

## An Assessment of the Extent of the Commercialization of Agriculture in Abia State, Nigeria

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**Abstract:** The study was conducted to assess the extent of commercialization of agriculture in Abia State. The study covered 6 Local Government Areas (LGAs) of the state, two each from each of the three zones in the state. Data were collected from 120 households spread across 24 communities through a structured questionnaire. Data were collected over a 5-month period covering household characteristics' food frequency and household coping strategies. Three concepts of commercialization were defined and used in categorizing and analyzing data. Results show that agriculture is not subsistence-oriented in terms of value of agricultural produce that is for market. Households were market-oriented in consumption as only 28.5% of the value of household consumption is from own-production. Households that are most subsistence oriented earned less in terms of off-farm income compared to those that were least- subsistence oriented who earned more off-farm income given the commercialization index. The study recommends rapid development of rural finance systems because access to rural financial institution at low overhead costs will enable benefits of commercialization to spread widely across the community.

**Key words:** Assessment, extent, commercialization, agriculture, Abia State

### INTRODUCTION

A major question in the abundant literature of agricultural growth and development in sub-Saharan Africa is how to encourage peasants primarily engaged in subsistence farming to become market-oriented, i.e. to produce surpluses over and above their own demands where staple food crops are concerned and/or to devote land and labour to new crops for sale: In brief, how to stimulate the process of agricultural commercialization. Many studies deal with this process without explicitly mentioning the term agricultural commercialization, but even if it is used, the actual meaning of the concept is seldom clearly defined (Jaffee, 1992; Fafchamps, 1992; Pingali and Rosegrant, 1995; Von Braun and Kennedy, 1994). Hinderink and Sterkenburg (1987) observed that an analysis of the relevant literature reveals that agricultural commercialization is interpreted in different ways and is measured by various criteria with the consequence that different aspects of the phenomenon are taken into account.

Agricultural commercialization in this study is understood as involving a deliberate action on the part of agricultural producers-of their own free will or by means of coercion-to use the land, labour, implements and animal

inputs (owned, purchased, hired, borrowed, obtained on credit or through customary arrangements-reciprocal or not) in such a way that a greater or smaller part of the crops produced and/or animals raised is for exchange or sale (Hinderink and Sterkenburg, 1987; Immink and Alarcon, 1993; Govereh and Jayne, 1996). Commercialization of agricultural systems leads to greater market orientation of farm production; progressive substitution out of non-traded inputs in favour of purchased inputs and the gradual decline of integrated farming systems and their replacement by specialized enterprises for crop, livestock, poultry and aquaculture product (Kennedy, 1994; Kennedy and Cogill, 1987, 1988; Braun and Kennedy, 1994).

The farm level determinants of increasing commercialization are the rising opportunity costs of family labour and increased market demand for food and other agricultural products. Family labour cost rise due to increasing off-farm employment opportunities, while positive shift in market demand are triggered by urbanization and/or trade liberalization.

In Nigeria and Abia State in particular the government has promoted the increasing commercialization of production systems through various government schemes and programmes. Abia State offers

an interesting scenario in the study of agricultural commercialization. The state being mainly agrarian with expanding population shows evidence of out-migration of the youths from the rural sectors in search of white collar jobs and trading (Okezie, 2006). The State produces many food crops and cash crops like Cocoa, Oil palm Cashew etc. Therefore, the study is desired to assess the extent of the commercialization of agriculture in the state.

### MATERIALS AND METHODS

**Study area:** This study was conducted in Abia State of Nigeria. The State is located between longitude  $04^{\circ} 45'$  and  $06^{\circ} 71'$  North and latitude  $07^{\circ} 00'$  and  $08^{\circ} 10'$  East. It is located East of Imo State and shares boundaries with Anambra, Enugu and Ebonyi States in the North West, North South and North East, respectively.

Abia State is bounded in the South by Akwa Ibom and Cross River States and South East by Rivers State. The State occupies a land area of  $5,833.77\text{Km}^2$  delineated into 17 Local Government Areas (LGAs) divided into three agricultural zones namely, Aba, Ohafia and Umuahia. In Aba zone, there are seven LGAs namely: Aba North, Aba South, Osisioma Ngwa, Obioma Ngwa North, Ukwa East, Ukwa West and Ugwunagbo. In Ohafia zone, there are five LGAs namely: Isuiukwuato, Ohafia, Bende, Arochukwu and Umunneochi. In Umuahia Zone, there are five LGAs namely: Umuahia North, Umuahia-South, Ikwuano, Isiala Ngwa North and Isiala Ngwa South. Umuahia however is the administrative capital.

