Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development
Vol. 14, Issue 3, 2014
PRINT ISSN 2284-7995, E-ISSN 2285-3952

INFLUENCE OF COMMERCIALIZATION ON FOOD SECURITY STATUS OF CASSAVA PRODUCING HOUSEHOLDS IN ABIA STATE, NIGERIA

Chibuzor NWACHUKWU[1], Chima EZEH[1], Ifeanyi NWACHUKWU[2]

[1]Abia State University, Dept of Agricultural Economics & Extension, Umuahia Campus, Abia State, P.M.B. 7010 Umuahia, Abia State, Nigeria, Phone: 2348038832435/2348064217385; Email: cnnwachukwu82@gmail.com/chimaezeh@yahoo.com
[2]Michael Okpara University of Agriculture, Dept of Agribusiness & Management, Umudike, P.M.B. 7267 Umuahia, Abia State, Nigeria, Phone: 2348034744517, Email: ifnwachukwu@yahoo.com

Corresponding author: ifnwachukwu@yahoo.com

Abstract

The study examined the influence of commercialization on food security status of cassava producing households in Abia State, Nigeria. It specifically assessed the current level of commercialization among the households and estimated the food security status of the households operating at different levels of commercialization. The study employed multistage sampling technique in the selection of location and respondents from whom data and information were elicited using pretested and structured questionnaire. In the course of data analysis, descriptive statistics, household commercialization index and food security index were used. The current level of commercialization revealed that a typical cassava producing household sold on the average 51 percent of its output with total sales ranging from 5.60% to 90.00%, implying that the most commercialized cassava producing household sold 90.00% of the gross value of its total cassava production. More so, the food security status of the households at different levels of commercialization depicted that households operating at a low level of commercialization were few and there was a slight disparity between the proportion of those that were food secure and those that were food insecure while the majority seemed to operate at a medium level with more of the people attaining food security. On the overall, the proportion of households that were food insecure is more than those that were food secure as indicated by the food insecurity incidence. On the basis of the findings, the study recommended that government and other stakeholders should shoulder the responsibility of developing new initiatives that will transform the smallholders from subsistence oriented to market – oriented production system among others.

Key words: *agricultural commercialization, cassava, food security, smallholder*

INTRODUCTION

Commercial transformation of subsistence agriculture is an indispensable pathway towards economic growth and development for many agriculture dependent developing countries [21]. Sustainable household food security and welfare also requires commercial transformation of subsistence agriculture. This is likely to result in welfare gains through the realization of comparative advantages, economies of scale, and from dynamic technological, organizational and institutional change effects that arise from the flow of ideas due to exchange-based interactions. This enhances the links between the input and output sides of agricultural markets [9].

Commercialization entails market orientation (agricultural production destined for market based on market signals) and market participation (produce offered for sale and use of purchased inputs) [17]. However, the literature on commercialization of smallholders makes little distinction between market orientation and market participation of smallholders [11].

Increasing per capita food production and raising rural incomes are arguably the greatest challenges facing Sub-Saharan Africa and the developing world more generally. The history of economic development in other regions of the world indicates that agricultural productivity growth has been the major source of sustained improvements in rural welfare [20]. The argument that productivity growth and food security in smallholder agriculture

will require a more commercialized orientation implies that policy must be designed to encourage a transformation out of the semi-subsistence, low-input, low-productivity agriculture that characterizes much of rural Nigeria.

Due to the usual thought of commercialization as large scale, economists usually tend to ignore the fact that even the small farmers and poor farm households participate in the market either because they produce a little surplus or sell to earn cash income to meet other family necessities. Further clarification of commercialization can be observed in the desperation among some of the poor households who sell their crops even before it is being harvested (distress sales). This is particularly the case when food is being sold and then the households are forced to buy back the same (or indeed a greater) quantity of food later in the year when the price is much higher [4].

As convincing as the scenario may seem coupled with the participation of smallholders in commercialization of subsistence agricultural economy, more than 800 million people throughout the world and particularly in developing countries do not still have enough food to meet their basic nutritional needs. Constraints on access to food and continuing inadequacy of household and national incomes to purchase food, instability of supply and demand, as well as natural and man-made disasters have been held culprit. This creates a nutritional gap which leaves the individual, state or nation insecure [16].

