

## Gender Dimensions of Time Allocation of Rural Farming Households in Southwest Nigeria

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**Abstract:** This study examines how farmers in rural areas of southwest Nigeria allocate their time to various activities. A time use survey was carried out among 150 farming households with 300 respondents (150 males and 150 females) during rainy and dry seasons. The time use data was analyzed using descriptive statistics such as frequencies, percentages, means and standard deviation. The analysis shows that there are basically three main activity sectors within the rural households namely: farming activity sector, non-farming activity sector and household activity sector. Leisure time of rural farmers is treated as residual. Time allocation to these sectors differs by gender and season of the year. Male allocated more time to farming and non-farming activity sectors than female during the two seasons whereas female allocated more time to household activities than male at all times. Farming and non-farming activity sectors are monetized whereas household sector is not monetized. In all, female allocated more time to work activities hence lesser leisure time than male. The two gender allocated more time to farming activity sector during rainy season than dry season. Female allocated more time to work during dry season than rainy season, whereas male consumed more leisure during dry season than rainy season. Based on the findings, it was recommended that time allocation intervention aiming at reducing the time allocation to household activity without living the sector to suffer be gender and season sensitive.

**Keywords:** Gender, rural farming households, Southwest Nigeria, time allocation

### INTRODUCTION

The asymmetry in the respective rights and obligations of men and women is more apparent in the patterns of time use differentiated by gender and the inefficiency and inequity they represent. Both men and women play multiple roles (productive, reproductive and community management) in society (Moser, 1989; Blackden and Bhanu, 1999). Although men are generally able to focus on a single productive role and play their multiple roles sequentially, women, contrary to men, play these roles simultaneously and must balance simultaneous competing claims on limited time for each of them. Women's labor time and flexibility are therefore much more constrained than is the case for men. The gender division of labor defines women's and men's economic opportunities and determines their capacity to allocate labor time for economically productive activities and to respond to economic incentives. Although some of these differences in time allocation can be explained through economic factors, in many societies these are secondary to non-economic factors in determining time use patterns (Ilahi, 2000). Some of the non-economic factors include: household composition and life cycle issues (age and gender composition of household members), seasonal and farm system considerations, regional and geographic factors, including ease of access to water and fuel, availability of infrastructure and distance to key economic and social services such as schools, health centers, financial

institutions and markets. Social and cultural norms also play an important role both in defining and sustaining rigidity in the gender division of labor. This is most evident in the division of responsibilities between productive (market) and reproductive (household) work. In addition to their prominence in agriculture and in much of the informal sector, women bear the brunt of domestic tasks: processing food crops, providing water and firewood and caring for the elderly and the sick, this latter activity assuming much greater significance in the face of the HIV/AIDS pandemic. The time and effort required for these tasks, in the almost total absence of even rudimentary domestic technology, is staggering.

Gender analysis of time use in Sub-Saharan Africa shows that there are synergies and short-term tradeoffs, between and within market oriented and household-oriented activities-economic production, childbearing and rearing and household/community management responsibilities. These assume particular importance because of the competing claims on women's labor time in most environments. There are interconnections between rural development and transport (Barwell, 1996), between education, health and fertility, between girls' education and domestic tasks and within the population/agriculture/environment "nexus" (Clever and Schreiber, 1994). Other critical interconnections illuminated by time use studies exist between the time spent (mainly by women and very young children) preparing and cooking meals in degraded and polluted

environments and health, as reflected in high levels of acute respiratory infections related to exposure to air pollutants (Green, 2005).

Several studies document that workload constraints limit the likelihood that children will be taken to health posts for vaccinations, or that sick children or family members will access health care in a timely manner. As argued by the World Bank (2006), there is a critically small “window of opportunity” for addressing under nutrition in children, which in turn hinges on timely access to food, including time for breastfeeding and timely preparation of meals in the first 2 years of life—a period in which, according to time use survey data, women with young children are likely to be especially heavily burdened with work. Building on these cross-sectoral interconnections can have positive multiplier effects for growth and poverty reduction.

