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GENDER DIFFERENTIALS IN LABOUR MARKET PARTICIPATION OF RURAL HOUSEHOLDS IN NON-FARM ACTIVITIES IN OYO STATE, NIGERIA

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ABSTRACT

Gender inequities in labour market opportunities is a particular concern since earnings from labour supplies are the most important source of income for the poor in the rural economies of developing countries. This study examined gender differentials in labour market participation of rural households in non-farm activities in Oyo state, Nigeria. A multistage random sampling technique was employed in selecting 120 rural households. Descriptive Statistics, Double- Hurdle regression model and Multinomial Logit regression models were the analytical tools employed. The mean farm size was relatively small as more than three-quarters of both male and female headed households respectively cultivated less than 1 hectare. Regression results indicated that male and female headed households participated and allocated more time to non-farm activities as their age and household size increased while farm size and remittances had negative effects. The decision on whether a household would hire or supply labour was largely influenced by the age of the household head, farm size, farming experience, household size and being a member of a cooperative group. However, female headed households' participation was constrained mainly by inaccessibility to town as a result of the long distance between the homestead and the nearest town. The study recommends the establishment of small and medium enterprises in the rural areas to encourage the participation of both male and female headed households in non-farm income generating activities to cushion declining farm incomes.

Contribution/Originality: This study contributes in the existing literature by complementing current research on labour market participation in Oyo State, Nigeria, a few of which have examined gender differences in non-farm activities by rural households.

1. INTRODUCTION

The rural labour force has been growing at a rate faster than the agricultural labour force is able to absorb (World Bank, 2008) This, along with low agricultural productivity, had challenged the potential of agricultural sector employment as a pathway out of poverty. There had also been some observed income diversification as a result of declining farm incomes and the desire to insure against agricultural production and market risks (Freeman, 2003; Lanjouw, 2007). As a result, non-farm activities emerged as an alternative to and supplement for farming activities in rural communities, increasing the output in the rural labour markets (Emerole *et al.*, 2008).The rural labour market consists of low paid farm and non-farm employment activities operated by smallholder farmers, making involvement in the rural labour market a means of empowering the rural poor whose access to physical capital and western education is limited. Empowerment of the rural poor, of course, is pertinent to increasing labour

productivity in the rural labour market, that is, the output of labour supplied exceeding the labour supplied by rural households since it translates to improved standard of living and contributes to the GDP of a nation (Ukoha, 2000; Bedemo *et al*., 2013).

The component of rural off-farm employment, in which the poor can participate because it does not require any complementary physical capital, is wage labour i.e. to supply their labour for wage in the rural labour markets (Barrett *et al*., 2001). This is owing to the fact that a combination of non-farm and farm work at household level is an efficient way of households' labour resource use as it allows income levels compatible with farm survival by taking into account income opportunities stemming from the farm and alternative employment opportunities (Corsi and Salvioni, 2013).

However, gender inequities in labour market opportunities is a particular concern since earnings from labour supplies are the most important source of income for the poor in the rural economies of developing countries (Lustig, 2000). In other words, income generating activities are not evenly distributed among male headed households and female headed households, despite the fact that both men and women play multiple roles (productive, reproductive and community management) in the society (Ekong, 2003). More so, failure to determine the quantity and quality of rural households' labour supplied to these non-farm sectors and to the available farm activities by men and women poses a serious threat to labour market contribution to development of rural communities (WB, 2009).

Based on the foregoing, this study examined gender differences in labour market participation in non-farm activities, time allocation and labour market participation regimes of rural households.

2. METHODOLOGY

This study was conducted in Oyo State, Nigeria. A multi-stage random sampling technique was employed in selecting representative households. The first stage was a random sampling of three Local Government Areas (LGAs) from the three Senatorial districts in Oyo State. These include Iseyin Local Government area selected from Oyo North Senatorial district, Ido Local Government area selected from Oyo South Senatorial district and Akinyele Local Government area selected from Oyo Central Senatorial district. The second stage was the random selection of two villages each from the LGA's. Adewuyi and Akan communities were randomly selected from Iseyin local government area, Olorisa and Onidundu communities were randomly selected from Akinyele local Government area while Omi-Adio and Akufo communities were randomly selected from Ido local Government area. The third stage involved the random selection of twenty households from each of the villages to make one hundred and twenty respondents in all. The analytical tools used in this study include Descriptive Statistics, Double Hurdle regression and the Multinomial Logistic Regression models.

