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Gender differentiation in Daily Farm Wage Rates in Abuja, Nigeria

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Abstract

The main objective of the study was to determine if significant difference existed in gender daily wage rates (wage rate/day) in farm production activities. Multi-stage technique was used for sample selection while structured questionnaires were used for data collection. A total of 168 farmers were randomly interviewed in four Agricultural Zones (42 respondents in each agricultural zone). Data were analyzed using two-way mixed factorial analysis of variance and mean separation was done at 5% probability level. Results revealed that there was significant difference ($P < 0.05$) in the gender daily wage rates. The daily wage paid to an adult male (₦950 = \$ 6.47) was significantly higher than the wage paid to an adult female (₦692.08 = \$ 4.55), young male (₦683.33 = \$ 4.73) and young female (₦562 = \$ 3.70). Young females received the least daily wage. Generally, the grand mean daily wage was ₦734.82 (\$ 4.86). Furthermore, there was significant ($P < 0.05$) main effect of location meaning that there were locational differences in the average daily wage rate. The Eastern Agricultural Zone had the highest daily wage (₦798.94). On the contrary, there was no significant ($P > 0.05$) interaction effect between gender daily wage rates and locations. Based on the findings, the paper concluded that there was significant difference in gender daily wage rates. It was recommended that the study should be replicated in other places for cross-validation purposes.

Keywords: average daily wage rates, farm production activities, gender

Introduction

Gender simply refers to the socially constructed roles and responsibilities assigned to women and men in a given culture. It focuses on the relationship between men and women in terms of their roles, access to and control over scarce resources, division of labour and other needs (Imoh and Nwachukwu (2009). In agriculture, both men and women, that is, both genders provide labour in form of hired or family labour. Hired labour attracts wage while family labour does not but it is always appreciated by family members. Labour availability according to FAO (2011) depends on the amount of family labour that a household can mobilize and the amount of labour that can be hired in local labour markets. Several studies

have been conducted to determine the importance of labour in agriculture (Haruna *et al.*, 2010; Jirgi *et al.*, 2011; Lawal *et al.*, 2008; Anyanwu, 2010; Iheke and Nwaru, 2009 and Okoye *et al.*, 2009). All the studies attested to the fact that labour input significantly influences farm output and productivity.

Judging from the documented evidence on the importance of labour in agriculture, it is very clear that labour, whether provided by a male or a female, plays significant roles in agricultural development but on the contrary, it is also one of the major sources of controversy between men and women especially, in developing countries like Nigeria. The gender wage gap, the observed difference between wages paid to women and wages paid to men, has been a source of both political controversy and economic research throughout the past several decades (ILO, 2009b). Feminists and women supporters have argued that female labour received lower wage compared to their male counterparts. They maintained that women are marginalized in agriculture because men receive higher wages more than women even when women are acclaimed to be more involved in agricultural production activities. Reports from a number of studies (Ahmed and Maitra, 2010; Fontana, 2009; ILO, 2009a; ILO 2009b) confirm that women, on average, are paid less than men for equivalent jobs and comparable levels of education and experience. In Ghana, for example, Hertz *et al.* (2009) stated that, men's wages were 31% higher than women's wages in urban areas and 58% higher in rural areas. In South Africa, the findings of the Women on Farms Project (WFP) and Centre for Rural and Legal Studies (CRLS) (2009) showed that female workers received lower wages and fewer benefits and were less likely to be permanent workers than were male workers. The report also indicated that the average wage paid to men was R667 per month while women received an average wage of R457 per month. Evidence from a sample of some countries according to Hertz *et al.*, (2009) showed that on average women were paid 28% less than males in rural areas, with the exception of women in the rural Panama that were paid 11 % more than men. The marginal product of 1 day of labour in agricultural self-cultivation for women, according to the World Bank (2008) is 75 % of the wages earned by men. Daily wages in the casual labour market according to the report also reflected disparity. Based on some of the evidence available, scholars like Sukti and Ratna (2011) have argued that women participation in wage work and the gender gap in wages were amongst the reasons for persistent poverty and inequality in a country like India. The disparity is discouraging because the World Bank (1995) stated that, if disparities between men's and women's statuses, access to resources, control of assets and decision-making powers persist, sustainable and equitable development would be undermined. Motivated by the available evidence on gender differences in gender wage gap in some countries, a study was conducted in Abuja, Nigeria.

Objectives of the study

The broad objective of the study is to examine gender daily wage rates in farm production activities in Abuja. Specific objectives are to determine:

1. Gender daily wage rates for adult males, adult females, young males and young females,
2. If significant differences exist in the gender daily wage rates,
3. If there are differences in the gender daily wage rates in the four agricultural zones which includes Central, Eastern, Northern and Western Agricultural Zones
4. If there is an interaction effects between gender and locations

Hypotheses

Ho: the gender of a farmer does not significantly influence his/her daily wage rate in farm production activities.

Ho: the location of a farmer does not significantly affect his/her daily wage rate in farm production activities.

Ho: there is no significant interaction effect between gender and location on farmers' daily wage rate in farm production activities.

