# Factors influencing labour supply among rural women farmers in Akpabuyo Local Government Area, Cross River State, Nigeria

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#### Abstract

This study analysed factors influencing labour supply among rural women in Akpabuyo Local Government Area of Cross River State. Nigeria. The objectives were to; ascertain the socioeconomic characteristics, examine the farming operations, determine the number of hours and days respondents supply labour in the farm during the peak farming season. Factors influencing the labour supply in the study area were also identified. A multistage random sampling and structured questionnaire were administered to 120 respondents. The data were analysed using descriptive and inferential statistics. The results showed that a higher proportion (31.8%) of the respondents were between the ages of 31-40 years, 53.64% were married, 45.46% had only primary education, 43.64% had farm size of 1-2 hectare while 37.27% rented the land they used for farming. Majority (59.09%) of the respondents had family size of 6-10 members, 87.27% of the respondents had income of less than N150,000 per annum. Family and hired labours were the major types of farm labour used in the study area. The study also showed that women were mostly involved in processing and weeding while less involved in tilling/ridging. Man days revealed that 71.89% spent 1-5 hours in the farm while 80.91% spent 1-5 days in a week. Wage rate, economic status and migration were the major factors influencing labour supply with wage rate significant at 99% confidence level. The study therefore recommended that to reduce cost, women should be granted access to land through inheritance and wage rate for farm labour should be increased to prevent rural-urban migration.

Keywords: Akpabuyo LGA, Labour Supply, Rural Women

## Introduction

Agriculture has been an important sector in the Nigerian economy in the past decades, and is still a major sector despite the oil boom. The importance of agriculture is manifested in the provision of employment opportunities to over 70% of the Nigerian workforce, provision of food and fibre needs of the population, supplying raw

materials to the growing industrial sector and source of foreign exchange earnings (Food and Agricultural Organization, (FAO) (2001) and Jacobs, Daniel and Summer, 2002). Majority of the Nigerian population live in the rural area and rely on agricultural production both for domestic food consumption and as a source of income. Therefore, the supply of agricultural labour especially among women who according to Ogunlela and Mukhtar (2009) are more involved in agricultural activities is important in the development of agriculture.

Labour as a primary factor to agricultural production and a key asset for small holder households in rural area is considered to be important not only in it productive purpose but also in the activation of other factors of production in terms of its supply. The availability of labour according to Oluyole, Dada, Oni, Adebiyi and Oduwole (2013) has been found to have impact on planting precision, better weed control, timely harvesting and crop processing. However, the supply of labour by women, especially family labour, hired and exchange labour that are mostly used in the rural areas are becoming scarce resources in agricultural production (Benjamin and Kimhi (2006) and Singh, Kushwah, Singh and Daipuria (2015). This of course has a negative effect on productivity as well as income (World Bank, 2001). Therefore, any effort designed to improve Nigeria agriculture generally must consider factors influencing the supply of labour among women.

This study therefore focuses on addressing the following objectives:

- 1. Ascertain the socio-economic characteristics of the respondents in the study area.
- 2. Examine the farming operations performed by the respondents in the study area.
- 3. Determine the number of hours and days respondents supply labour in the farm during the peak farming season.
- 4. Identify factors influencing the supply of farm labour among respondents in the study area.

# *Hypothesis of the study*

**H**<sub>o</sub>: there is no significant relationship between supply of farm labour and some selected socioeconomic characteristics of respondent

## Methodology

The study was carried out in Akpabuyo Local Government Area. The area is located

in Cross River State, Nigeria and its headquarter is in the town of IkotNkanda. It lies within the vegetation belt of south and shares the Atlantic Coastline with Bakassi to the East and the Republic of Cameroon to the West(National Population Commission - NPC, 2006).

Akpabuyo Local Government Area consists of ten (10) council wards namely: Indundun Anyananse, Atimbo East, Atimbo West, Ikot Edem Odo, Eneyo, Ikot Nakanda, Ikot Eyo, Ikang North, Ikang South and Ikang Coastal. The inhabitants of Akpabuyo LGA are predominantly farmers and cultivate various arable crops such as cassava, cocoyam, coconut, palm produce as well as sea foods.

The major ethnic groups are the Efiks, Quas and Efuts, sharing a common cultural and ancestral heritage. The major languages spoken are Efik and English. The people of Akpabuyo Local Government Area produce

## Sampling procedure and sample size

A simple random sampling technique was adopted in sampling the respondents. In the first stage, a simple random sampling method was used to select three wards (Atimbo West, imbo East and Idundun) out of the ten wards.