**Sample selection and sampling technique:** A total of 120 farm households were chosen from the three agricultural zones of Abia State. A multi-stage stratified random sampling technique was adopted in selecting respondent households. First, all the 17 LGAs will be listed to form a separate sampling frame from the three zones. Two Local Government Areas (LGAs) was purposively selected from each of the zones making a total of 6 LGAs, from the state. Secondly, from each of the 6 LGAs, four farming communities will be purposively selected. The essence of the purposive selection is to ensure that rural communities whose major occupation is farming were selected. Thirdly, in each of the 24 communities/villages, a list of farm households was compiled with the assistance of village heads and resident ADP extension agents. From each village, 5 households were randomly selected for the study.

**Data collection procedure:** A variety of techniques including observation, recall and direct measurement were used in the survey. Well-trained Enumerators who were

resident Extension agents assisted in the completion of the questionnaires. The pre-testing of questionnaire was undertaken in July 2005. Thereafter, the study households were visited fortnightly over a five-month period beginning in August and ending in December 2005.

The extent of subsistence orientation and commercialization may be addressed from three different angles. Agricultural subsistence orientation (Concept 1) is measured by the extent to which farm households consume out of their aggregate agricultural produce as compared with the value of total agricultural produce:

$$CA = AS/AP \quad (1)$$

Where,

CA = Agricultural subsistence ratio.

AS = Value of non-marketed agricultural produce (₦).

AP = Total value of agricultural production (₦).

In addition to this output-oriented concept, it can be imagined that subsistence agriculture develops towards commercialization on the input side but not on the output side; for instance, when farm households sell their labour in the off-farm labour market and invest proceeds in augmenting their subsistence production.

A more comprehensive concept of commercialization will take into account the overall degree of market integration of rural households into the exchange economy and does not just look into agriculture. This may be approached from two different angles, the income earning side and the consumption side.

Subsistence orientation at the income generation side of the household (Concept 2), can be defined as follows:

$$CY = AS/Y_{tot} \quad (2)$$

With total income  $Y_{tot}$  being

$$Y_{tot} = AP - AC + Y_o + Y_w + Y_L \quad (3)$$

Where,

CY = Subsistence share in total income.

AC = Cost of agricultural production.

$Y_o$  = Any other income from transfers or renting out asset (such as land).

$Y_w$  = Off-farm wage income (from integration into the labour market).

$Y_L$  = Income equivalent of leisure.

Subsistence orientation at the consumption side (Concept 3) may be evaluated with the rates CX:

$$CX = X_s / X_{tot} \quad (4)$$

Where,

- CX = Subsistence share in total consumption.
- Xs = Total value of goods consumed out of home production.
- X<sub>tot</sub> = Total consumption value of household, including purchased and own-produced items for consumption, such as the value of subsistence food.

The above measures (Concept 2 and 3) capture market integration/penetration of households beyond agricultural market integration. Landed rural households may commercialize through specialization in crop production or shifts in production functions through technical change combined with increased input demand (integration in input markets). Also farm households may commercialize via increased off-farm work partly at the expense of market surplus from agricultural production. This means that there may be substitution between (AP-AC) and Yw, leaving CY in Eq. 2 rather stable, with different patterns of subsistence orientation.

**RESULTS AND DISCUSSION**

**Social-economic characteristics of farm households:** The study is more concerned with the micro level processes of commercialization that is prevalent in farm households in Abia State. The issue of interest is in the socioeconomic and demographic concerns in households as depicted in Table 1.

The micro level forces of interaction in farm households determine to a large extent the degree of market integration of households, hence the tendency towards increased commercialization. The socio-economic characteristics were classified on a commercialization index defined in the study as the value of crop sales produced over total value of agricultural production. Average farm size in the study area ranged between 1.02 ha in the lowest tercile to 4.88 ha in the

topmost tercile. The farmers in the state are still in the active working age. The average age in the topmost tercile is 53 years while it is 47 years in the lowest tercile. Average household size is 6 or 7 members in households. Members of households are ready source of farm labour, however, this depends on the composition of the household by age, sex and the number of hours each member is ready to put into agricultural production (2006).

**Household subsistence orientation: concepts and basic patterns:** The study identified three concepts under which household subsistence or commercial orientation can be quantified. The first concept (Concept 1), agricultural subsistence orientation measures the extent to which farm households consume out of their aggregate agricultural produce as compared with the value of total agricultural produce. The second and third, a broader concept looks at subsistence orientation at the income generation side and consumption side, Concept 2 and 3, respectively.

Assessing household’s subsistence orientation based on the three concepts defined above and as outlined in the methodology, the results are presented in Table 2.

