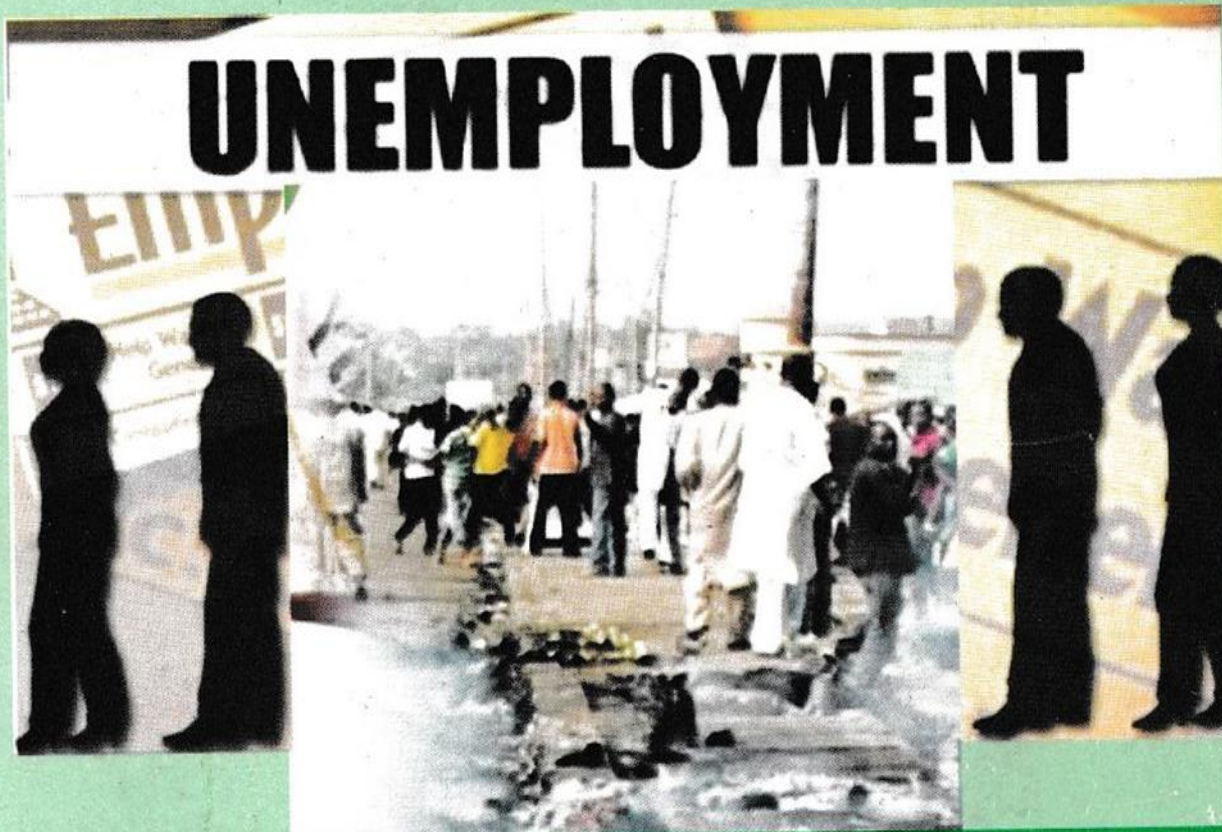




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**YOUTH EMPLOYMENT AND POVERTY REDUCTION
IN NIGERIA**

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DOES GENDER COUNT IN EMPLOYMENT IN PUBLIC AGRICULTURAL INSTITUTIONS IN NIGERIA?

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ABSTRACT

As is the case in many other societies, there exist in many cultures within Nigeria, socially assigned tasks, obligations, privileges and benefits that are reserved either for males or females. These gender assigned roles tend to discriminate against women. This discrimination manifests in the formal workplace in form of vertical and horizontal segregation, in addition to inequality in wages and slow advancement, among others. The public sector is the largest employer of labour in Nigeria. If gender discrimination persists in the country, it may also find its way to the public sector. The results show that there was a significant difference in the nature of activities, participation in decision-making and leadership positions between men and women in the institutions studied. Men were found to dominate in all three issues considered. Household assets, educational level and number of children of pre-school age negatively influenced the decision of women to supply their labour. This implies that these factors could stop women from participating in employment in public institutions. The number of children of school age, own wage and household assets had positive effect on male labour supply. In order to encourage women to participate in the public sector labour market, a baby-friendly work environment needs to be provided and the condition of service in the public sector needs to be made enticing enough for women to be willing to supply their labour to the sector. These would reduce the number of

unemployed people as well as the gender imbalance in the Nigerian public sector.