In stage two, one community from each of the three wards was selected randomly (Atimbo West: Ikot Akwa; Atimbo East: Anwa Enang; Idundun: Asabanka), therefore, three communities were selected

In stage three, forty respondents (women) were randomly selected from each of the village, giving a total of one hundred and twenty (120) respondents. However, only 110 were used for the analysis as some were discarded due to inadequate information.

## Method of data analysis

Both descriptive and inferential statistics were used for the analysis of data collected. The descriptive statistics included frequency, percentages and means while the inferential statistics used was linear regression.

#### Results and discussion

Table 1 shows the socioeconomic characteristics of the respondents. These include age, marital status, educational level, farm size income, nature of land ownership and household size. 31.8% of the respondents were between the ages of 31-40 years, implying that farmers that engaged in labour supply were in their active age and this is necessary since farming activities requires

much energy. 53.64% of the women supplying labour in study area were married.

Result further revealed that 52.72% had only primary education, implying that most of the respondents were not highly educated because individuals are likely to work off the farm when highly educated .farm size. The result revealed that most (43.64%) of the respondents had farm size of 1-2 hectare, implying that women farmers in the study area were characterized by small scale operators.

On land ownership, 37.27% of the respondents rented the land used for farming indicating that a larger proportion of the females in the study area rented the land used for farming. This is in line with the report by Ekenta, Mohammed, and Afolabi (2012) that the most common means of acquiring land among women was through renting and purchasing. From the result it was also observed that, majority (73.64%) of the respondents had their income from farming while only 2.73% had income from white collar job. This imply that a good number of the respondents were farmers which could the reason for being able to supply farm labour. Table 1 revealed that larger proportion (59.09%) of the total respondents had family

size of 6-10 members, indicative of relatively large family size in line with the observation of Effiong (2005) that relatively large household size enhances availability of family farm labour. Among respondents, 87.27% had annual income of less than N150,000, suggesting low income among women farmers in the communities.

Table 2 shows mean distribution and ranking based on the farming operations undertaken by respondents in the study area. It was observed from the table that, processing ranked first with 4.24 mean score, weeding ranked second with 3.84 mean score while tilling/ridging was last on the list with 1.9 mean score. The implication of this result is that women are mostly involved in processing and weeding while they are least involved in tilling/ ridging. This may be attributed to the fact that tilling /ridging requires more energy when compared with weeding and processing as such the "weaker" sex who are the women are less involved. The result is in line with the study carried out by Chayal and Dhaka (2010) which indicated that weeding and processing were the major farm operation undertaken by women.

Tables 3a and 3b showed the frequency distribution of respondents based on labour supply with respect to number of hours and number of days spent in the farm during the peak of farming season. The result revealed that majority (71.89%) spent between 1-5 hours in the farm and the average hour spend is On the number of days spent in a week, the result indicated that most(80.91%) of the respondents also spent 1-5 days out of the seven days in a week. This shows that the respondents in the study area do not spend the whole hours as well as the whole days in the week in the farm, this could be attributed to the fact that women are saddled with including numerous tasks home care responsibility. This result is in line with the research carried out by Ogunlela and Mukhtar (2009) which revealed that women are more involved in agricultural activities as well as household chores than men especially in sub-Saharan Africa and provide most labour for a number of agricultural activities.

Table 4 shows mean distribution and ranking based on factors influencing labour supply in the study area. It was observed from the table that, low farm wage, economic status and migration were the major factors influencing labour supply in the study area as they ranked first, second and third respectively.

This result is in line with the research conducted by Nmadu and Akinola (2015) which revealed that migration and wage rate were the major factors that influence supply of labour

Table 5 shows regression result on factors influencing labour supply. From the result the coefficient on wage rate is positive indicating that increase in wage increases the labour supply among respondents and the result was significant at 1% significant level. The R<sup>2</sup> of 64.6per cent shows that 64.6% of the independent variables are responsible for the variation in the dependent variable(labour supply). Since the t calculated(12.863) is greater than the t tabulated (3.39) we reject the null hypothesis implying that there is significant relationship between supply and some selected socioeconomic characteristics among women in Akpabuyo Local Government Area. This result is similar with the study carried out by Nmadu and Akinola (2015) which stated that wage rate was among the variables that had significant relationship with labour supply.