2.1. Double Hurdle Regression Model

The Double Hurdle model, developed initially by Cragg (1971) is designed to deal with survey data which has many zero observations on a continuous dependent variable. It generalizes the Tobit model by allowing for a separate first hurdle which represents a household's decision to participate, and a second hurdle which represents the consumer's decision about how much time to allocate. Participation is realized only after both hurdles are cleared. It may be presumed that for each decision the individual weighs up the utility difference of each course of action but as these calculations cannot be observed directly, the model operates by assuming the existence of two latent variables: y_1^{**} associated with the individual's decision to participate in the non-farm labour market, and y_2^{**} associated with the decision of how many hours to work off farm. These are linear functions of the first and second hurdle regressors, X_1 and X_2, respectively:

$$y_1^{**} = \beta_1 X_1 + \varepsilon_i$$

$$y_2^{**} = \beta_1 X_2 + \varepsilon_2$$

Thus, X_1 represents those variables used to explain the participation decision and X_2 represents those variables used to explain the hours of work decision. If we denote an (unobservable) index variable as y_1^* = 1, if the individual decides to participate and y_1^* = 0, otherwise, then:

$$y_1^* = 1 \text{ if } y_1^{**} > 0 \text{ and } y_1^* = 0 \quad \text{otherwise.}$$

It is assumed that the error term ε_1 is normally distributed, then, the first hurdle corresponds to a Probit model. Turning to the hours of work equation, conditional upon clearing the first hurdle, non-farm labour, y_2^* , is generated as:

$y_2^* = y_2^{**}$ if, $y_2^{**} > 0$ and $y_2^* = 0$ otherwise and the second hurdle takes the form of a Tobit model, which is capable of generating zero levels of non-farm labour, independent of the first hurdle. The observed hours of work, *y*, is determined by the interaction of both hurdles:

$$y = y_1^* y_2^*$$

2.2. Multinomial Logit Regression Analysis

Logistic regression is a tool used in predicting a categorical (usually dichotomous) variable from a set of predictor variables. Logistic regression can be extended to handle responses that are *polytomous*, i.e. taking *y*>2 categories. It is often chosen if the predictor variables are a mix of continuous and categorical variables and/or if they are not normally distributed. With a categorical dependent variable, discriminant function analysis is usually employed if all of the predictors are continuous and normally distributed. By using the multinomial logistic regression the probability of a result being in one of the response categories is modeled as a function of the level of one or more explanatory variables.

However, the multinomial logit model does not allow analyzing the probability of being allocated to a specific labor market category, rather only the relative probabilities can be distinguished because of identification restrictions. So, it is necessary to normalize by assuming one of the alternatives as a reference category so that each regime will be compared against this base category. For this study, the response variable is 1 when the rural households supply labour, 2 when the household hire labour, 3 when the household both supply and hire labour and 0 when the household neither supply nor hire labour (self-sufficient), this serves as the base category. The functional form is denoted in equation (1).

$$\ln\left[\frac{\theta_i}{1-\theta_i}\right] = \beta_{0+} \sum_{j=3}^{k} \beta_j X_j + \varepsilon_i$$

Where j is response category(0,1,2,3)i denotes cases $(1,2,3,4,n)$ and is the conditional probability, β_0 is the coefficient of the constant term, β_j is the coefficient of the independent variables, X_{ij} is the matrix of observed values, ε_i is the matrix of unobserved random effects, $\frac{\theta_i}{1-\theta_i}$ is the odds and $\ln\left[\frac{\theta_i}{1-\theta_i}\right]$ is the logarithm of odds.