Tradeoffs in time allocation and sometimes harsh choices, are at the core of the interrelationship between the “visible” market and “invisible” household economies, given the simultaneous competing claims on women’s—but not men’s—labor time. There are tradeoffs between different productive activities, between market and household tasks and between meeting short-term economic and household needs and long-term investment in future capacity and human capital. The work burden on women and the disproportionate cost borne by women of reproductive work in the household economy not only limits the time women can spend in economic activities but restricts them (spatially and culturally) to activities compatible with their domestic obligations (Blackden and Morris-Hughes, 1993). A review of the relationship between female headship and poverty found that the reasons for greater poverty among female-headed households lie not in structural factors in household composition, such as higher dependency ratios, or in gender-related differences in economic opportunity, but in the combination of the two. Where women heads of households have no other adult women to fulfill home production or domestic roles, they face greater time and mobility constraints than do male heads or other women, that in turn leads to lower paying jobs more compatible with childcare (Buvinic and Rao Gupta, 1997).

Evidence from Malawi indicates that female farmers were inclined to limit their labor time in farm activities due to a heavy commitment to domestic chores, while responsibility for children and housekeeping made it difficult for female heads to opt for regular or off-farm labor activities to increase their earnings. Because they must carry out their multiple

roles simultaneously and because the “household time overhead” is not dispensable, women can only engage in directly productive economic activity (whether measured or not) after or in conjunction with the discharge of their domestic responsibilities. Balancing competing time uses, in a framework of almost total inelasticity of the gender division of labor, presents a particular challenge to reducing poverty. In many circumstances, necessary and essential actions, including both directly productive tasks and meeting the “household time overhead,” must compete for scarce labor time.

In Sub-Saharan Africa, both men and women engage in a number of productive and reproductive work activities. Time use studies from the region reveal that women spend more time than men at work particularly when their inputs in non-SNA production, namely domestic and care work, are included. Children and adolescents, particularly girls, also have important economic roles in their household. In Tanzania, girls at every age have heavier work burdens than boys. Also in Uganda, girls work 21.6 h/week while boys 18.8 h a week (Ritchie *et al.*, 2004). A cross-country study which includes two countries from the region, South Africa and Kenya also shows that girls spend more time on non-SNA work in the form of household work compared to boys (Ritchie *et al.*, 2004). Fetching water and collecting firewood are also associated with child labor, though the evidence is not conclusive if boys or girls spend more time on these activities. Nankhuni (2004) studies children’s time allocation on natural resource collection in Malawi and finds that being female is the most significant determinant of a child participating in natural resource collection. Her results also indicate that girls are more likely than boys to be burdened by resource collection responsibilities while simultaneously attending school.

Environmental degradation, as manifested by lack of clean water and deforestation, can significantly increase women’s and girls’ work burdens and total time allocated to firewood and water collection. The time and distance that women and girls need to travel to collect water increase substantially as clean water resources are exhausted. Similarly, deforestation significantly increases the time that needs to be allocated for firewood collection. A recent study by Nankhuni (2004) in Malawi suggests that women who live in areas with moderate to severe wood deficits spend more time on housework and less time on self or wage employment.

Reproductive tasks, such as housework, cooking, care for children, the sick and elderly household

members are necessary to maintain families. The time required for these activities is usually positively correlated with the poverty level of households (Barnett and Whiteside, 2002). Poor households in rural areas depend on female household members for the provision of reproductive tasks since they lack the economic means to access market substitutes. Additionally, whenever the household is confronted by a crisis, such as illness, the time spent on care-giving and domestic work increases significantly. Women and girls bear a large portion of these unpaid reproductive responsibilities which are often made more time consuming due to the lack of adequate household technologies. Cooking and childcare are among the most time-consuming of women's reproductive responsibilities (Charmes, 2005). Tasks such as water and firewood collection, cooking, cleaning and child and health care take up inordinate amounts of women's time (World Bank, FAO and IFAD, 2008). Time use studies in Nigeria indicates that female allocated more time to work activities than male hence they enjoyed less leisure compared with their male counterparts (Ikpi, 1991; Alimi *et al.*, 2004; National Bureau of Statistics, 2006).