## Conclusion

Based on the result, it is evident that respondents were in their active age, married, not highly educated, small scale operators as well as had large family size. Family labour is about the main source of farm labour available to farmers in Akpabuyo Local Government Area of Cross River State. The supply of farm labour as revealed by the study is highly influenced by wage rate and that there is a significant relationship between labour supply and wage rate.

#### Recommendations

This study recommends that reduce cost of production, women should be granted access to land through inheritance and wage rate should be increased so that farm labour will be readily available to prevent rural-urban migration.

## References

- Benjamin, C. & Kimhi, A.(2006). Farm work, off-farm and hired labour: Estimating a discrete –choice model of French farmcouples decision. *European Review of Agricultural Economics*, 33(2):149-171.
- Chaya, I. K. & Dhaka, L. (2010). Analysis of Role Performance of Women in farm activities. *Indian Research Journal of Extension Education*, 10 (2): 109-112.
- Effiong, E. O. (2005). Efficiency of production in selected livestock enterprises in Akwalbom State, Nigeria. An Unpublished Ph.D Thesis, Department of Agricultural Economics, Michael Opara University. University of Agriculture, Umudike
- Ekenta, C. M., Mohammed, A. B. & Afolabi, K.O.(2012). Gender analysis of land ownership structures and agricultural

- production in Imo State, Nigeria. Journal of Economics and Sustainable Development, 3(9): 67-73.
- FAO (2001). FAOSTAT Database FoodBalance Sheets. Food and Agriculture Organisation., Retrieved on June 6 2016 from <a href="http://apps/fao.org/page/collections">http://apps/fao.org/page/collections</a>.
- Jacobs, K. & Daniel, A., Sumner, D. A. (2002). The food balance sheets of the Food and Agriculture Organization: *A Review of Potential Ways to Broaden the Appropriate Uses of the Data*. Retrieved March 10 2016 fromftp://mail.ksph.kz/Chemistry\_Food%20Sa
- Nmadu, J.N. &Akinola, A. (2015). Farm labour supply and utilisation for crop production in Nigeria paper presented at *International Conference on Education and Social Sciences*, At Istanbul, Turkey.
- Ogunlela, Y. I. & Mukhtar, A. A.(2009). Gender Issues in agriculture and rural development in Nigeria: The role of women. *Humanity & Social Sciences Journal*,4(1): 19-30.
- Oluyole, K. A., Dada, O. A., Oni, O. A., Adebiyi, S. &Oduwole, O.O.(2013). Farm labour structure and its determinants among cocoa farmers in Nigeria. American Journal of Rural Development. 1(1): 1-5.
- Sing, S, Kushwah, S., Singh, V. B & Daipuria, O.P.(2015)Factor Affecting the Participation of Rural Women in Agricultural Activities. *Indian Research Journal of Extension Education*, 15(1):114-117.
- World Bank (2007). World Development Report 2008: Agriculture for Development. Washington, D.C.: World Bank Publications.

**Table1**. Socio-economic characteristics of women farmers

| Variables              | Frequency | Percentage |
|------------------------|-----------|------------|
| Age                    |           |            |
| Below 21               | 10        | 9.01       |
| 21-30                  | 27        | 24.54      |
| 31-40                  | 35        | 31.80      |
| 41-50                  | 32        | 29.09      |
| 51-60                  | 5         | 4.54       |
| Above 60               | 1         | 0.91       |
| Total                  | 110       | 100        |
| Marital Status         |           |            |
| Single                 | 28        | 25.46      |
| Married                | 59        | 53.64      |
| Widowed                | 14        | 12.73      |
| Divorced               | 9         | 8.18       |
| Total                  | 110       | 100        |
| Educational level      |           |            |
| Primary                | 58        | 52.72      |
| Secondary              | 27        | 24.54      |
| Tertiary               | 25        | 22.72      |
| Total                  | 110       | 100        |
| Farm size              |           |            |
| Less than 1            | 41        | 37.27      |
| 1-2                    | 48        | 43.64      |
| Above 2                | 21        | 19.01      |
| Total                  | 110       | 100        |
| Land ownership         | 25        | 22.72      |
| Family land            | 25        | 22.72      |
| Rented                 | 41        | 37.27      |
| Inherited              | 20        | 18.18      |
| Communal               | 24        | 21.82      |
| Total                  | 110       | 100        |
| Major source of income |           |            |
| Farming                | 81        | 73.64      |
| Trading                | 26        | 23.64      |
| Civil servant          | 3         | 2.73       |
| Total                  | 110       | 100        |
| Household size         | 110       | 100        |
| 1-5                    | 34        | 30.91      |
| 6-10                   | 65        | 59.09      |
| 11-15                  | 9         | 8.18       |
| Above 15               | 2         | 1.89       |
| Mean                   | 7.1       | 1.07       |
| Total                  | 110       | 100        |
| Annual income('000)    | 110       | 100        |
| <150                   | 96        | 87.27      |
| 150-200                | 10        | 9.09       |
| 201-250                | 4         | 3.64       |
| Above 250              | 5         | 4.55       |
| Total                  | 110       | 100        |
| Wage rate(naira)       |           |            |
| 500-2000               | 58        | 52.70      |
| 2001-3000              | 34        | 30.90      |
| Above 3000             | 18        | 16.40      |
| Total                  | 110       | 100        |
|                        |           |            |