3. RESULTS AND DISCUSSIONS

3.1. Socioeconomic Profile of Respondents

The socioeconomic characteristics of the farm households are presented in Table 1. The mean ages of household heads were found to be 45.9± 13.5 and 47.4±13.2 years for male and female headed households respectively. This indicates that majority of the respondents were in their economically productive age, implying a greater involvement in both farm and non-farm activities.

Table-1. Socioeconomic Characteristics of the Respondents

Socioeconomic characteristics	Male		Female	
	Frequency	Percent	Frequency	Percent
Age of household head				
≤30	10	15.2	10	18.5
31-60	44	66.7	36	66.7
>60	12	18.2	8	14.8
Total	66	100.0	54	100.0
Mean	45.9		47.4	
Standard Deviation	13.5		13.2	
Household size (in number)				
≤5	40	60.6	39	72.2
6-10	21	31.8	14	25.9
>10	5	7.6	1	1.9
Total	66	100.0	54	100.0
Mean	5.5		4.9	
Standard Deviation	3.0		3.9	
Farm size (in hectares)				
≤1.00	51	77.3	50	92.6
1.00-3.00	12	18.2	4	7.4
>3.00	3	4.5	0	0.0
Total	66	100.0	54	100.0
Mean	0.7		0.4	
Standard Deviation	1.0		0.6	
Non-farm weekly earnings(₦)				
< 5000	28	42.4	25	46.3
5000 – 10000	31	47.0	22	40.7
10000 – 20000	6	9.1	7	13.0
> 20000	1	1.5	0	0.0
Total	66	100.0	54	100.0
Mean	5,290.61		5,552.04	
Standard Deviation	4,828.08		369.04	
Time allocated to non-farm activities weekly(in hours)				
< 25.00	25	37.8	13	24.1
25.00 - 50.00	18	27.3	22	40.7
50.00 - 75.00	19	28.8	17	31.5
> 75.00	4	6.1	2	3.7
Total	66	100.0	54	100.0
Mean	35.4		39.1	
Standard Deviation	**28.223.6**			

Source: Computation from survey data

Most of the households had 5 members or less. The mean farm size of male-headed households of 0.78±1.06 hectares was found to be slightly greater than that of female-headed households of 0.48±0.40 hectares. About 37.8% and 24.1% of the male and female respondents spent less than 25 hours on non-farm activities per week, while about an average of 35 and 39 hours were spent on non-farm activities weekly by male and female-headed households respectively.

3.2. Labour Allocation and Market Participation Regimes of Rural Households

Table 2 presents the labour allocation and market participation regimes of the rural households. Results showed that more than three-quarters of the female headed households and about three-quarters of their male counterparts were engaged in non-farm activities such as trading, self-employment, civil servants and artisanship. This shows clearly that females in the study area take part more in non-farm activities relative to their male counterparts. With respect to labour market participation regimes for both male-headed and female-headed households, all age categories with the exception of age category of ≥ 60 years were mainly simultaneous hirers and suppliers of labour. This implies that gender differences in labour allocation and market participation with respect to age in the study area is insignificant. Further, for male and female-headed households with less than 5 members, most of the respondents were mainly simultaneous hirers and suppliers of labour while others either hire, supply or neither hire nor supply labour. Similarly, male and female-headed households with household size of between 6 and 10 members were mainly simultaneous hirers and suppliers of labour, while households with more than 10 members participated more in the labour market as suppliers of labour than hirers as expected. Also male respondents with farms greater than 1.00 hectare participated mainly in the hirer regime while their female counterparts participated mainly in the labour market as simultaneous hirer and suppliers.