The result according to concept I that expresses the value of subsistence production as a percent of total agricultural production, agriculture is not highly subsistence-oriented as only 43.9% of agricultural production is for home consumption. There is a considerable level of market-orientation if the assumption is that all that is not consumed is for the market. Concept 2 which relates the value of subsistence production to total income, including off-farm and non-agricultural incomes and transfers. It was found that subsistence food production constitute about 45.8% of total income. Likewise, according to the consumption-oriented concept 3 which relates the value of consumption from own-production to the value of consumption of foods and nonfoods is 28.5% of total consumption value.

Table 1: Household characteristics according to \*Commercialization index

Characteristics	1st Tercile (0-33%)	2nd Tercile (34-66%)	3rd Tercile (67-100%)
State average			
Age of household head	47	48	53
School years of household head	9.77	8.53	8.29
Household size	6	6	7
Farm size (hectare)	1.02	2.60	4.88
Labour input (Mandays)	27	63	112
Capital inputs (N)	734.17	1,338.44	1,624.23
Farm income (N)	69,859.62	129,592.36	333,883.86
Off-farm income (N)	30,935.77	23,837.50	33,551.11
Agric produce consumed/value of Agric production (%)	0.71	.044	0.32
Total expenditure/capita	50,739.74	48,837.50	60,938.35

Source: Field data (2005) \*Commercialization index defined as the value of crop sales divided by total value of crop production

Table 2: Alternative concepts assessing household subsistence orientation, by person - land ratio and total expenditure quartiles

Group	Concept 1	Concept 2	Concept 3
	Value of subsistence production In Percent of total agricultural production value	In percent of total Income	Value of consumption from own production in percent of total value of consumption of foods and non foods.
Person-land ratio quartiles (average persons/ hectare)			
Bottom quartile (20.0)	66.0	40.1	25.0
Second quartile (13.1)	70.0	62.4	33.1
Third quartile (8.1)	60.9	50.4	26.9
Top quartile (2.6)	37.7	43.2	28.4
Total average	43.9	45.8	28.5
Total expenditure quartiles* (average in Naira)			
Bottom quartile (33,273)	46.7	46.3	33.0
Second quartile (56,033)	42.7	43.1	25.2
Third quartile (81,752)	39.5	44.6	28.7
Top quartile (115,454)	61.2	63.4	21.4
Total average	44.9	45.6	28.6

Source: Field survey (2005). \*Annual expenditure per capita, including the value of food consumed from own production (this may be viewed as an income proxy)

The study notes however, the relatively low values as the *a priori* expectation would have been that the values should have been higher. This is against the background that agriculture constitutes the main source of livelihood in these areas. However, the plausible reason as equally proffered by Braun *et al.* (1991) is that minor deviations can be expected, as the period of the consumption survey is not identical with the income survey.

Given our assessment, it is equally pertinent to note that the land poorest which is the bottom quartile who are highly subsistence oriented based on concept I (60%) constitute 2% of the sample while the land richest (Top quartile, 2.6) constitute 78% of the sample. This implies that a greater percentage of the populations are market-oriented. The same cannot be said of the other concepts because of inherent tendencies of under estimating subsistence income and over-estimating total income.

A striking result of this assessment of household relationship from various angles is the strong relationship of subsistence orientation with household income level, with total expenditure as proxy. Concept 1 show a weak relationship at the bottom, second and third quartile level are 46.7, 42.7 and 39.5%, respectively. The same is true of concept 2, 46.3, 43.1 and 44.6%, respectively. It is only at the top quartile level that a strong relationship exists. The percentages were 61.2 and 63.4 (bottom of Table 2 concepts 1 and 2) far above the average of 44.9 and 45.6%, respectively. It can be inferred that subsistence production at the top expenditure quartiles is used to finance household expenditure. Values of own-production for consumption show weak relationship with total expenditure-that is own-produced food consumed constitute a lower proportion of total household consumption expenditure. Its implication is that households reach out beyond

immediate production capability for consumption and thus likely to be more market-integrated.

### CONCLUSION

Commercialization of the rural sector is considered a cornerstone of successful economic development. Generally speaking, it describes an individual's or a household's economic transactions with others. These may be both in cash and in kind the latter playing a considerable role in the many traditional societies (Von Braun *et al.*, 1991). Agricultural commercialization in the study area as defined by the various concepts shows some interesting results. Agriculture in the study area is not subsistence oriented as 43.8% of agricultural production is for home consumption. Household subsistence production constitutes an important component of household income and households were market-oriented in consumption.

Rural development programmes play an important role in the overall commercialization process. A holistic approach is required in understanding the interaction between agriculture and the rest of the rural economy and requires further research. The study concentrated on the exogenous determinants of commercialization and suggests further research on the endogenous determinants of commercialization.

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