno određuju produktivnost poljoprivrednih proizvođača u ispitivanoj oblasti. Promenljive socijalnog kapitala značajno su uticale na produktivnost poljoprivrednih proizvođača manioke. Stoga se predlaže da bi kreatori politike zainteresovali za proizvodnju poljoprivrednih proizvođača trebalo da aktivno učestvovanje u radu institucija lokalnog nivoa učine obaveznim.

Ključne reči: socijalni kapital, produktivnost, poljoprivredni sektor, poljoprivredni proizvođači manioke, Nigerija.

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