The study is very important because labour is one of the most important factors of production. Because of the importance of labour, the European Commission included gender wage gaps among the structural criteria for judging economic equality (Grimshaw and Rubery, 2002). Furthermore, FAO (2011a) stated that studies that consider the gender roles within their specific geographic and cultural context can provide practical guidance for policy-makers and practitioners involved in technology investments, extension services, post-harvest activities and marketing interventions. This paper, therefore, brings a substantial contribution to the literature on gender labour wage rates in farm production activities in Abuja, Nigeria.

Research Methodology

The study was conducted in Abuja, Nigeria located between latitudes $8^{\circ} 25'$ and $9^{\circ} 25'$ North of the equator and longitudes $6^{\circ} 45'$ and $7^{\circ} 45'$ East of Greenwich. Abuja has both urban and rural communities but the population for the study comprised all the small-scale farmers in the rural communities. The choice of Abuja is very important because Abuja lies in the transitional zone between the grain dominated agriculture of the Northern Nigeria and the predominantly root crop farming of the forest zone. In other words, it lies in the transitional zone between the savannah in Northern Nigeria and forest vegetation in the Southern Nigeria which endowed it with tremendous potentials for supporting agricultural production (Garba, 2000). Multi-stage technique was used for sample selection while semi-structured questionnaires were used for data collection. Presently, Abuja ADP has four agricultural (4) zones – Central, Eastern, Northern and Western Zones – with twelve (12) Agricultural Blocks and ninety three (93) cells (AADP, 2009). In the first stage, all the four (4) agricultural zones and twelve (12) agricultural blocks were

chosen. In the second stage, seven (7) cells were randomly chosen from each of the agricultural blocks giving a total of 84 cells. In the third stage, two (2) farmers (male and female) were randomly selected and interviewed in each of the cells and this gave a total of forty two (42) respondents in each of the agricultural zones. For the four agricultural zones, a total of 168 respondents were used for the analysis. Equal number (42) was used because of the factorial analysis and by implication they served as replications. The respondents were asked to state the amount (in Nigerian currency i.e. Naira) they used to spend hiring matured men, matured women, young men and young women for a day's farm work (wage rates) in their respective communities. This analysis is in line with the method adopted by Andy (2005), David (2004), Fredrick and Wallnau (2004), Shah and Madden (2004) and Harry and Steven (1995). SPSS 15.0 package was used to run the analysis and mean separation was done using Bonferroni model. It was tested at 5% probability level. The model specification for the analysis is:

$$Y_{ij} = \mu + G_i + L_j + GL_{ij} + e_{ij}$$

Where:

Y_{ij} = Individual farmer's response

μ = General mean

G_i = main effects of gender

L_j = main effects of locations (agricultural zones)

GL_{ij} = interaction effects of gender and locations

e_{ij} = error term

By interpretation, the model hypothesizes that the observed differences in farmers' daily wage rates in farm production activities in Abuja, Nigeria (Y_{ij}) are influenced or affected by gender of the farmer (G_i), the location of the farmer, that is, the agricultural zone where the farmer comes from (L_j) and the joint effect of both location and gender of the farmer (GL_{ij}).

Results and Discussion

The results of the analysis are presented in Tables 1- 3 below

TABLE 1
ANOVA Results of Gender Labour Wage rates (N/day)

Source of Variation	Df	SS	MS	F-cal	P-value	Sig
Gender	3	15,528,928.60	5,176,309.52	179.28	0.00	S
Gender*locations	9	432,767.86	48,085.32	1.67	0.095	NS
Error (within group)	492	14,205,803.60	28,873.58			
Locations	3	838,668.16	279,556.05	3.27	0.023	S
Error (between group)	164	14,025,751.50	85,522.88			
Total	671	45,031,919.72				

Source: Survey data, 2010

Table 1 shows the ANOVA results of gender labour wage rates ((N/day). The results revealed that that the main effect of gender was significant, $F(3, 492) = 179.28, P = 0.00$, implying that there was significant difference ($P < 0.05$) in the amount paid to the different gender categories in the study area. Similarly, there was significant main effect of location, $F(3, 164) = p = 0.023$, meaning that there were locational differences in the average daily wage rates. In other words, the amount paid to hire farm labour for a day job significantly differed ($P < 0.05$) in some of the agricultural zones (locations). On the contrary, there was no significant interaction effect between gender daily wage rates and location, $F(9, 492) = 1.67, P = 0.095$. Based on the ANOVA results, the data were further subjected to mean separation using Bonferroni model (Andy 2005) at 5% alpha level (see Table 2).