JEL Classification: J16, J21, N5, J7, J47

1. Introduction

Until very recently, Nigeria had an essentially male-dominated labour market. Apart from farming, most economic sectors, particularly those that require formal education, were exclusively employers of male labour force. Any adventure by a woman into such 'exclusive' zones was considered a feat which merited celebration. Thus, in Nigeria, reference is still being made to 'the first female senator', 'the first female state governor', 'the first female pilot', etc. Following the Beijing Declaration of 1985 and other platforms of action for gender equity and mainstreaming, however, there has been tremendous increase in the number of women who have taken up employment in such sectors as public service.

Akwa Ibom State is predominantly a 'civil service state'; there are very few private firms with high employment capacities. Thus, most persons are either employees of the government or private, informal small-scale business operators. Labour supply in Akwa Ibom State like elsewhere, has a great impact on the quality of life of the workers. The apparent willingness of the people to supply labour stems from a desire to provide their families with a higher standard of living. However, labour supply could be influenced by a number of factors. Mackellar and Bird (1992) noted that demography and labour supply are inextricably linked and should therefore, be considered together. From their perspective, the number of children an individual has as well as age affect labour supply. Other demographic factors such as marital status and educational level also affect labour supply.

Labour economics literature have attempted to shed some light on the labour supply behaviour of individuals. Economic models of labour supply are based on the assumption of rational choice. The decision to enter the labour force and hence, supply of labour is viewed as a comparison between the

attractiveness of work measured by the wage or potential wage, and the opportunity cost of staying at home, which is typically called the reservation wage. Labour supply tends to occur if the wage for outside labour exceeds the reservation wage. Nwanganga (1980) observes that labour supply involves a decision by the individual on how to allocate his/her time, and a decision on the part of the employer to offer an individual a job. This interaction of supply and demand then determines whether or not a person supplies labour.

The labour supply and demand situation is bound to differ from country to country, depending on a number of factors. Thus, there has been a growing concern and call for the development of the informal sector both as an alternative source of economic growth and as an employment sector where one can supply labour preference to those workers rejected from the formal sector (Lanot and Muller, 1997).

In recent years, the global policy process has become more gender sensitive to an extent that international agencies of trade and finance, as well as individual countries have endorsed the protocols for integrating women more actively into development programmes. This renewed effort reflect the widespread recognition of the fact that women constitute an important source of potential labour required for the sustained growth of national economies in which agriculture plays an important part (Ayoola and Ayoola, 2000).

As is the case in many other societies, there existed in many cultures within Nigeria, socially assigned tasks, obligations, privileges and benefits that were reserved either for the males or females. These gender assigned roles tended to discriminate against women (World Bank, 1995; Effiong, 2008). Oladunni (2003) reports that this discrimination manifests in the formal workplace in the form of vertical and horizontal segregations in addition to inequality in wages, slow advancement, among others. The National Economic Empowerment and Development Strategy (NEEDS, 2004: p 99) gave national recognition to this problem when it stated "... being of one gender or the other is unfortunately still in Nigeria an important determinant of one's poverty situation or one's poverty-escaping opportunities..." However, Nigeria has

ratified many conventions: The United Nations declaration of 1976 to 1985 as decade for women, the United Nations Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 1979, and the Beijing (1985) platform of action. The country has taken concrete actions to eliminate discrimination in any form (including employment) against women and these actions have culminated in the establishment of the Ministry of Women Affairs. The Nigeria Vision 20: 2020 clearly conveys the determination of Nigeria to promote gender equality by stating that: "The strategy for promoting gender equality and women empowerment will be systematic gender mainstreaming in all policies, programmes and organizational cultures, through the incorporation of the principles of Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) and other global and regional frameworks that support gender equality and women empowerment."

The public sector is the largest employer of labour in Nigeria. If gender discrimination persists in the country, it may also find its way into the public sector. However, given the government's efforts at gender equality over the years, the questions which this paper addresses itself to are: (i) what is the nature of activities assigned to men and women in public agricultural institutions in Akwa Ibom State? (ii) Do men and women participate equally in decision making and in taking leadership positions in public agricultural institutions? And, (iii) what factors determine men and women's decisions to supply their labour to the public agricultural institutions in the state?