Time spent on agricultural production especially in rain-fed agriculture like Nigeria shaped particularly around seasonal labor requirements which may lead to tradeoffs in the form of less time on care and domestic work. This may impede, among other things, the timely preparation and consumption of adequate food and adversely affect household and particularly children's nutrition. According to Wodon and Beegle (2006), strong seasonality exists in labor supply as well as in workload between men and women due to the burden of domestic work, including the time spent for collecting water and firewood.

The above revelations make it imperative to study how male and female farmers allocate their time to various activities during rainy and dry seasons. The objective of this study therefore is to examine the type of activities farmers in the study area are engaged in and the amount of time allocated to such activities during rainy and dry seasons.

## **MATERIALS AND METHODS**

**Study area:** The study was carried out in southwest, Nigeria. Southwest is one of the six geopolitical zones in Nigeria. It falls on latitude 6° to the North and latitude 4° to the south. It is marked by longitude 4° to the West and 6° to the East. It is bounded in the North by Kogi and Kwara States, in the East by Edo and Delta

States, in the South by Atlantic Ocean and in the West by Republic of Benin. The Climate is equatorial with distinct wet (rainy) and dry seasons with relatively high humidity. The dry season lasts from November to March while the wet season starts from April and ends in October. The mean annual rainfall is 1480 mm with a mean monthly temperature range of 18-24°C during the rainy season and 30-35°C during the dry season. South west Nigeria covers approximately an area of 114, 271 km<sup>2</sup> that is, approximately 12% of Nigeria's total land mass and the vegetation is typically rainforest. The total population is 27, 581, 992 as at 2006 and they are mainly farmers. The climate in the zone favors the cultivation of crops like maize, yam, cassava, millet, rice, plantains, cocoa, kola nut, coffee, palm produce, cashew etc., (NPC, 2006). The zone comprises six States namely: Ekiti, Lagos, Ogun, Ondo, Osun and Oyo states.

**Method of data collection:** Primary data was used for this study through the use of pre-tested, well-structured questionnaire. The questionnaire used for data collection consisted of four parts:

- Household Identification/composition required to record information on some household socio-economic characteristics supplied by the household head.
- Individual Identification required collecting information on demographic characteristics of the respondents.
- **Individual diary (simplified time diary) record:** Used for providing a diary of activities which the respondents spent time on during the day over a 7-day reference week to take account of day-to-day variations in activities and allocation of time to the activities (FOS, 1999).
- **Use of time summary schedule:** A schedule used for summarizing, on daily basis, time spent by the respondents over various activities (paid and non-paid) by major activity groupings using the United Nation (UN, 2003) document "Trial International Classification for Time-Use Activities". This is the document used in classifying and coding time-use activities. The document was adopted by (Federal Office of Statistics, 2000). This study also adopted the document to enhance standardization and international comparability as well as some very important and useful attributes being canvassed and encouraged by the UN.

**Sampling procedure:** Multi-stage sampling technique was used in selecting the representative farming

Table 1: List of farm work and the average daily time (h) spent on them by gender and season of the year

