GENDER INVOLVEMENT IN COCOA FARMING ACTIVITIES IN SOUTH WEST NIGERIA

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ABSTRACT

This study investigated gender involvement of household members in cocoa production activities in south west Nigeria. A multi-stage sampling procedure was used to randomly select respondents from cocoa producing states in south-western Nigeria; specifically, Oyo and Osun states. Four field sites namely Iddo and Ogo-Oluwa in Oyo State and Atakumosa East and Ayedire in Osun state were purposively selected due to the on-going humidtropics project in these states. Fifty cocoa farmers registered with the state Agricultural Development Programme (ADP) who were members of the Innovation Platform (IP) in the on-going humid tropics programme were purposively selected from each of the 4 field sites from Akindele, Lagbedu and Iwara, Osunwoyin in Oyo and Osun States respectively, making a total of 200 cocoa farmers comprising 147 males and 53 females. Data were analyzed using descriptive (frequency and percentage) and inferential (Chi-square and PPMC) statistics at p=0.05. Descriptive result revealed that majority 73.5% and 89.5% of the respondents were male and married. While 40.0% were primary school leavers. The respondents' mean age and years of farming experience were 52 years and 29 years, respectively. It further revealed that the head of the family took most decisions on different production activities such as, crops to plant (68%), technology to be adopted (55%), purchase of inputs (55%) and varieties to grow (66%). There was a significant relationship between respondents' personal characteristics such as educational qualification and household size (χ^2 = 408.518, r = 0.347), and their involvement in cocoa production activities. Further result shows a significant difference between male and female involvement in cocoa production activities (t= 2.304, p= 0.022). The study concluded that women were less involved in most production activities. It is therefore recommended that government should encourage women to be more involved in production activities. In terms of technical know-how, training on proper use and maintenance of such technology should be provided.

Keywords: Gender, Household, Involvement, Decision making, Cocoa, Production activities

INTRODUCTION

Cocoa (*Theobromae cacao)* is the second major non-oil foreign exchange earner in Nigeria. It is produced in 16 States in Nigeria; among which are: Adamawa, Kogi, Cross River, Osun, Oyo, Ekiti, Akwa Ibom, Kwara,

Edo and Ogun States with annual production of 400,000 metric tonnes out of which 98% goes into exportation (Amao, *et al*., 2015). In Nigeria, cocoa is interplanted with a variety of crops such as, coffee, citrus, plantain and so on to form a farming system due to many reasons such as risk aversion, environmental and economic benefit, among others (Oluwatusin, 2014). Production activities in cocoa farming system include: planting, transplanting, weeding, fertilizer application, mulching, shading, roasting and grinding, harvesting, pressing, fermenting and drying, packing and transporting and marketing of cocoa. These production activities are segregated along gender line within the farming households. In other words, division of labour within household is gender-specific Gender is useful in analyzing the roles, responsibilities, opportunities and constraints of both men and women along different ethnic, religion and ecological lines (Ayoola and Odiaka, 2004).

In almost all societies, men and women differ in their activities and their undertakings, regarding access to and control over resources in participating in decision making. Generally, men are presumed to be the chief actors in agriculture (Mohammed and Abdulquadri, 2012). Production activities such as farm clearing, planting of seedlings as well as chemical application are mostly undertaken by men (Oluyole and Lawal, 2010). While women are involved in off-farm activities such as buying and selling of farm produce, storage of crops and packing of farm produce (Oluyole *et al.*, 2013), they still participate in planting, harvesting, on-farm processing and marketing with almost equal task in weeding operations (Mohammed and Abdulquadri, 2012).

The rationale for considering gender in agriculture relates to agricultural productivity, food security, nutrition, poverty reduction and empowerment (Meinzen-Dick *et al.*, 2011). Peterman *et al.* (2009) opined that lower productivity is persistent on female-owned plots and in female-headed households in Africa, Nigeria inclusive. Women are faced with many constraints which range from lack of access to production resources like farm equipment and other economic resources such as capital, thereby limiting their contributions to household farming decisions (Anslem, 2010). An inferior position has been ascribed to the women in the society by the male dominated culture in Nigeria; customs forbidding women from owning land, taboos as well as gender division of labour keeps women subordinated to men.