2. Objectives

The general objective of this study was to investigate those factors that determine male and female labour supply to agricultural institutions in Akwa Ibom State. This is with a view to making policy suggestions which could have wider application in other states and state-owned institutions. The specific objectives of the study were to:

1. Assess the types of duties carried out by men and women workers in public agricultural institutions in Akwa Ibom State.

2. Analyse the factors that determine labour supply decisions in public agricultural institutions in Akwa Ibom State.
3. Make policy recommendations in line with the findings of the study.

3. Theoretical framework

This study has its foundation in the neoclassical theory of labour supply. The simple neoclassical static model of labour supply without uncertainty assumes that the individual maximizes his utility function, u , defined as the amount of market (i.e consumer) goods, C , which are assumed to be a composite commodity, and hours of leisure L , consumed per period, subject to income constraints. This can be presented as:

$$\text{Max}_{C,L} U(C,L) \dots\dots\dots (1)$$

Where the income constraint is defined as:

$$P C = W H + V \dots\dots\dots (2)$$

P is the price of a unit of C , W is the fixed price of an hour of wage per hour, L , and V is other non-labour income. Thus, spending on market goods must equal income from work plus other income e.g. property income. A person's total available hour T could be allocated between leisure L and work H , so,

$$H = T - L \dots\dots\dots (3)$$

The optimum would occur where the magnitude rate of subtraction of consumption for leisure, $M = (\delta u / \delta L) / (\delta u / \delta C)$ equals the ratio of prices, W/P , which is the real wage rate. Thus,

$$M = (\delta / L) / (\delta / C) = M(C,L) = W/P \dots\dots\dots (4)$$

The optimal quantities of labour supply, H , and consumption goods, C , are derived as functions of prices (P, W) and property income, V , by solving equations 2 and 3. Thus, $H = H(W, V, P)$. Representing W/P by ω , and V/P as

v , the labour supply for a given individual may be written as $H = H(\omega, v)$ and indicates the absence of money illusion (Maglad, 1998).

The discussion as outlined above refers to labour supply decisions of the individual. However, the situation will be different in a household setting. Thus, we extend the model to labour supply decisions by household, taking the case of a two-person household (wife and husband). The wage offer available to the other spouse is added to the list of variables determining labour supply. Earlier studies recommended addition of the wage offer available to the other spouse to the list of variables determining the reduction-form equation of market labour hours, if both spouses engage in some market activity (Miner, 1962; Kusters, 1966; Heckman, 1974; Schwts, 1980; Killingswoth, 1983).

The impact of a change in one partner (v,s) labour supply to a unit change in another (j,s) wage is written as the sum of the substitution and income effect:

$$\delta H_i / \delta W_j = S_{wj}(H_i) + H_j(\delta H / \delta V) \dots \dots \dots (5)$$

Where S_{wj} is the substitution effects and has to do with the effect of a wage change with property income adjusted so as to help utility constraint, H_j is the income effect of the change in W_j on H_i . This theoretical model predicts that:

- i. A rise in the wage rate leads to a decrease in the demand for leisure and hence a rise in labour supply. Therefore, the income compensated own-wage elasticity of labour supply is positive.
- ii. Income compensated cross-substitution effects $S_{wi}(H_j)$ and $S_{wj}(H_i)$ must be equal. In addition, the income compensated cross-substitution effect of one spouse's wage offer on the spouse's labour supply may be negative or positive. This depends on whether the leisure time of one spouse is a substitute or compliment for the leisure time of the other spouse in the household.
- iii. The model also predicts that an increase in an individual's income as a result of wage increase leads to demand for more leisure, and

consequently to lower labour supply than before the rise in the wage rate.

Child rearing is an important activity which may influence the female labour force participation. Many people have studied empirically, the effect of children on the work choices of mothers (Nakamura and Nakamura, 1994; Porterfield, 2002; Boushey, 2008). All of them found a negative impact, especially when a child is young or has disabilities. Young children or children with disabilities usually require more attention from their mothers than the older or healthier children. Therefore, a woman with a young child (along with the entire household) faces more difficulties if she spends more time on the outside job. The marginal utility of the household from the woman's household work is now larger than before. Hence, the household ends up choosing more time at house-work (and less time outside) for the woman. Thus, the existence of children as well as disabled ones who need more attention of their mothers reduces the female labour supply.