Activities	Rainy season				Dry season					
	Total	Male	Total (%)	Female	Total (%)	Total	Male	Total (%)	Female	Total (%)
• Planting										
Seed dressing	0.28 (0.06)	0.16 (0.03)	57.1	0.12 (0.04)	42.9	0.08 (0.04)	0.06 (0.02)	75.0	0.02 (0.02)	25.0
Crop planting	0.43 (0.08)	0.25 (0.05)	58.1	0.18 (0.03)	42.1	0.19 (0.06)	0.00 (0.00)	0.0	0.19 (0.29)	100.0
Fertilizer application	0.29 (0.09)	0.25 (0.07)	86.2	0.04 (0.02)	13.8	0.07 (0.04)	0.06 (0.02)	85.7	0.01 (0.01)	14.3
• Weeding	2.66 (0.17)	1.46 (0.11)	54.9	1.20 (0.12)	45.1	1.64 (0.49)	0.84 (0.14)	51.2	0.80 (0.02)	48.8
• Harvesting										
Harvesting	1.12 (0.12)	0.85 (0.05)	75.9	0.27 (0.07)	24.1	3.08 (0.49)	1.51 (0.14)	49.0	1.57 (0.31)	51.0
Collection & transportation of natural edibles	0.99 (0.09)	0.33 (0.05)	33.3	0.66 (0.05)	66.7	1.37 (0.16)	0.65 (0.05)	47.5	0.72 (0.31)	52.6
• Processing										
Direct processing	1.02 (0.15)	0.25 (0.05)	24.5	0.77 (0.13)	75.5	0.90 (0.62)	0.46 (0.56)	51.1	0.44 (0.06)	48.9
Threshing	0.56 (0.07)	0.22 (0.03)	39.3	0.34 (0.04)	60.7	0.93 (0.10)	0.53 (0.06)	57.0	0.39 (0.05)	43.0
Cleaning	0.47 (0.13)	0.30 (0.07)	63.8	0.17 (0.03)	36.2	0.48 (0.06)	0.30 (0.04)	62.5	0.18 (0.02)	37.5
Crop grading	0.39 (0.06)	0.26 (0.03)	66.7	0.13 (0.04)	33.3	0.33 (0.12)	0.18 (0.08)	54.6	0.15 (0.08)	45.4
• Compound gardening	2.54 (0.17)	1.21 (0.07)	47.6	1.33 (0.10)	52.4	1.37 (0.15)	0.80 (0.07)	58.4	0.57 (0.08)	41.6
• Livestock husbandry	3.06 (0.20)	2.05 (0.10)	67.0	1.01 (0.10)	33.0	0.96 (0.17)	0.92 (0.10)	95.8	0.04 (0.08)	4.2
Total time	13.81 (1.25)	7.59 (0.60)	55.0	6.22 (0.65)	45.0	11.39 (1.73)	6.31 (0.56)	55.4	5.08 (0.61)	44.6

The figures in parenthesis are the standard deviation of the mean; Field survey (2009)

households that were used for this study. The first stage of the sampling procedure was the purposive selection of Oyo and Osun States from southwest, Nigeria. The second stage was the random selection of two rural LGAs from each of the two states. The next stage involved the random selection of five villages from each of the selected LGAs to give a total of twenty villages. The list of farming households from the villages selected was obtained from states' Agricultural Development Projects (ADPs). However, the enumerators and the village heads assisted in compiling the list of multi-person (more than one adult) farming households in the selected villages. The fourth and final stage was the random selection of representative farming households from each of the twenty villages. From each household however, one male and one female who were age 18-60 years (economically active members) were selected as the target sample. Data were collected in August and December 2009 representing the rainy and dry seasons respectively from the same households and respondents. A total of 200 households and 400 respondents were selected for the two seasons. However, a total of 150 farming households and 300 respondents were used for the analysis due basically to incompleteness of 50 household questionnaires.