As part of the efforts to bridge the widening nutritional gap and its concomitant food insecurity in Nigeria, government has tried several agricultural programmes and projects and while some of the efforts are still on course, many have since gone moribund [13]. The intervention in root and tuber crops particularly in cassava in the form of Presidential Initiative and Strategic Plan for the Development of the cassava Industry in 2003 and 2006 respectively is significant in the fight against food insecurity. This is because Nigeria has comparative advantage in the production of cassava and has remained its leading global producer since 2006 [6, 19].

Today, cassava ranks highly as a major staple food particularly for the low income earners and resource poor farmers in the developing economies of Sub- Saharan Africa. It serves over 200 million Africans, second only to maize in its calories contribution and a large population of Nigerians depends on a daily basis on it as their main dish. Therefore, its comparative production advantage over other staples serves to encourage its cultivation even, by the resource poor farmers who are greater in number [7, 14, 2].

The current reality shows that commercialization of smallholder farming is not yet high enough to enable farmers benefit from increased income and the farmers are not yet out of the subsistence-oriented agriculture [12]. Market imperfections and high transaction costs have hindered smallholder farmers from exploiting the welfare outcomes of commercialization. Thus, it is not possible for the smallholder farmers to integrate with the market and enjoy the benefits of commercialization unless the already existing hurdles are removed and better environment is created [3].

In fact nowadays, 75 percent of the poor in developing countries live in rural areas, so strengthening the agricultural sector means not only improving access to nutritious food, but also the necessity of creating a sustainable environment for enhancing food security and economic development. The majority of small farmers experience difficulties in food production with heavy post-harvest losses; moreover smallholder farmers suffer from weak connections to national and international markets and fail to add value to their agricultural production. They have insufficient water supplies and lack access to technology, due to inadequate investments and depletion of natural resources. All these factors negatively affect their incomes, causing food insecurity for their families [8].

On the basis of the foregoing, this study is articulated to examine the influence of commercialization on the food security status of Cassava producing Households in Abia State, Nigeria with specific focus on (i) assess the current level of commercialization among

cassava producing households; (ii) estimate the food security status of the households operating at different levels of commercialization.

MATERIALS AND METHODS

The study was conducted in Abia state and is located within the southeastern Nigeria which lies between longitudes 04^0 45' and 06^0 07' E and Latitudes 07^0 00' and 08^0 10' N. Households employed for the study were selected using multistage sampling technique drawn from the local governments within the agricultural zones. The sample size was 120. The survey instrument was well structured and pre-tested questionnaire administered to elicit data and information from the selected households. Data were analyzed using commercialization index, food security index and descriptive statistics. The indices are specified as follows:

$$\text{Commercialization Index} = \frac{\text{Value of crop sold}}{\text{Total value of crop produced}} x \frac{100}{1} \ldots(1)$$

This is in line with previous studies who employed the index [10, 20].

Fi = Per capita food expenditure for the i^{th} household/ 2/3 mean per capita food expenditure of all households……..(2)

Where Fi= food security index

When Fi ≥ 1= food secure i^{th} household

Fi ≤1= food insecure i^{th} household.

A food secure household is therefore that whose per capita monthly food expenditure fall above or is equal to two-third of the mean per capita food expenditure. On the other hand, a food insecure household is that whose per capita food expenditure falls below two-third of the mean monthly per capita food expenditure [15, 1].

RESULTS AND DISCUSSIONS

Assessment of the current level of commercialization

The assessment of the current level of commercialization among the households using the commercialization index showed in Table 1 that a typical cassava producing household sold on the average about 51 percent of its output with total sales ranging from 5.60% to 90.00%.

Table 1.Current level of commercialization among the households

Degree of Commercialization	Frequency
Low (1 – 25% of output sold)	8
Medium (26 – 50% of output sold)	70
High (51 – 100% of output sold)	42
Mean Commercialization Index	51.48
Minimum Commercialization Index	5.60
Maximum Commercialization Index	90.00

Source: Field Survey, 2013

The implication is that the most commercialized cassava producing household sold 90.00% of the gross value of its total cassava production. This level of commercialization can be compared to the national average of 33 – 36% in Ethiopia [18]. However, this commercialization level can be adjudged low given the fact that Nigeria remains the largest producer of cassava and Abia state belongs to the South east zone that contributes about 20% to the national basket. The Nigerian Cassava belt is composed of the North Central Zone (Benue, Nasarawa, Plateau, Niger, Kogi, Taraba and kwara States) which produces the largest quantity (about 29%) followed by the South South States (24%), South east (20%), South west (20%) while North east and North west contributed 7% [5].