Male dominance in decision making in the household has continued even in areas where women are the key processors in agriculture; bearing in mind they are important providers of labour. Sadly, female farmers in the country are among the voiceless, especially with respect to influencing agricultural policies. Policies which are aimed at increasing food security and food production tend to both underestimate and totally ignore women's role in both production and general decision making process within the household. Their relevance and significance cannot be overemphasized because the role they play and their position in meeting the challenges of agricultural production and development are quite dominant and prominent.

To this end, this study described the socio-economic characteristics of household members involved in cocoa production activities, determined the level of involvement of cocoa farming households in production activities, determined the level of involvement of cocoa farming households in decision making in cocoa production activities and determined the level of access to financial resources by cocoa farming households involved in production activities.

Study Area

This study was carried out in Oyo and Osun States of Nigeria. Oyo State is an inland State in the South western Nigeria and has Ibadan as its capital. Oyo state has 33 Local Government Areas with a total population of 5,580,894 (National Population Commission NPC, 2006). The climate is equatorial characterized by wet and dry seasons with relative high humidity. The climate in the State encourages the cultivation of crops like cocoa, cassava, yam, maize, plantain, cashew and so on. Agriculture is the main source of income for the greatest number of people of the state. Osun State like Oyo State is located in the south western part of Nigeria. In fact, it was carved out of old Oyo state on August 27, 1991. It covers an area of approximately 14, 875 square kilometres. Osun State is made up of 30 local government areas with a population of 3,423,535 people (National Population Census, 2007). The State has dual climatic condition with a rainy season and dry season. The crops planted include maize, cocoa, cassava etc.

Sampling Procedure and Sample Size

A multi-stage sampling procedure was used to select respondents for the study. The first stage was a random selection of cocoa producing states in South-western Nigeria (Oyo and Osun States). The second stage was a purposive sampling of 4 field sites namely Akindele, Lagbedu and Iwara, Osunwoyin in Oyo and Osun States respectively due to the on-going humid tropics project in these States and historical cocoa production significance. At the third stage, fifty cocoa farmers registered with the State Agricultural Development Programme (ADP) who were also members of the Innovation Platform (IP) in the on-going humid tropics programme were purposively selected from each of the 4 field sites, making a total of 200 cocoa farmers comprising of 147 male farmers and 53 female farmers.

Analytical techniques

Data were analysed with the use of descriptive statistics and inferential (Chi-square) statistics

Table 1: Socioeconomic characteristics of the respondents

Variables	Frequency	Percentage	Mean
Gender			
Male	147	73.5	
Female	53	26.5	
Age (Year)			52.0
Less than 30	14	7.0	
31-40	32	16.0	
41-50	60	30.0	
51-60	39	19.5	
61-70	38	19.0	
Above 70	17	8.5	
Marital Status			
Married	179	89.5	
Single	14	7.0	
Widowed	7	3.5	
Education Status			
Non-formal	50	25.0	
Primary	80	40.0	
Secondary	51	25.5	
Tertiary	15	7.5	
Standard	4	2.0	
Farming experience (years)			29.0
1-10	18	9.0	
11-20	55	27.5	
21-30	60	30.0	
31-40	28	14.0	
41-50	19	9.5	
Above 50	20	10.0	
Household Size (#)			9.2
1-5	32	16.0	
6-10	99	49.5	
11-15	49	24.5	
16-20	14	7.0	
20 and above	6	3.0	

Source: Field Survey, 2015

RESULTS AND DISCUSSION

Socio-economic Characteristics

The socio-economic characteristics of the respondents were presented in Table 1. Age of the farmers ranged between 24 and 90 years with a mean age of 52 years. This clearly shows that a great number of cocoa farmers were in the old age bracket, a sign that Nigerian youths have gradually neglected agriculture. This corroborates