## RESULTS AND DISCUSSION

**Farm work and time allocated to it by gender and season of the year:** Table 1 shows all the activities related to agricultural production in the study area starting from planting of crops and rearing of animals to the marketing of their output as well as the amount of

time spent per day on each activity by gender and season of the year. It is worthy of note that land preparation which is also an important activity in agricultural production was not reported by the respondents. This may be because of the months in which data were collected which are August and December as earlier mentioned in the methodology. The table shows that female respondents are involved more in harvesting and processing of farm produce while other sub-activities are dominated by male farmers. For an average farm size of 2.3 ha, a total of 13.81 and 11.39 h were spent daily on farming by respondents during rainy and dry seasons respectively. Disaggregation by gender shows that male spent on the average 7.59 h which represent 55.0% while female supplied the remaining 6.22 h representing 45.0% during the rainy season. During the dry season, male spent 6.31 h (or 55.4%) and female spent 5.08 h (or 44.6%). This follows expectedly that, both gender spent more time during the rainy season on the farm than during the dry season. This may be due to the fact that agricultural production in the zone is still rain-fed. Male spent more time working in the farm than female during the two seasons. This may not be unconnected with the cultural belief that males are the supposed bread winners of their homes and will have to work more on the farm which is an income earning activity so as to be able to provide for his house Non-farm Work and time allocated to it by gender and season of the year

Table 2 summarizes the activities under the non-farm sector. These include the endeavors of respondents other than farming for the sole purpose of making money and the amount of time spent on them by

Table 2: List of non-farm activities and the average daily time (h) spent on them by gender and season of the year

Activities	Rainy season				Dry season					
	Total	Male	Total (%)	Female	Total (%)	Total (%)	Male	Total (%)	Female	Total
Trading	1.19 (0.58)	0.11 (0.02)	9.3	1.08 (0.42)	90.7	2.10 (0.30)	0.37 (0.14)	38.8	1.73 (0.16)	61.2
Motor cycling	1.25 (0.50)	1.25 (0.50)	100.0	0.00 (0.00)	0.0	1.52 (0.37)	1.52 (0.37)	100.0	0.00 (0.00)	0.0
Hand crafts	1.92 (0.50)	1.22 (0.28)	63.7	0.70 (0.29)	36.3	1.56 (0.33)	1.56 (0.33)	100.0	0.00 (0.00)	0.0
Hunting wildlife	1.03 (0.14)	1.03 (0.20)	100.0	0.00 (0.00)	0.0	0.64 (0.15)	0.64 (0.15)	100.0	0.00 (0.00)	0.0
Collecting wild product	1.02 (0.08)	0.46 (0.02)	45.1	0.56 (0.25)	54.9	1.37 (0.27)	1.37 (0.27)	64.0	0.61 (0.09)	36.0
Labor production	1.70 (0.31)	0.67 (0.10)	39.4	1.03 (0.21)	60.6	2.37 (0.28)	2.37 (0.28)	27.3	1.73 (0.10)	72.7
Total time	9.01 (1.99)	4.74 (0.86)	52.6	4.27 (1.12)	47.4	9.56 (1.39)	5.10 (1.39)	53.3	4.46 (0.43)	46.7

The figures in parenthesis are the standard deviation of the mean; Field survey (2009)

household members during two different seasons. The result shows that there are more female than male in trading and labor production at all times than male while motor cycling and hunting are exclusively for male. During the rainy season, respondents spent on the average a total of 9.0 h/day while it is 9.6 h during the dry season on non-farm activities. Gender disaggregation of the sector shows that male spent 4.74 h (or 52.6%) and female spent 4.27 h (or 47.4%) on this sector during the rainy season and 5.1 h (or 53.1%) with 4.5 h (or 46.9%) for male and female respectively during the dry season. This implies that male spent more time on non-farm work than female during rainy and dry seasons. The reason may be because male as the supposed breadwinner according to cultural norms is expected to work more on income earning activities. Not surprisingly, both gender allocated more time to this sector during the dry season than during the rainy season. This could be because the burden of farm work was greatly reduced during the dry season and hence more time on non-farm activities.