**Table 2.** Mean distribution of farming operations undertaken by respondents in the study area

| Types of farming operations | <b>Total Score</b> | Mean Score | Rank              |
|-----------------------------|--------------------|------------|-------------------|
| Clearing                    | 238                | 2.16       | 10 <sup>TH</sup>  |
| Tilling/Ridging             | 211                | 1.91       | $11^{TH}$         |
| Planting                    | 424                | 3.85       | $3^{RD}$          |
| Transplanting               | 317                | 2.88       | $7^{\mathrm{TH}}$ |
| Weeding                     | 426                | 3.87       | $2^{ND}$          |
| Processing                  | 467                | 4.24       | $1^{ST}$          |
| Winnowing                   | 267                | 2.42       | $8^{TH}$          |
| Drying                      | 372                | 3.38       | $5^{TH}$          |
| Harvesting                  | 417                | 3.79       | $4^{\mathrm{TH}}$ |
| Husking                     | 206                | 1.87       | $12^{TH}$         |
| Threshing                   | 256                | 2.32       | $9^{TH}$          |
| Tending of animals          | 367                | 3.33       | 6 <sup>TH</sup>   |
| Field survey, 2016          |                    |            |                   |

**Tables 3a and b.** Distribution of respondents based on hours and days spent in farm

| 3a. Hours spent in farm per day        | Frequency | Percentage |  |
|--|-----------|------------|--|
| 1-5                                    | 79        | 71.89      |  |
| 6-10                                   | 31        | 28.18      |  |
| Mean                                   | 4.1       |            |  |
| Total                                  | 110       | 100        |  |
| <b>3b.</b> Days spent in farm per week | Frequency | Percentage |  |
| 1-5                                    | 89        | 80.91      |  |
| Above 5                                | 21        | 19.09      |  |
| Mean                                   | 4.5       |            |  |
| Total                                  | 110       | 100        |  |
| Field survey, 2016                     |           |            |  |
|  |           |            |  |

**Table 4**. Distribution of respondents based on factors influencing labour supply

| Factors influencing labour supply | Total<br>Score | Mean  | Rank |
|-----------------------------------|----------------|-------|------|
| 5 <b>upp1</b> ;                   | Score          | Score |      |
| Migration                         | 339            | 3.1   | 3rd  |
| Low farm wage                     | 377            | 3.4   | 1st  |
| Drudgery of farm work             | 309            | 2.8   | 5th  |
| Household size                    | 251            | 2.2   | 6th  |
| Off-farm employment               | 209            | 1.9   | 7th  |
| Farming experience                | 313            | 2.9   | 4th  |
| Economic status                   | 371            | 3.3   | 2nd  |

Field survey, 2016

**Table 5**. Regression analysis on factors influencing labour supply

| Model              | Un-standardised coefficients |               | Standardised coefficients | T      | Sig. |
|--------------------|------------------------------|---------------|---------------------------|--------|------|
|                    | В                            | Std.<br>Error | Beta                      |        |      |
| (Constant)         | 4.647                        | .535          |                           | 8.689  | .000 |
| Wage rate          | .001                         | .000          | .798                      | 12.863 | .000 |
| Age                | .010                         | .008          | .073                      | 1.224  | .224 |
| Education          | 023                          | .027          | 051                       | 827    | .410 |
| Data analysis from | Field survey, 2016           |               |                           |        |      |