Table-2. Rural Households' Labour Allocation

Activities	Female		Male	
	Frequency	Percent	Frequency	Percent
Farming	8	14.8	16	24.2
Trading	30	55.6	22	33.3
Self employed	8	14.9	20	30.3
Civil servant	5	9.3	4	6.1
Artisans	3	5.6	4	6.1
Total	54	100.0	66	100

Source: Computation from survey data

Table-3. Market Participation Regimes of Rural Households by Gender

	Male				Female			
	Hirer	Supplier	Both	Autarky	Hirer	Supplier	Both	Autarky
Age (in years)								
≤ 30	0 (0)	4 (3.3)	5 (4.2)	1(0.8)	0(0)	2(1.7)	7(5.8)	1(0.8)
31-60	8 (6.7)	13 (10.8)	19(15.8)	4(4.4)	9(7.5)	5(4.2)	17(14.2)	5(4.2)
>60	7 (5.8)	1 (0.8)	1(0.8)	3(2.5)	5(4.2)	-	-	3(2.5)
Total	15(12.5)	18 (15.0)	25(20.8)	8(6.7)	14(11.7)	7(5.8)	24(20.0)	9(7.5)
Household size (number)								
≤ 5	5(4.2)	14(11.7)	16(13.3)	5(4.2)	8(6.7)	18(15.0)	7(5.8)	6(5.0)
6-10	6(5.0)	2(1.7)	8(6.7)	5(4.2)	2(1.7)	6(5.0)	4(3.3)	2(1.7)
>10	2(1.7)	3(2.5)	-	-	-	1(0.8)	-	-
Total	13(10.8)	19(15.8)	24(20.0)	10(8.3)	10(8.3)	25(20.8)	11(9.2)	8(6.7)
Farm size (hectares)								
≤ 1.00	3(2.5)	16(13.3)	21(17.5)	11(9.2)	9(7.5)	6(5.0)	22(18.3)	13(10.8)
1.00-3.00	5(4.2)	2(1.7)	4(3.3)	1(0.8)	1(0.8)	1(0.8)	2(1.7)	0(0)
> 3.00	3(2.5)	-	-	-	-	-	-	-
Total	11(9.2)	18(15.0)	25(20.8)	12(10.0)	10(8.3)	7(5.8)	24(20.0)	13(10.8)

Source: Computation from survey data
Note: Figures in parentheses are percentages.

3.3. Factors Influencing Participation in Non-Farm Activities and Time Allocation of Rural Households

Analysis of the factors influencing non-farm participation and time-allocation of rural households revealed that age and age squared were significant and had positive and negative relationship with participation in and time allocated to non-farm activities respectively for both gender. This implies that as age increased, participation in non-farm activities as well as the number of hours allocated to non-farm increased. This may be owing to the fact that older household heads have more experience needed to enhance their participation in non-farm activities, however this is seen to decline as they grow older. Similarly, household size was significant and had a positive relationship with both participation in non-farm activities and the number of hours allocated to non-farm activities for both gender. This indicates that the probability of rural households' heads participation in non-farm wage activities increased with increase in household size. This may be attributed to the fact that usually larger households have a wider range of needs and greater food and non-food expenses, therefore the need to earn additional income from non-farm sources becomes imperative. This finding agrees with the findings of Skoufias (1994); Matshe and Young (2004). The number of hours allocated to non-farm activities also increased with increase in household size. In addition, marital status had a positive relationship with participation and the number of hours allocated to non-farm activities for female headed households only. Specifically, being widowed increased the likelihood of participation in non-farm activities and also the number of hours allocated to the non-farm activities. This is expected as such households would need to engage in other activities to augment household income.

On the other hand, farm size was significant and had a negative relationship with participation in non-farm activities and the number of hours allocated to non-farm activities for female-headed households, but was significant only for the number of hours allocated to non-farm activities for male-headed households. This implies that increase in the hectares of farm land of a household decreased the likelihood of participation in non-farm activities and also decreased the number of hours that households allocate to non-farm activities. This may be attributed to the fact that households with big farms spend more time in various farming operations and therefore have limited time available for non-farm activities. This is supported by the results of Abdulai and Delgado (1999);Woldenhanna and Oskam (2001); Ibrahim and Srinivasan (2013); Bedemo *et al.* (2013). Also, remittances was significant and had a negative relationship with participation in non-farm activities and also the number of hours allocated to non-farm activities for both male and female headed households. By easing the constraint on household income, remittance income reduced the need to undertake non-farm activities. Distance to nearest town had a negative relationship with both participation and number of hours allotted to non-farm activities for the female-headed households. This is similar to the findings of Babatunde *et al.* (2010) that the closer the locations where there are non-farm work opportunities for rural households, the greater the likelihood of participation and number of hours allocated to non-farm activities.