**Housework and time allocated to it by gender and season of the year:** The detailed activities and the time allocated to housework are shown in Table 3. The activities are stated explicitly as food preparation, care of the children and elderly members, house maintenance, water fetching and firewood gathering. The analysis shows that male allocated more time to care of the elderly people and house maintenance than female most especially during the rainy season. As shown in the table, a total of 12.61 and 13.54 h were contributed to this sector in a day by the respondents during the rainy and dry season respectively. Disaggregation by gender shows that female alone spent 8.15 h (or 64.6%) while male spent the remaining 4.46 h (or 35.4%) during the rainy season. During the dry season, the female respondents spent 9.17 h (or 67.7%) of the total time jointly spent while male spent 4.37 h (or 32.3%) of the total time. It then follows that

farmers allocated more time to this sector during the dry season than rainy season. This may not be unconnected with the fact that there is scarcity of portable water in the study area which becomes scarcer during the dry season. The male respondents devoted more time to this sector during the rainy season than dry because of their involvement in care economy. They are involved in providing care for the elderly during the rainy season.

**Summary of all the activities (work and leisure) and time allocated to them by gender and season of the year:** Table 4 summarizes all the work and non-work activities of the rural farmers and the average daily time allocated to them in hours. The table shows that patterns of time allocation vary sharply by season of the year and gender. During the rainy season, farming households allocated 22.82 h (or 64.5%) of their total work hours of 35.43 h/day to paid work (monetized work) while the remaining 12.61 h (representing 35.6%) is spent on non-paid house work. The leisure time consumed by farmers during this time is 12.57 h (or 26.2%). During the dry season, farming households allocated 20.95 h (or 60.74%) of their total work hours of 34.49 to paid activities while the remaining 13.54 h (or 39.3%) was spent on non-monetized house work. The leisure time of both genders is 13.51 h. Farming households devoted more time to work during the rainy season than during the dry season.

On gender basis, the analysis shows that male respondents spent 12.33 h (or 73.4%) of the total time spent working in a day during the rainy season which is 16.79 h on the two monetized activities while female spent 10.49 h (or 56.3%) of her own working time of 18.64 h on the activities. The remaining work time of 4.46 h (or 26.6%) for male and 8.15 h (or 43.7%) for female is spent on house work. The leisure time of male and female stood at 7.21 h (or 30.0%) and 5.36 h (or 22.3%), respectively. In all, male spent about 8.1%

Table3: List of housework activities and the average daily time (h) spent on them by gender and season of the year