4. Research Methodology

4.1 The study institutions

The study was conducted using data set obtained from public agricultural institutions in Akwa Ibom State. Akwa Ibom has the Ministry of Agriculture and Natural Resources (MANR) with several Departments and units as well as parastatals under the Ministry. The focus of this study was the Ministry of Agriculture and one of its parastatals which employs a large number of the agricultural work force in the State- Akwa Ibom Agricultural Development Project (AKADEP). MANR has a total of 9 units/departments while AKADEP has 8 units/departments (Table 1). The population of the study constituted of staff of the Ministry of Agriculture and Natural Resources (MANR). MANR has many units as well as parastatals under it. The institutions and the units studied are as listed in table 1.

The Ministry of Agriculture and Natural Resources came to be in Akwa-Ibom State in 1988. The ministry is governed by the honourable commissioner for Agriculture. Directly under the office are AKADEP, Integrated Farmers Scheme, Fertilizer Unit, Agric Engineering Division, Agric Information Division and Rice Development Project. The objective of the institution is to develop Agriculture so as to accommodate both the food supply and job needs of the people.

Akwa-Ibom Agricultural Development Programme is an offshoot of Cross River Agricultural Development Programme (CRADP). It came into being in January 1988 after the creation of Akwa Ibom State from Cross River State in 1987. AKADEP is managed by a project manager. It has six zones (Uyo, Eket, Ikot Ekpene, Abak, Oron and Etinan) and executes its activities through the 8 divisions listed in table 1. It is governed by the Agricultural Development Project Executive Committee (ADEPC) which reports to the Honourable Commissioner for Agriculture.

Table 1. Public agricultural institutions and component units

Ministry of Agriculture and Natural Resources	Akwa Ibom Agricultural Development Project (AKADEP)
Administration Department	Technical Services
Department of Agriculture	Commercial Services
Department of Fisheries	Engineering Services
Department of Livestock Services	Extension Services
Department of Vet Services	Planning, Monitoring & Evaluation Unit
Department of Planning, Research and Statistics	Administration Unit
Integrated farmers scheme	Human Resources Development
IFAD/FGN Community-based natural resources management programme	Finance
Agricultural loans board	

The staff structure is made up of junior, intermediate and senior categories. One of the objectives of the AKADEP is to strengthen indigenous capabilities for agricultural planning and project execution through training of both staff

for efficiency and farmers for awareness and adoption of the improved extension packages.

4.2 Sample size and data collection

The data used in the study were both primary and secondary. Secondary data were obtained from official records of the Ministry of Agriculture and Natural Resources (MANR) and Akwa Ibom Agricultural Development Programme (AKADEP). Information were collected on the number, distribution and designation of staff, both male and female. The primary data were collected through the use of a questionnaire. This also contained questions on labour supply decisions and factors influencing these decisions.

The staff-strength of AKADEP and MANR were seven hundred and thirty-two (732) and one thousand and eleven (1011) respectively. One hundred and seventy (170) staff ninety (90) from MANR and eighty (80) from AKADEP were sampled. Because the population studied was largely literate, the questionnaire was completed by individual respondents under the guidance of the researcher.

4.3 Methods of data analysis

The data collected were analyzed using both descriptive and inferential statistics. Frequency count and percentages were used to determine the relationship between workers' socioeconomic characteristics and nature of activities they engaged in. In addition, chi square statistics was employed to assess if differences exist in the socioeconomic characteristics, the nature of duties as well as the participation in decision making by male and female workers in MANR and AKADEP. Chi-square is given by the formula:

$$X^2 = \sum_{i=1}^n (o - e)^2 / e$$

where X^2 = chi square, o = observed value, e = expected value

The determinants of labour supply to the institutions were estimated using the ordinary least square regression. Three labour supply models were estimated: Male Labour Supply Function (MLSF), Female Labour Supply Function (FLSF), and Overall Labour Supply Function (OLSF), which was the aggregate of the first and second with the introduction of a dummy variable to account for gender effect. In implicit form, the models are expressed as:

Male Labour Supply Function (MLSF)

$$YEM = f(W_w + W_o + V + Z_i + \mu_i) \dots \dots \dots (6)$$

Female Labour Supply Function (FLSF)

$$YEM = f(H_w + W_o + V + Z_i + \mu_i) \dots \dots \dots (7)$$

Aggregate Labour Supply Function (ALSF)

$$YEM = f(W_s + W_o + V + Z_i + DUM + \mu_i) \dots \dots \dots (8)$$

Where:

- YEM = number of years in employment
- W_w = Wife's wage
- W_o = Husband's wage
- W_s = Spouse wage
- V = Household assets in the past five years
- Z_i = Vector of demographic characteristics, namely: respondent's age of children in two school age groups (pre-school and school age), marital status and educational qualification.
- Dum = Dummy variable to capture gender effect (male = 1 and female = 0)
- μ_i = Error term

The models are specified in explicit form as follows:

MLSF

$$YEM = b_0 + b_1 W_w + b_2 W_o + b_3 V + b_4 Z_i + \mu_i \dots \dots \dots (9)$$

FLSF

$$YEM = b_0 + b_1 H_w + b_2 W_o + b_3 V + b_4 Z_i + \mu_i \dots \dots \dots (10)$$

ALSF

$$YEM = b_0 + b_1 W_s + b_2 W_o + b_3 V + b_4 Z_i + b_5 Dum + \mu_i \dots \dots \dots (11)$$

5. Results and Discussion

5.1 Type of activities carried out by women and men.

The percentage distribution of the type of duties that are performed by both males and females employees in Akwa Ibom State Ministry of Agriculture and natural Resources as well as Akwa Ibom Agricultural Development Projects are presented in table 2. Our interest was to discover any particular pattern that could exist in the job distribution between the male and female workers in the two establishments. The common pattern found in the two establishments is that there is no female involvement in driving/transportation and mechanical work. A check at employment policy of the institutions did not reveal any discriminating against either men or women for these duties. However, discussions during the field survey shows that there the females rarely apply to these positions. In the Ministry of Agriculture and Natural Resources, the females are more of clerical staff (40.5 per cent) whereas the males are more of field workers (33.3 per cent). In AKADEP, women are more of field workers (75 per cent). The majority are employed as agricultural extension agents and extension officers.

Although there is no official activity-based gender discrimination in the two public agricultural institutions studied, it would seem that there are certain activities that the females would, on their own, choose not to participate in. These are mainly driving/transportation activities and engineering related activities. The results seem to depict the present situation in Nigeria where women's involvement in these type of activities is not widespread but only

found in a few right based organizations. It is expected that with activities promoting women involvement in commercial driving, mechanical work and the study of engineering courses in tertiary institutions, there will be greater women involvement in these activities in the future. Chi square test at 5 per cent level indicates that the type of activities perform by the male staff of MANR and AKADEP significantly differ from those performed by the females and vice versa.

Table 2. Nature of activities performed by males and females in public agricultural institution

Activity	MANR		AKADEP		All (n=170)
	Female (n=42) (%)	Male (n=48) (%)	Male (n=40) (%)	Female (n=40) (%)	
Field Work	19.1	33.3	45	75	42.4
Desk/Technical Staff	21.4	25	30	7.5	21.2
Administrative Staff	9.5	8.3	5	10	8.2
Clerical	9.5	2.1	7.5	5	5.9
Secretarial Staff	40.5	25	2.5	2.5	18.2
Mechanical/Engineering	0	2.1	5	0	1.8
Driving/Transportation	0	4.2	5	0	2.3

$$X^{2cal}(df=18, \alpha=.05) = 55.91; X^{2tab} = 28.9(\alpha =.05), 34.8(\alpha =.01)$$

5.2 Participation in decision-making

The gender sensitivity of the public agricultural institutions studied was examined by assessing the participation of men and women in decision making in the institutions. The results of the investigation are presented in table 3. The results reveal that more women are involved in taking decisions regarding staff welfare. A total 71.4 per cent of the female employees of the Ministry of Agriculture and Natural Resources are involved in welfare decision making while 65 per cent of their counterparts in AKADEP participate in taking decision on staff welfare. Although a high percentage of the male respondents participate in welfare decision making, the percentage involved in this is not as high as the percentage of the females, implying that there may be a tacit or

unofficial delegation of this responsibility more to women than to men. The results however, reveal that more men participate in decision making involving job allocation and other operational activities than women. This is the situation in the Ministry of Agriculture and Natural Resources as well as in AKADEP. Chi square test at 5 per cent level reveals that there is significant difference in the participation of the male and female staff of MANR and AKADEP in decision making. This suggests gender discrimination in staff participation in decision making in the public agricultural organization studied.