Likewise, leisure had a negative relationship and significant relationship with participation in non-farm activities but no significant effect on the number of hours allocated to non-farm activities for both gender. This implies that there is a trade-off between the number of hours allocated to leisure and non-farm activities. In other words, the higher the number of hours allocated to leisure, the lower the probability of participation in non-farm activities.

Table-4. Non-Farm Participation and Time Allocation of Male Headed Rural Households (Double hurdle Model)

Variables	1st Hurdle		2nd Hurdle	
	Coefficient	Z- stat	Coefficient	Z- stat
Age	0.213	2.09**	2.581	1.92***
Age square	-0.002	-2.32**	-0.009	-2.31**
Marital status	-0.400	-0.76	-4.603	-0.56
Household size	0.110	2.06**	4.145	2.52**
Educational years	0.022	0.46	0.503	0.73
Farming	-1.193	-2.91*	-2.268	-0.26
Farm size	-0.255	-1.25	-1.304	-1.93***
Farming experience	-0.032	-1.65***	-0.141	-2.23**
Cash crop farm	0.341	0.65	3.687	0.55
Remittance	-0.000	-2.12**	0.000	0.30
Leisure	-0.057	-2.21**	-0.045	-0.07
Household chores	0.010	0.33	-0.868	-1.54
Total assets value	5.99e-07	0.34	0.000	0.45
Distance to nearest town	0.002	0.03	0.432	0.39
Constant	7.088	2.97	88.620	2.55

Source: Regression result from survey data ***,**,*- significant at 1%, 5% and 10% respectively.

Table-5. Non-Farm Participation and Time Allocation of Female Headed Rural Households (Double hurdle Model)

Variables	1st Hurdle		2nd Hurdle	
	Coefficient	Z- stat	Coefficient	Z- stat
Age	1.075	2.98*	-0.220	-0.10
Age square	-0.013	-3.00*	0.000	0.01
Marital status	3.003	2.54**	12.440	1.70***
Household size	1.745	2.49**	1.230	3.23*
Educational years	0.028	0.40	0.400	0.86
Farming	-1.745	-4.04*	-4.800	-0.84
Farm size	-3.780	-2.11**	-19.093	-2.06**
Farming experience	0.100	1.32	0.280	0.56
Cash crop farm	-8.980	-2.64*	-31.880	-3.00*
Remittance	-0.000	-2.10**	-0.000	-0.45
Leisure	-0.087	-2.83*	-0.800	-1.53
Household chores	-0.045	-1.17	-0.700	-1.53
Total assets value	-0.000	-1.63	0.000	1.57
Distance to nearest town	-0.805	-2.63*	-1.882	-2.85*
Constant	-17.074	-2.33	41.725	0.77

Source: Regression result from survey data ***,**,*- significant at 1%, 5% and 10% respectively.

3.4. Determinants of Rural Households Labour Market Participation Regime.

Results of the Multinomial Logit Regression analysis in Table 6 showed that age was significant and had a negative relationship with participation as a hirer for the male-headed households. Marginal effects results showed that a unit increase in age of the household head reduced the probability of participation in the buyer's regime relative to autarky (neither buy nor sell) by 0.022. This implies older household heads have a lower probability of participating as a hirer in the rural labour market. Age squared on the contrary, had a positive relationship with participation as a hirer. This implies that at much older years, the likelihood of participation as a buyer increases relative to the autarky regime. This could be attributed to the fact that as household heads grow much older there is a higher likelihood that they will hire labour for most activities, to which they pay income to, in return for their services.