Food Security Status of the households at different levels of commercialization

In ascertaining the food security status of the households at different levels of commercialization, simple descriptive statistics and food security index were employed (Table 2).

From the result, households operating at a low level of commercialization are few and there is a slight disparity between the proportion of those that are food secure and those that are food insecure.

Table 2.Estimates of food security status at different levels of commercialization

Level of Commercialization	Food secure		Food insecure	
	Freq	%	Freq	%
Low (1 – 25%)	3	6.12	5	7.04
Medium (26 – 50%)	32	65.31	38	53.52
High (51 – 100%)	14	28.57	28	39.44
Total	49	100.00	71	100.00
Food insecurity incidence	0.59			

Source: Field Survey, 2013

Those that are food insecure are more in number. However, majority (65.31% for food secure; 53.52% for food insecure) of the households seem to operate at a medium level with more of the people attaining food security. Also, at high commercialization level, the scenario is no different from that of those operating at a low level of commercialization. On the overall, the proportion of households that are food insecure is more than those that are food secure as indicated by the food insecurity incidence. This is comparable to the food insecurity incidence of 0.49 for Lagos Urban households [15]. Although households who are food secure tend to be more commercialized, this result does not wholly support the assertion because the proportion of both food secure and food insecure households increased with increasing level of commercialization of cassava [6]. This could be attributable to the farming system in Nigeria where mixed cropping and farming are dominant. The attainment of food security may not be tied to a particular enterprise in a mixed cropping and farming operational milieu.

CONCLUSIONS

Having examined the effect of commercialization on food security status of cassava producing households in Abia State, the need to re-orientate farmers has become imperative if the transformation agenda is anticipated to see the light of reality. As shown by the results, the current level of commercialization revealed that a typical cassava producing household sold on the average 51 percent of its output with total sales ranging from 5.60% to 90.00%. the food security status of the households at different levels of commercialization depicted that households operating at a low level of commercialization were few and there was a slight disparity between the proportion of those that were food secure and those that were food insecure while the majority seemed to operate at a medium level with more of the people attaining food security. It is therefore necessary to use incentives to attract people especially young entrepreneurs to the promotion of commercial cassava production. Programmes such as CAD (Commercial Agriculture Development) assisted by the World Bank should be encouraged. This is one laudable effort that will make the transformation agenda and diversification of the economy a tangible reality. The need to formulate new agricultural policies (input subsidy, market access policy etc) to promote commercialization of cassava which Nigeria has huge comparative advantage in as well as assist producing households and communities in attaining food security has become imperative.

ACKNOWLEDGMENTS

The authors are grateful to Prof. C.U. Nwajiuba for his comments and contributions.

REFERENCES

[1]Arene, C.J., Anyaeji, B.C., 2010, Determinants of Food Security among Households in Metropolis of Enugu, Nigeria, Pakistan Journal of Social Sciences, 30(1): 9 – 16.
[2]Bamidele, F. S., Babatunde, R.O., Rasheed, A., 2008, Productivity Analysis of Cassava-Based Production Systems in the Guinea Savannah: Case Study of Kwara State, Nigeria. American-Eurasian Journal of Scientific Research, 3(1): 33-39
[3]Bernard, T., Eleni, G., Alemayehu, S.T., 2007, Smallholder's Commercialization through Cooperatives: A Diagnostic for Ethiopia, IFPRI