Table 3. Participation in decision making

Type of decision	MANR		AKADEP		All (n=170) (%)
	Female (n=42) (%)	Male (n=48) (%)	Female (n=40) (%)	Male (n= 40) (%)	
Promotions	4.8	8.3	7.5	12.5	8.2
Welfare	71.4	43.8	65	37.5	54.1
Employment	9.5	22.9	2.5	10	11.8
Job Allocation & Operational Activities	14.3	25	25	40	25.9

df =9; $X^{2cal} = 21.28$; $X^{2tab} = 16.90$ (5 per cent)

5.3 Occupation of leadership positions

Many commentators and feminists have cited denial of leadership positions in organizations as a common gender discrimination practice. This study attempted to find out if both men and women have equal opportunities to occupy available leadership positions in MANR and AKADEP respectively. The results of this investigation are presented in table 4. Almost 90 per cent of the female respondents studied in MANR have not occupied any leadership position, while 77.5 per cent of the female employees in AKADEP are in this category. Though percentages of the respondents who have not occupied

many employees), there still exists a large gap between the males and females in leadership positions. This tends to substantiate the claim of male dominance in many public institutions (Oladunni, 2003). For the number of respondents that have experienced leadership, the situation seems to differ from establishment as well as leadership position concerned. In MANR all the leadership positions seem to be dominated by the males. For instance, 25 per cent of the male respondents have been head of department or executive officer, while only 7.5 per cent of the females have been appointed to these positions. Nonetheless, the females seem to have the upper hand in occupying the position of block head in AKADEP as 10 per cent of the females occupy this position compared with 2.5 per cent of the male respondents who occupy this leadership position. Further test of differences in occupation of leadership position using chi-square test confirmed that indeed, there is a significant difference between the males and the females regarding opportunities to occupy leadership positions in the public agricultural institutions studied.

Table 4. Percentage distribution of respondents by leadership position held

Leadership Position held	MANR		AKADEP		All(n=170) (%)
	Female(n=42) (%)	Male(n=48) (%)	Female(n=40) (%)	Male(n= 40) (%)	
None	88.1	50	77.5	50	65.9
Block Head	NA	NA	10	2.5	2.9
Supervisor	2.4	16.7	2.5	20	10.6
HOD/Executive Officer	7.1	25	7.5	25	16.5
Director & other higher position	2.4	8.3	2.5	2.5	4.1
Total	100	100	100	100	100

df = 12, $X^{2cal} = 37.85$; $X^{2tab} = 21.0$ (5 per cent)

5.4 Determinants of labour supply

5.4.1 *Determinants of labour supply in the Ministry of Agriculture and Natural Resources*

In table 5, the regression results of the factors that influence the supply of labour by both male and female staff of the Ministry of Agriculture as well as all the staff of the ministry (pooled data) is presented. For the male respondents, own wage and household assets were found to be important determinants of their decision to supply their labour to the Ministry of Agriculture and Natural Resources—these factors had a positive influence on their decision. While the coefficient of own wage is significant at 1 per cent level, the coefficient of household assets is significant at 5 per cent level. The positive sign of the coefficient of household assets for male workers in the institution shows that household assets such as houses and cars would encourage labour supply. Fosu (1999) found that household assets exert a positive impact on labour supply.

The signs of the coefficients of the two variables seem to indicate otherwise. Ordinarily, one would expect that as one's income increases and the more household assets one acquires, the less one is interested in offering labour, particularly in Nigerian public service where remuneration is generally low. However, the possible explanation for this is the primitive passion to accumulate wealth. This, itself is a product of insatiable and acquisitive nature of humans. This has been implicated in the corruption that is endemic in developing countries including Nigeria.

Nwanganga (1980) in his study found that the expected income largely determines entry into the formal (wage) market. It therefore, means that workers in the institutions would use own wage to view the attractiveness of work by comparing it with the opportunity cost of staying at home (reservation wage).

The coefficient of level of education of respondents was found to be negative, suggesting that the higher the respondent's level of education, the less he is willing to work in the Ministry of Agriculture and Natural

Resources. All the included variables explain about 75 per cent of the variation in male labour supply to the Ministry of Agriculture and Natural Resources.