Farm size had a positive relationship with the hirer regime for both male and female headed households. This is expected as households with larger farmlands are more likely to employ more units of hired labour to cultivate their land. Ownership of a cash crop farm had a positive relationship with the hirer regime. Specifically, being an owner of a cash crop farm increased the probability of participation as a buyer of labour by 0.45 units relative to the

autarky regime. This could be owing to the fact that more labour is needed to carry out activities related to cultivation, harvesting and processing. .Also, while being a member of a cooperative group increased the probability of participation as a buyer of labour by 0.53 units relative to the autarky regime, access to remittance had a negative relationship with participation as a supplier of labour only.

For the female-headed households on the other hand, as presented in Table 7, age squared had a positive marginal effect on participation as a hirer only. This shows that at older years, a year increase in the age of the household head increased the probability of participation in the buyer's regime by 0.160 units relative to the autarky (neither buy nor sell) regime. Age also had a negative marginal effect on participation as seller of labour relative to the autarky regime. In other words, a year increase in the age of the household head decreased the probability of participation as a seller of labour relative to the autarky regime. Being married decreased the probability of participation as a supplier of labour by 0.863 units relative to the autarky regime. This implies that married household heads have a lower likelihood of participating in the supplier of labour regime. Marital status is however not significant for the other regimes.

Table-6. Determinants of Rural Households Labour Market Participation (Male-headed Households)

Variables	Hirer only		Supplier only		Hirer and Supplier	
	dy/dx	Z-stat	dy/dx	Z-stat	dy/dx	Z-stat
Age	-0.022	-2.51**	0.001	0.20	0.007	2.91*
Age square	0.0002	2.61*	-0.000	-0.68	-0.001	-2.85*
Marital status	-0.012	-0.43	-0.050	-0.64	-0.085	-0.60
Household size	0.000	0.37	0.380	3.32*	0.002	0.53
Educational years	0.000	0.45	0.002	0.80	0.003	0.86
Farming	0.122	1.38	-0.122	-1.38	0.122	1.38
Farm size	0.380	3.32*	0.020	0.70	0.020	2.63*
Farming experience	-0.000	-0.47	0.012	2.77*	-0.001	-0.86
Cash crop farm	0.458	3.78*	0.113	0.97	0.141	0.99
Remittance	2.45e-07	0.40	-0.0001	3.08*	9.67e-07	0.53
Leisure	0.014	1.30	-0.003	-1.13	-0.003	-1.12
Household chores	0.004	0.51	0.004	0.54	0.004	0.52
Total assets value	-9.68e-09	-0.39	-2.11e-08	-0.55	-3.07e-08	-0.55
Distance to nearest town	0.001	0.44	0.003	0.73	0.005	0.88
Cooperative	0.530	3.95*	-0.100	-1.62	-0.384	-2.45**

Source: Regression result from survey data **,*- significant at 5% and 10% respectively.

Household size was significant only for the simultaneous hirer and supplier regime and had a negative relationship with participation as a seller of labour only. This indicates that the bigger the household size the lower the likelihood of participating as a simultaneous hirer and supplier of labour in the rural labour market. Total assets value was significant for the hirer and the simultaneous hirer and supplier regimes and had positive effects in both regimes. That is, a unit increase in the total assets value of a household increased the probability of the household being a supplier of labour relative to the autarky regime, this may be owing to the fact that households with high asset value tend to either want more assets or maintain the ones they own already thereby, they supply labour to various non-farm activities to generate more income. Remittance was however significant to the three regimes. While it had a positive effect in the hirer regime, implying that a unit increase in the unearned income of a household increased the probability of participation as a buyer of labour relative to autarky regime, its effect in both supplier and simultaneous hirer and supplier regimes was negative. This indicates that a unit increase in the unearned income of a household decreased the probability of participation as a supplier of labour by 0.008 units and decreased the probability of participation as a simultaneous buyer and seller of labour by 0.020 units relative to the autarky regime respectively.