Activities	Rainy season			Dry season						
	Total	Male	Total (%)	Female	Total (%)	Total	Male	total (%)	Female	total (%)
<b>Food preparation</b>										
Peeling	0.54 (0.13)	0.28 (0.06)	52.2	0.26 (0.08)	47.7	0.30 (0.11)	0.14 (0.06)	50.9	0.15 (0.06)	49.1
Grating	0.34 (0.12)	0.11 (0.04)	33.5	0.23 (0.09)	66.5	0.40 (0.09)	0.14 (0.04)	33.7	0.27 (0.05)	66.3
Grinding	0.43 (0.09)	0.11 (0.04)	24.3	0.33 (0.06)	75.7	0.4 (0.10)	0.15 (0.05)	38.6	0.24 (0.05)	61.1
Pounding	0.44 (0.12)	0.09 (0.06)	19.7	0.35 (0.07)	80.3	0.41 (0.10)	0.15 (0.05)	36.7	0.26 (0.06)	63.4
Cooking	1.58 (0.17)	0.29 (0.06)	18.5	1.29 (0.12)	81.5	1.05 (0.11)	0.13 (0.03)	12.5	0.92 (0.08)	87.5
Dish and pot washing	0.46 (0.13)	0.17 (0.05)	36.6	0.29 (0.06)	63.4	0.34 (0.08)	0.11 (0.03)	33.3	0.23 (0.05)	66.7
<b>Total</b>	<b>3.80</b>	<b>1.05</b>	<b>31.3</b>	<b>2.74</b>	<b>68.7</b>	<b>2.91</b>	<b>0.84</b>	<b>32.4</b>	<b>2.07</b>	<b>67.6</b>
<b>Care</b>										
<b>Child care:</b>										
Bathing and dressing	0.60 (0.15)	0.14 (0.08)	23.3	0.46 (0.07)	76.7	0.94 (0.09)	0.17 (0.03)	17.8	0.77 (0.10)	82.2
Feeding	1.03 (0.11)	0.14 (0.05)	13.2	0.89 (0.09)	86.8	1.22 (0.09)	0.18 (0.04)	14.5	0.81 (0.06)	85.5
Training	0.51 (0.14)	0.14 (0.06)	26.5	0.38 (0.08)	73.5	0.79 (0.08)	0.16 (0.03)	20.1	0.63 (0.05)	79.9
Cloth washing	0.84 (0.09)	0.19 (0.04)	22.4	0.65 (0.05)	77.6	0.92 (0.09)	0.14 (0.03)	15.7	0.78 (0.06)	84.3
Tending the sick	0.74 (0.09)	0.31 (0.03)	42.6	0.42 (0.09)	57.4	0.66 (0.08)	0.16 (0.03)	23.8	0.50 (0.05)	76.2
<b>Care of the senior:</b>										
Bathing and dressing	0.19 (0.08)	0.13 (0.03)	66.9	0.06 (0.04)	33.1	0.32 (0.10)	0.16 (0.04)	49.3	0.16 (0.06)	50.7
Feeding	0.16 (0.05)	0.10 (0.03)	62.7	0.06 (0.05)	37.3	0.25 (0.08)	0.12 (0.04)	48.6	0.13 (0.05)	51.4
Cloth washing	0.29 (0.07)	0.09 (0.03)	31.5	0.20 (0.04)	68.5	0.27 (0.09)	0.13 (0.03)	46.1	0.15 (0.06)	53.9
Tending the sick	0.40 (0.08)	0.11 (0.02)	28.3	0.29 (0.05)	71.7	0.35 (0.08)	0.12 (0.03)	34.2	0.23 (0.05)	65.9
<b>Total</b>	<b>4.75</b>	<b>1.34</b>	<b>33.7</b>	<b>3.40</b>	<b>66.3</b>	<b>5.73</b>	<b>1.33</b>	<b>38.1</b>	<b>4.16</b>	<b>61.9</b>
<b>Home maintenance</b>										
House cleaning	0.36 (0.13)	0.06 (0.04)	16.5	0.30 (0.09)	83.5	0.42 (0.10)	0.09 (0.03)	21.9	0.33 (0.07)	78.1
Fence repair	0.52 (0.13)	0.38 (0.08)	72.3	0.14 (0.05)	27.7	0.37 (0.10)	0.27 (0.05)	34.2	0.10 (0.05)	65.8
House repair/construction	0.64 (0.14)	0.48 (0.08)	75.1	0.16 (0.06)	24.9	0.49 (0.11)	0.37 (0.06)	47.1	0.12 (0.05)	52.9
Digging of drainages	0.50 (0.10)	0.38 (0.05)	75.9	0.12 (0.05)	24.1	0.28 (0.09)	0.19 (0.04)	45.3	0.09 (0.05)	54.7
Other maintenance	0.50 (0.10)	0.21 (0.04)	42.5	0.29 (0.06)	57.6	0.50 (0.15)	0.24 (0.09)	47.8	0.26 (0.07)	52.2
<b>Total</b>	<b>2.10</b>	<b>1.51</b>	<b>40.5</b>	<b>1.01</b>	<b>59.5</b>	<b>2.06</b>	<b>1.16</b>	<b>39.9</b>	<b>0.89</b>	<b>60.1</b>
Water fetching	1.02 (0.62)	0.33 (0.34)	32.1	0.69 (0.28)	67.9	2.61 (0.61)	0.87 (0.3)	29.0	1.98 (0.42)	71.0
Fire wood gathering	0.53 (0.53)	0.23 (0.35)	43.6	0.3 (0.18)	56.5	0.25 (0.10)	0.18 (0.04)	71.5	0.07 (0.06)	28.5
<b>Grand total</b>	<b>12.61 (3.31)</b>	<b>4.46 (1.65)</b>	<b>35.4</b>	<b>8.15 (1.62)</b>	<b>64.65</b>	<b>13.54 (2.47)</b>	<b>4.37 (0.87)</b>	<b>32.3</b>	<b>9.17 (1.60)</b>	<b>73.5</b>