findings by Adeogun *et al.* (2013). Majority (73.5 percent) of the farmers were male. This implies that cocoa production is highly dominated by men, as a result of the tedious nature of operations involved in its production. This result corroborates one of the findings of Muhammad-Lawal *et al.* (2009) and Oluwatusin (2014). Majority (89.5 percent) of the cocoa farmers were married. In Nigeria to some extent, marital status determines the household size as it is expected of married farmers to have household members that would most of the time assist in farming activities. This agrees with findings by Ayoola and Odiaka (2004) and Oluyole *et al.* (2017) that majority of the rural work force were married. As regards education, 75.0 percent were literates. This implies that most cocoa farmers in the study areas were educated. Earlier findings made by Oluwatusin, (2014) shows that most cocoa farmers were educated and can read and write. Thus, this could serve as an impetus in adopting cocoa production technologies and acquiring some of the required knowledge for adequate farm maintenance. Most (61.0 percent) of the farmers had farming experience of 30 years and above, while a smaller number (39.0 percent) of them had experience of 30 years and below. Findings by Akinnagbe and Ajayi, (2010) corroborate that cocoa farmers have fairly long period of farming experience. The implication is that most of the farmers have the experience necessary for cocoa production. Majority (84.0 percent) of the respondents had household size of 6-20 members and above Respondents' household size dictates the number of family labour that would be available for farming activities and, at times, signifies the size of cocoa farm of an individual farmer.

Table 2: Gender involvement in cocoa production activities.

Activities	Family Labour				Hired Labour			
	Male		Female		Male		Female	
	Freq.	(%)	Freq.	(%)	Freq.	(%)	Freq.	(%)
Land Clearing	104	(52.0)	45	(22.5)	175	(87.5)	10	(5.0)
Planting	140	(70.0)	78	(39.0)	136	(68.0)	7	(3.5)
Weeding	110	(55.0)	48	(24.0)	154	(77.0)	28	(14.0)
Fertilizing	95	(47.5)	68	(34.0)	54	(27.0)	46	(23.0)
Spraying	111	(55.5)	62	(31.0)	73	(36.5)	54	(27.0)
Harvesting	86	(43.0)	86	(43.0)	50	(25.0)	64	(32.0)
Processing	100	(50.0)	94	(47.0)	59	(29.5)	11	(5.5)
Marketing	129	(64.5)	74	(37.0)	60	(30.0)	15	(7.5)
Livestock Care	64	(32.0)	65	(32.5)	25	(12.5)	9	(4.5)

Source: Field Survey, 2015

Gender involvement in cocoa production activities

Gender involvement in cocoa production activities was presented in Table 2. More (52.0 percent) male family members were involved in land clearing while less (22.5 percent) female family members were used as labour. This implies that land clearing is a tedious task that female cannot easily perform. This agrees with findings by Mohammed and Abdulquadri (2012) that men perform major roles in physical activities like clearing and tilling. Most (70.0 percent) family males were involved in planting while less (39.0 percent) females were involved.

From Table 2, more male involvement in planting implies that planting is a stressful task which females cannot perform easily. This is in agreement with findings by Oluyole and Lawal (2010) which showed that operations such as planting of seedlings are mostly undertaken by men. More (43.0 percent) female family members were involved in harvesting while 25.0 percent males were hired for harvesting. This implies that females were more involved in harvesting. Since harvesting is a less tedious task, the farming households hired less male labour than female labour. Umar (2010) observed that women are more involved in harvesting than men. More (95.0 percent) male family members were involved in fertilizer application than females were. This shows that fertilizer application is a more tedious task than harvesting. According to Apata and Awe (2013), operations such as chemical application are mostly undertaken by men.

Decision making in production activities

Table 3 reveals that majority (68.0 percent) of the household head took decisions on crops to plant while only (3.0 percent) spouses had a say. This implies that most decisions taken on crop to plant were taken by the male in the house. The low involvement of women in decision making on crops to plant agrees with the findings of Subita (2013) that farm women involvement in decision making in agriculture on crop to plant is quite minimal. Also, when considering which varieties of crops to grow, most (66.0 percent) household head alone made decisions, whereas, less (8.0 percent) spouse and extension agent jointly took decisions. This means that most decisions taken on varieties of crops to grow were taken by the male in the house. However, the extension agent and spouses had less influence on the decision. The result is in agreement with the submission of Danisa and Yohanna's study (2007) which showed that farm women involvement in decision making in agriculture is quite minimal. As regards decision on planting new crop, majority (54.0 percent) of the household head made decisions, (3.5 percent) spouse took decision while 2.0 percent of the extension agent made decision. This implies that most decisions taken on planting new crops were taken by the male in the house while some (40.0. percent) of the respondents jointly took decisions with their spouse. Extension agents were less involved in the decision to plant new crop. A higher percentage (55.0 percent) of household heads took decisions on the purchase of farm input while (43.5 percent) of the spouses were involved. Findings of Chayal *et al.* (2013) showed that women

were less involved in decision making on the purchase of farm input. In like manner, decision about new agricultural technology to be adopted was taken mainly by 52.0 percent of the household heads. This implies that most decisions taken on new agricultural technology to be adopted were taken by the man of the house and the spouse's opinion did not count. This finding is similar to Jibowo (2000) who posited that in Nigeria, and most developing countries of the world, the father is the key actor in the rural family decision-making process.