Table-7. Determinants of Rural Households in Labour Market Participation (Female-headed Households)

Variables	Hirer only		Supplier only		Hirer and Supplier	
	dy/dx	Z-stat	dy/dx	Z-stat	dy/dx	Z-stat
Age	0.610	2.15**	-0.006	-3.10*	0.014	0.70
Age square	-0.124	-1.42	0.00006	3.12*	-0.00009	-2.90*
Marital status	-0.040	-0.98	-0.863	-7.16*	0.200	1.21
Household size	-0.100	-1.11	0.046	1.43	-0.034	-1.95***
Educational years	-0.013	-0.54	-0.008	-1.15	-0.001	0.58
Farming	0.300	2.50**	0.003	0.39	0.300	2.50**
Farm size	0.800	2.20**	0.148	1.23	0.124	1.42
Farming experience	0.013	1.69***	-0.008	-1.41	-0.001	-0.73
Cash crop farm	1.68e-06	0.93	0.000	1.07	3.25e-06	0.61
Remittance	0.530	2.38**	-0.008	2.90*	-0.020	1.75
Leisure	0.003	0.47	0.003	0.45	0.003	0.50
Household chores	-0.009	-0.82	-0.008	-1.01	-0.009	-0.86
Total assets value	0.00003	2.25**	3.64e-07	0.64	0.010	2.74*
Distance to nearest town	0.061	1.59	0.004	0.42	-0.005	-0.75
Cooperative	-0.111	-1.10	-0.111	-1.10	-0.024	-0.66

Source: Regression result***,**,*- significant at 1%, 5% and 10% respectively.

3.5. Constraints to Labour Market Participation by Rural Households in Non-Farm Activities.

Table 8 presents the major constraints to labour market participation reported by both male and female-headed households. These include mainly high start-up capital, lack of formal education and low wage rate for both gender. While gender bias was the least of the constraints to labour market participation reported by male-headed households, access to land was the least reported constraint by the female-headed households.

Table-8. Constraints to Labour Market Participation

Constraints	Males Frequency	Rank	Females Frequency	Rank
Start-up capital	74.2	1	75.9	1
Lack of formal education	62.1	2	55.6	2
Low wage rate	47.0	3	50.0	3
Inadequate training	43.9	4	37.0	6
Poor road network	34.8	5	27.8	7
Access to inputs	34.5	6	37.1	5
Farm production level	21.2	7	9.5	9
Access to land	13.6	8	9.3	10
Others(age, time)	9.1	9	11.1	8
Gender bias	7.6	10	38.9	4

Source: Field Survey, 2015.
Note: The frequency does not add up to 100% because respondents were allowed multiple responses.

4. CONCLUSION AND RECOMMENDATIONS

The study examined gender differentials in labour market participation by rural households in non-farm activities in Oyo state, Nigeria. Results revealed that majority of rural households engage in non-farm activities and are in their economically active ages. However, while female household heads allocated more number of hours to non-farm activities per week (39.2 and 35.5 hours for the female and male -headed households respectively), on the average, male-headed households earn more from non-farm activities monthly.

Factors such as age, household size, being a farmer, farm size, farming experience, access to remittances and number of hours allocated to leisure were found to be the main significant factors which influenced the participation and time allocation of both gender in non-farm activities in addition to marital status, ownership of cash crop farm and distance to nearest town for female-headed households.

The probability of participating as a hirer or a simultaneous hirer and supplier in the labour market for male-headed household increased with increase in age. Remittances had a negative effect in the supplier regime and increase in household size increased the probability of participation in that regime. On the other hand, households with larger hectares of farm and who cultivated cash crops had increased probability of participation in the hirer regime. Female-headed households had similar significant factors with the addition of marital status which was significant in the supplier regime. Membership of cooperative groups was also a significant factor in the hirer and simultaneous hirer and supplier regimes for both gender.

The study concludes that although female headed households participated in non-farm work activities like their male counterparts to supplement farm incomes, gender differences still exists in labour market participation by rural households in Oyo State. Thus, based on the findings from the study, it is recommended that:

- Rural households be encouraged to form co-operative groups so as to be better positioned to obtain credit to help them improve their participation in the rural labour market. In addition, micro-credit institutions with reasonable interest charges should be established in the rural areas to increase households' access to credit.
- Labour market wage policies should ensure equitable returns to both gender.
- Increased access of rural households' to non-farm employment should be encouraged by construction of feeder roads between rural areas and nearest towns.

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