Discussion Paper No. 00722.
[4]Borbala, B., 2004, Determinants of Commercialization of the Individual Farms in Romania,Conference on International Agricultural Research for Development, Deutscher Tropentag Berlin, October 5 – 7
[5]Cassava Master Plan, 2006, A strategic Action Plan for the development of the Nigerian Cassava industry, Prepared by The United Nations Industrial Development Organization In Cooperation With The Ministry of Trade and Industry and The Presidential Initiative on Cassava.
[6]Chirwa, E.W., Matita, M., 2012, From Subsistence to Smallholder Commercial farming in Malawi: A Case of NASFAM Commercialization Initiatives, Future Agricultures, Working Paper 037.
[7]FAO, 2000, The State of Food and Agriculture, Food and Agriculture Organization of the United Nations, Rome, Italy.
[8]FAO, 2013, Food Security through Commercialization of Agriculture (FSCA) Strategy. FAO/Italy Cooperative Programme. A Publication of Food and Agriculture Organization of the United Nations.
[9]Gebremedhin, B., Moti, J., 2010, Commercialization of Smallholders: Is Market Participation Enough? Contributed Paper Presented at the Joint 3rd African Association of Agricultural Economists (AAAE) and 48th Agricultural Economists Association of South Africa (AEASA) Conference, Cape Town, South Africa, September 19 -23.
[10]Govereh, J., Jayne, T.S., Nyoro, J., 1999, *Smallholder Commercialization Interlinked Markets and Food Crop Productivity: Cross Country Evidence in Eastern and Southern Africa*, the Department of Agricultural Economics and the Department of Economics, Michigan State University, June 1999. Available on:www.aec.msu.edu/fs2/ag_transformation/atw_govereh.PDF, [Accessed on 20.09.12]
[11]Jaleta, M., Gebremedhin, B., Hoekstra, D., 2009, *Smallholder Commercialization :Processes, Determinants and Impact*. Discussion Paper No. 18. Improving Productivity and Market Success (IPMS) of Ethiopian Farmers Project, ILKRI, Nairobi, Kenya. 55pp.
[12]Mahelet, G.F., 2007, Factors Affecting Commercialization of Smallholder Farmers in Ethiopia: The Case of North Omo Zone, SNNP Region. Paper Presented at the Fifth International Conference on the Ethiopia Economy.
[13]Nwachukwu, I.N., Ezeh, C.I., 2007, Impact of Selected Rural Development Programmes on Poverty Alleviation in Ikwuano LGA of Abia State, Nigeria. African Journal of Food, Agriculture, Nutrition and Development. 7(5): 1 – 17.
[14]Nweke F., Haggblade, S., Zulu, B., 2004, Building on Successes In African Agriculture: Recent Growth in African Cassava. International Food Policy Research Institute, www.ifpri.org
[15]Omonona, B.T., Agoi, G.A., 2007, An Analysis of Food Security Situation among Nigerian Urban Households: Evidence from Lagos State, Nigeria, Journal of Central European Agriculture, 8(3): 397 – 406.
[16]Omotesho, O.A, Adewumi, M.O., Muhammad – Lawal, A., Ayinde, O.E., 2006, Determinants of Food Security among the Rural Farming Households in Kwara State, Nigeria, African Journal of General Agriculture, 2(1): 7 – 15.
[17]Otieno, D.J., Omiti, J., Nyanamba, T., McCullough, E., 2009, Market Participation by Vegetable Farmers in Kenya: A comparison of Rural and Peri-urban Areas. African Journal of Agricultural Research, 4(5): 451-460.
[18]Samuel G., Sharp K., 2007, Commercialization of Smallholder Agriculture in Selected Tef-Growing Areas of Ethiopia, Ethiopian Journal of Economics, Volume XVI, No1, April 2007. Available on http://www.ajol.info/viewissue.php,[Accessed on 15.10.12]
[19]Sanni L. O., Onadipe, O.O., Ilona, P., Mussagy, M.D., Abass, A., Dixon, A.G.O., 2009, Successes and Challenges of Cassava Enterprises in West Africa: A Case Study of Nigeria, Bénin, and Sierra Leone: International Institute of Tropical Agriculture (IITA).
[20]Strasberg, P.J., Jayne, T.S., Yamano, T., Nyoro, J., Karanja, D., Strauss, J., 1999, A Summary of Report in Titillated: Effect of Agricultural Commercialization on Food Crop Input Use and Productivity in Kenya, policy Synthesis No. 41, Mus Agricultural Economics.
[21]World Bank, 2008, World Development Report 2008: Agriculture for Development, Washington D.C.