The result of the female labour supply function indicates that household assets, marital status and number of children of pre-school age were important determinants of female labour supply to MANR. The coefficients of household assets and number of children of pre-school age were negatively signed, indicating inverse relationship between them and the decision of the female respondents to offer their services to the Ministry of Agriculture and Natural Resources. The behaviours of these variables are as expected. The apparent willingness of married women to join the labour force stems from a desire to provide their family with a higher standard of living. The result reveals a negative sign for the coefficient of assets for females. This implies that as the household assets increase, women will tend to withdraw from working in public agricultural institutions. This may be because women have lower opportunity cost of non-participation when there is increased household assets than male, based on the fact that amongst households with either more income or more children, there is a higher demand for a married woman's time in household production, therefore her reservation wage is higher (Neuman *et al*, 1998).

As for the sign perceived from the number of pre-school children, it simply means that the larger the number of pre-school children the woman has to take care of, the less time she is expected to have to work in the public service. Nwanganga (1980) in his study found that the type of responsibility a woman has in the household largely determines entry into the formal (wage) market for women. It therefore, means that females in the institutions would consider the responsibility of taking care of the children at home than taking up formal employment in the public sector. It is this type of situation that has generated the call for the provision of child friendly work environments so that women of reproductive age can participate in the labour market.

The result from the pooled data further confirmed that importance of own wage, level of education and number of children of school age are important factors influencing both male and female workers in the Ministry of

Agriculture and natural Resources to offer their services to this institution. However, the coefficient of the dummy variable which was intended to capture sex/gender effect was not statistically significant. This means that one sex may not necessarily influence the decision of the workers in the MANR to offer their services to the institution.

Table 5. Determinants of labour supply in Ministry of Agriculture and Natural Resources (MANR) (double log function)

Variables	Male Coefficients	Female Coefficients	Pooled Data
Constants	-12.020 (-0.480)	13.939 (2.413)***	-1.737 (-1.383)
Own wage (W_o)	6.444 (2.759)***	5.490E-04 (-0.423)	.736 (5.027)***
Spouse wage (W_s)	-0.332 (-1.244)	-2.72E - 05 (-0.423)	-2.44E-02 (-1.382)
Household assets (V)	1.442 (2.092)**	-7.92E - 06 (-3.371)***	4.229E-02 (1.155)
Age of respondents (Age)	4.673 (-0750)	1.187E - 02 (0.069)	.279 (.758)
Marital status (Ms)	-0.318 (-4.534)	6.101 (2.369)***	.253 (1.355)
Educational level (EDU)	-28.139 (-4.534)***	-2.206 (-3.225)***	-1.929 (-5.321)***
Number of children of school age (CHSAGE)	6.920 (4.875)***	0.809 (1.117)	.385 ((4.094)***
Number of children of pre-school age (CHPSAGE)	4.749 (1.408)	-5.237 (-3.032)***	.157 (.789)
Sex(Dummy)			4.670 -02 (.492)
R	0.892	0.920	.872
R ²	0.796	0.813	.760
Adjusted R ²	0.754	00.767	.733
F-statistics	19.038	17.091	28.141
Standard error	4.3117	3.2416	.3531

Note: **, *** are 5 per cent and 1 per cent significant levels respectively. t-ratio figures in parenthesis

5.4.2 *Determinants of labour supply in the Agricultural Development Project (ADP)*

Table 6 contains the results of regression analysis of determinants of labour supply to Akwa Ibom Agricultural Development Project (AKADEP). For the male respondents, own wage and age were positively related to their labour supply decisions while educational level was inversely related. The coefficient of own wage shows that a one naira increase in salary could increase the number of years the males are willing to work by about 10 years. While this sounds outrageous, the reality on ground supports this as most public servants are unwilling to quit service unless mandatorily retired or forced by age and or infirmity to do so. It may also imply that it is not actually the regular salary that sustains male workers' interests in public institutions.

The coefficient of age is positive and significant at 1 per cent level. This means that age is one of the important determinants of male labour supply. Pencavel (1986) submits that labour supply of individuals rises in youth and declines in old age. Viewed from this life cycle dimension, the positive sign of the coefficient of age indicates that male respondents in AKADEP were young, hence their desire to supply labour.