The figures in parenthesis are the standard deviation of the mean; Field survey (2009)

Table 4: Summary of all the activities (work and leisure) and the average daily time (h) spent on them by gender and season of the year

Activities	Rainy season			Dry season		
	Pooled	Male	Female	Pooled	Male	Female
Farm work	13.81	7.59	6.22	11.39	6.31	5.08
Non-farm work	9.01	4.74	4.27	9.56	5.10	4.46
Total paid work	22.82	12.33	10.49	20.95	11.41	9.54
Housework	12.61	4.46	8.15	13.54	4.37	9.17
<b>Grand total</b>	<b>35.43</b>	<b>16.79</b>	<b>18.64</b>	<b>34.49</b>	<b>15.78</b>	<b>18.71</b>
Leisure	12.57	7.21	5.36	13.51	8.22	5.29

Field survey (2009)

more time on income earning activities than female. Despite this, female still reported on the average nearly 15.0% less leisure than male due to her involvement in house work which is nearly 29.1% more than that of her male counterpart in addition to economic work; a difference that is common in developing economy. This finding is similar to what Ikpi (1991) and Ilahi (2000) obtained. They all reported that female allocated more time to work activities than male. During the dry season, male spent 11.41 h (or 72.3%) of the total work time of 15.78 h while female allocated 9.54 h (or 51.0%) of the total work time of 18.71 h on economic

work. Meanwhile, male spent 4.37 h (or 27.7%) on non-paid work and female allocated 9.17 h (or 49.0%). The leisure time during the dry season for male and female respectively stood at 8.22 and 5.29 h. Meanwhile female devoted about 35.5% more time to house work than male on daily basis.

The seasonality of time allocation is even more pronounced for female than for male. While male enjoyed more leisure during the dry season than rainy season which is expected, reverse was the case for female. This is as a result of scarcity of portable water in the study area which became worse during the dry

season. Generally, male work more (8.9%) in income earning activities than female, whereas female reported on the average (21.7%) less leisure also due to the burden of house work which falls mainly on her shoulder. This is an indication of gender inequality which is a threat to the attainment of Millennium Development Goal-3 (MDG3) in the country.

### CONCLUSION AND RECOMMENDATIONS

This study focused on time allocation to various activities of male and female farmers in rural areas of southwest Nigeria. Time allocation analysis revealed that rural farmers allocated their time to work and non-work activities and that the allocation differs by gender and season of the year. Male allocated more of their working time to monetized activities (farm and non-farm work) than their female counterparts during rainy and dry seasons. The amount of time female farmers devoted to non-monetized housework far exceeded that of male at all times. Both gender spent more time on monetized activities during rainy season than during dry season. While male consumed more leisure during dry season than rainy season, reverse was the case for female. Based on the findings from this study, it is therefore recommended that policies that will reduce the non-monetized housework time of farmers especially that of female be put in place. Government should prioritize public investment in infrastructure that reduces housework time, such as rural water projects within the vicinity of farmers that will ensure all year round water supply, primary and secondary schools (adhere to UNESCO recommended daily 15 min' walk to-and from school). Another area of intervention should be provision of alternative energy sources to replace firewood as cooking fuel reduces the time farmers-particularly female spent in arduous domestic tasks. If these are done more time will be freed for both paid farm and non-farm activities and farmers' poverty rate will be reduced.

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