TABLE 2
Gender mean daily wage rates (N/day) in Abuja Agricultural Zones

Gender	Abuja Agricultural Zones				Total	
	Central	Eastern	Northern	Western		
Adult Male	979.76	1,005.95	1,085.71	839.29	977.68 ^a	
Young male	717.86	769.05	795.24	576.19	714.58 ^b	846.13
Adult Female	657.14	777.38	716.67	600.00	687.80 ^b	
Young female	544.05	627.38	588.80	477.38	559.23 ^c	623.52
Total	724.90^a	798.94^a	796.43^a	513.33^b	734.82	

Note: Means with the same alphabet did not significantly differ from each other

Source: Survey data, 2010

Table 2 shows the mean separation results of the gender mean daily wage rates. The results indicated that the daily wage paid to an adult male (N950^a) was significantly higher than the wage paid to an adult female (N692.08^b), young male (N683.33^b) and young female (N562^c). The result also showed that the daily wage paid to an adult female (N692.08^b) was not significantly different from the wage paid to young male (N683.33^b). Young females received the least wage (N562^c) in the study area. At the zonal level (see Tables 2), the average wage paid for a day work in Abuja Central Agricultural Zone (N729.58^a), Abuja Eastern Agricultural Zone (N783.75^a) and Abuja Northern Agricultural Zone (N729.58^a) were not significantly different ($P > 0.05$) from each other but they were significantly higher than the average daily wage paid in Abuja Western Agricultural Zone (N513.33^b). Generally, the grand mean daily wage was N 734.82 (\$ 4.86). World Bank (2007) stated that most work in agriculture is onerous, and the returns are lower than in other sectors and this finding is a clear justification of the statement. This amount (N 734.82 = \$ 4.86) is poor when considered as a daily income and may have been one of the causes of rural-urban migration and strict hawking among the youths in the major cities in Nigeria especially in Abuja.

TABLE 3
Dollars' equivalents of the daily wage rates in farm production activities

Gender	Abuja Agricultural Zones				Gender
	Central	Eastern	Northern	Western	Total
Adult Male	6.49	6.66	7.19	5.56	6.47
Young male	4.75	5.09	5.27	3.82	4.73
Adult Female	4.35	5.15	4.75	3.97	4.55
Young female	3.60	4.16	4.00	3.16	3.70
Total	4.60	5.29	5.27	3.40	4.78

Source: Survey data, 2010

Dollar equivalent of Nigerian naira (₦), 1 Dollar = ₦151

Central Bank of Nigeria (CBN) Exchange Rates (November, 23, 2010).

Table 3 shows the Dollars' equivalents of the daily wage rates in farm production activities. The results revealed that adult male received average daily wage of \$6.47 while adult female, young male and young female received \$4.55, \$4.73 and \$3.70 average daily wages respectively. This result agreed with the findings of FAO (2011) which stated that women in the rural areas of Ecuador, Guatemala, Nicaragua, Panama, Bangladesh, Indonesia, Nepal, Tajikistan, Viet Nam, Ghana and Malawi received lower wage compared to women. It equally agreed with the findings of Hertz, De La O Campos and Zezza (2009) which indicated that men earn more than women in the agricultural sector. Similar result was reported in India by Chavan and Bedamatta (2006) who reported that there was a very significant gender gap in wages as well as institutional constraints to the payment of minimum wages to women workers in rural areas of India. According to the report, the wages paid to women unskilled agricultural workers were lower than the wages paid to men and wages paid to women were almost always less than the government stipulated minimum wage. The report documented by the International Labour Organization (ILO) (2009a) also agreed that there is a gender wage gap with women on the disadvantage. The report further stated thus: "Throughout most regions and many occupations, women are paid less money than men for the same job. In most countries, women's wages represent between 70 and 90 per cent of men's wages, with even lower ratios in some Asian and Latin American countries." (ILO, 2009a). Other studies have also shown that

salary differential exists between men and women in many countries (Lumpkin and Tudor, 1990; Stedham and Yamamura, 2002; Stedham, et al., 2003; ILO 2009a; ILO, 2009b). Personal factors, such as gender, education, experience, and level of management have been suggested as factors responsible for the observed gender differences in salary (Stedham and Yamamura, 2002).

Conclusion

In a developing country like Nigeria, men and women contribute significantly to agricultural development but one of the major sources of controversy is gender gap in wage rates. Some scholars believe that women constituted greater part of the agricultural labour force but received lower wage rates compared to their male counterparts. Apart from low wage rates, it is equally believed that they spend more time working in the farm while men spend less time with higher wage rates. Based on this perceived gender wage gap, a study was conducted to determine if significant difference exists in gender wage rates in Abuja, Nigeria. This is very important because the war against gender marginalization has been globally recognized as an approach to restore gender equity. Results revealed that the main effect of gender was significant implying that there were significant differences gender wage rates. Also, the main effects of location were significant revealing that there were locational differences in gender wage rates. On the contrary, the interaction effects between gender wage rates and locations was not significant. The daily wage paid to an adult male (N950^a = \$ 6.47) was significantly higher than the wages paid to an adult female (N692.08^b = \$ 4.55), young male (N683.33^b = \$ 4.73) and young female (N562^c = \$ 3.70). Young females received the least daily wage in the study area. Generally, the grand mean daily wage was N734.82 (\$ 4.86). Based on the findings, the paper concluded that there was significant difference in gender wage rates. In view of the findings, replication of this study in other places is recommended for cross-validation purposes.

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