Educational level is significant at 1 per cent level. Nonetheless, educational level is found to be negatively related to labour supply. This implies that the higher the level of educational attainment of an individual, the less likely he or she will supply labour in these two public agricultural institutions. This applies to both males and females. This situation might be attributed to perceived poor conditions of service in public agricultural institutions, such as: poor and irregular salary, poor work environment, lack of opportunity for growth etc. The findings of the study are in conformity with results of previous studies. Manda (1997) for instance, reports that during the era of Structural Adjustment Programme in Kenya, the rapid expansion of education was accompanied by the problem of unemployment, decline in real wages and the rapid increase in the informal sector employment (private sector). Thus, it can be concluded that higher education could lead to depletion of the workforce in the public service.

The result of the female supply function was similar to that of the male labour supply function except that age was not found to be an important determinant of female labour supply. However, as was the case in the female labour supply in the Ministry of Agriculture and natural Resources, the number of pre-school children was found to be a significant but negative determinant of the female labour supply to AKADEP. The negative sign of the coefficients

Table 6. Determinants of male and female labour supply in the Akwa Ibom Agricultural Development Programme (AKADEP) (Double Log Function)

Variables	Male Coefficients	Female Coefficients	Pooled Data Coefficients
Constants	-77.715 (-5.557)***	6.332 (1.036)	-8.131 (-4.873)***
Own wage (W_o)	10.682 (5.565)***	3.678E-04 (4.571)***	.963 (4.804)***
Spouse wage (W_s)	0.139 (1.062)	-6.19E - 05 (-1.669)	6.797E-03 (0.398)
Household assets (V)	-0.559 (-1.054)	-1.72E - 06 (-1.527)	3.351E-02 (0.684)
Age of respondents (Age)	8.299 (1.953)**	0.334 (3.150)	1.139 (2.731)***
Marital status (M_s)	-1.357 (-0.809)	3.115 (1.586)	-0.140 (-0.668)
Educational level (EDU)	-16.274 (-3.022)***	-1.158 (-3.332)***	-1.498 (-2.598)***
Number of children of school age (CHSAGE)	1.181 (1.236)	0.214 (0.616)	0.102 (1.036)
Number of children of pre-school age (CHPSAGE)	-4.124 (-1.448)	-2.680 (-3.264)***	-.438 (-1.641)
Sex(Dummy)			-3.91E-03 (-0.040)
R	0.928	0.889	.850
R ²	0.861	0.791	.723
Adjusted R ²	0.826	0.737	.687
F-statistics	24.103	14.639	20.309
Standard error	2.4026	2.3148	.3743

Note: *, **, *** are 10 per cent, 5 per cent and 1 per cent significant levels respectively. t-ratio figures in parenthesis

Source: Field Survey, 2007

implies that the more the number of children of pre-school age a household has, the less the woman (wife) will be available for public service work. A similar study by Maglad (1998) reports that small children of pre-school age tend to discourage women from labour supply, whereas older children encourage women to supply labour. Thus, a gender and baby-friendly work environment needs to be provided in public institutions. At the moment, this is not the case in Akwa Ibom Agricultural Development Project.

6. Policy Implications and Conclusion

Several issues of policy relevance have emerged from this study. Firstly, the public agricultural institutions studied do not have gender discriminatory policies. However, the females tend not to show interest in such duties as driving and engineering work. Programmes that will ensure more women obtain training that will equip them for these types of duties are therefore desirable if women must join their male counterparts in performing such duties. Secondly, significant differences were in participation in decision making and leadership positions held by the male and female employees of MANR and AKADEP. For transparency sake, a decision-making process that involves every cadre of staff should be put in place in public institutions. In this way, all staff—male and female would be involved in decision making. This would make for inclusive decision making and joint/collective ownership of the outcome of a given decision taken through such process.

Having established a relationship between labour supply and some socioeconomic characteristics of workers in public agricultural institutions in Akwa Ibom State as well as factors that determine their labour supply decisions, it is important to draw the attention of policy makers within public agricultural institutions and the government to the need to educate men and women equally so as to enhance labour supply. It is also essential for public agricultural institutions to provide support services for the welfare of female staff in form of health clinics and child care in order to empower married

women with children of pre-school age to supply labour. The inverse relationship of educational level and participation in public agricultural institutions is a clarion call to managers and administrators of public institutions to make the public service attractive to persons with a high level of education. This is one sure way to achieve high productivity from the service and sustainable growth and development of the country.

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