Table 3: Distribution of respondents' decision making in production activities

Decision	Head alone		Spouse alone		Jointly		Extension agent	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Crop to plant	136	68.0	6	3.0	56	28.0	2	1.0
Varieties to grow	132	66.0	8	4.0	56	28.0	4	2.0
Planting new crop	108	54.0	7	3.5	81	40.5	4	2.0
Purchase of farm input	109	55.0	4	2.0	87	43.5	0	0.0
New agricultural technology to be adopted	104	52.0	7	3.5	87	43.5	2	1.0
Farm operation	110	55.0	7	3.5	87	40.5	2	1.0

Source: Field Survey, 2015

Level of access to resources

Access to and control of natural resources is crucial for sustainable livelihoods, resource management and overall rural development. Table 4 shows that the level of access to resources differs across gender, just as roles and responsibilities too. Most (57.5 percent) respondents stated that land is equally accessible by both male and female cocoa farmers. This implies that both the male and female farmers had the same opportunity of practicing their farming activities in the study area. Although, 33.0 percent of the respondents were of the opinion that women had less access to land than men. In terms of accessibility to financial capital majorly, cash and credit, 69.5 percent stated that women and men have equal access. This implies that women had enough capital to purchase the needed implements for farming and women have equal opportunity of joining social networks such as cooperative and farmers' association as men in the study area.

Of all the respondents, it was believed by 19.0 percent of the respondents that women had less access to social capital than men while 11.5 percent stated that women had more access to social capital than men. Findings by Bantilan and Padmaja (2008) indicated that social capital formation via the participation of men and women in mixed gender groups facilitated the adoption and diffusion of seed technology. Human capital, that is, labour needless to say, is very crucial in agricultural production, as, it is the human strength geared towards production process.

Result in Table 4 shows that most (67.0 percent) of respondents stated that human capital is equally accessible by both male and female cocoa farmers. This implies that both the male and female farmers have the opportunity of engaging labour; both family members and hired in their farming activities. Although, 25.0 percent of the respondents were of the opinion that men had less access to human capital than women, 8.0 percent still believed that women had more access to human capital than men.

Table 4: Distribution of respondents' level of access to resources

Resources	More than men		Equally with men		Less than men	
	Freq.	%	Freq.	%	Freq.	%
Natural capital	19	9.5	115	57.5	66	33.0
Human capital	16	8.0	134	67.0	50	25.0
Financial capital	23	11.5	139	69.5	38	19.0
Physical capital	24	12.0	126	63.0	50	25.0
Social capital	30	15.0	139	69.5	31	15.5

Source: Field Survey, 2015

Difference between male and female involvement in cocoa production activities

The result of the t- test analysis in Table 5 reveals a significant difference between male and female involvement in cocoa production activities (t= 2.304; p=0.022). This implies that there is a variation in gender involvement. This indicates that males perform more task than their female counterparts in the production activities. For instance, males were more involved in activities such as land clearing, weeding, planting, fertilizer application and spraying than females. This high involvement of male in cocoa production activities is similar to findings by Umar *et al.* (2010) which showed that men were more involved in most agricultural activities than women.

Table 5: t-test of the difference of male and female involvement in cocoa production activities

Involvement	t-value	p-value	Remark	Decision
Male and female	2.304	0.022	S	Reject null

CONCLUSION

Males were more involved in cocoa production activities than their female counterparts. Government should encourage women to be more involved in production activities in which men are the major players by providing more sophisticated technologies among others. In terms of technical know-how, training on proper use and maintenance of such technology should be provided. Since

the success and progress of any production depend upon the plans made and decisions taken, women should be given opportunity to actively take part in decision-making process.

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