Structure and Labour Use Pattern Among Cocoa farmers in Ondo state, Nigeria

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Abstract

This study investigated the structure and use pattern of farm labour in the study area. The study was carried out in Ondo state, Nigeria. Multistage sampling technique was used to collect data from 160 farmers and 144 cocoa farmers' data were used for analysis in this study. Seventy five percent of the farmers were above 50 years of age and about 25.01% were 50 years and below. Majority (79.17%) of the farmers were men. In the study contract type of labour is majorly used for most activities in cocoa farming while cooperative labour was seldom used. Activities such as land clearing (75.0%), planting (83.32%), weeding (95.83%), application of chemicals (91.67%), removal of mistletoes (87.50%), harvesting of cocoa pods (87.50%), among others were majorly carried out by contract labour. Male labour was mostly utilized for all the activities as indicated by most farmers. Female labour were sparingly utilized for some activities such as land clearing (8.33%), planting (0%), application of chemicals (8.33%) and spraying of chemicals (4.17%),. The study recommended that funds should be made available to farmers to engage in contract labour and also there should be the need to use equipments and machineries to reduce drudgery.

Keywords: Cocoa farmers, Ondo state, labour structure, labour pattern.

Introduction

Nigerian agricultural sector is dominated by small-scale farmers whose farms vary between 0.10 and 5.99 hectares in size and constitute about 80.35% of all the 29,800 million farm holdings in Nigeria (Ayanwale, 2002; Saror *et al.* 2021). Their farmers used traditional technologies called hoe-cutlass culture and their capital structure is in form of small tools and predominant usage of family labour (Oluyole *et al.* 2009; Gomez *et al.*2022). Human labour is about the only main source of labour available to smallholder farmers in Nigeria. Smallholder farmers contribute over 85% of domestic agricultural output in Nigeria, hence, human labour accounts for domestic food supply in Nigeria. Therefore, the need to continue supplying food for the ever-growing Nigerian population anchors on human labour productivity. In Nigerian agriculture, hired labour is predominantly used. In fact, it carries 88% of the total labour used on farms (Okuneye, 2000; Emmanuel and Oba, 2019). Apart from hired labour, the other types of labour that could be

employed are family labour and cooperative labour. The availability of labour has been found to have impact on planting precision, better weed control, timely harvesting and crop processing (Oluyole *et al*. 2007). Therefore, labour is a major constraint in peasant production especially during planting, weeding and harvesting (Gocowski and Oduwole, 2003; Idiake-Ochei, 2019). Lele and Stone (1989) and Adipala and Egeru (2018) affirmed that rapid growth in population which increases farm labour supply exerts so much pressure on land and reduces farm size per hectare. Empirical evidence has shown that available labour force comprised mostly of old people to the exclusion of young men and women within the active working age thus having a negative impact on agricultural productivity. This is because the role of youths in agricultural production cannot be over-emphasized.

Idiake- ochai (2019) assessed farm labour constraints in Edo State, Nigeria. The study identified the labour types used for farming activities and considered the constraints farmers encountered in using labour. The authors purposively selected four villages and sampled one hundred and eight farmers in Edo state. Descriptive and Inferential statistical analytical tools were used. The farm activities include clearing, weeding, planting, harvesting, and chemical spraying, processing, transportation, storage and fertilizer application. For clearing activity, 40.7% family labour and 31.5% of hired labour was used. Forty three percent of family labour and thirty one percent of hired labour was used for weeding activity. In chemical spraying 38.0% of family labour and 40.7% of hired labour was used. In all most of the farmers used hired and family labour for most of their farming activities. The constraints majorly encountered were high cost of labour ($\bar{x}$ =2.84) and lack of finance ($\bar{x}$ =2.83). The study recommended that farmers should form cooperatives to assist each other in labour support.

Oluyole *et al*. 2013 examined the labour structure and its determinants among cocoa farmers in Nigeria. One hundred cocoa farmers were selected in the study area using stratified sampling technique. Eighty percent of the respondents are smallholder farmers having between 1-5 hectares of cocoa farm. Ninety four percent of the cocoa farmers used hired labour for farm clearing while 61.0% and 51% used family labour for harvesting and on farm cocoa processing, respectively. The major determinants of labour use among cocoa farmers were wage rate ($p<0.05$), farm size ($p<0.01$), farm income ($p<0.01$). The study recommended that infrastructural facilities should be provided in rural South West to encourage youth involvement in agriculture.

With the foregoing, it could be observed that human labour plays a very significant role in agricultural development especially in the developing countries in which the level of technological development is still very low. In view of the importance of labour in agricultural production, this study was designed to investigate the structure and use pattern of farm labour in the study area.

Methodology
Study Area
The study was carried out among cocoa farmers in Ondo State. Ondo State is one of the Southwestern States in Nigeria. The State is the highest cocoa producing State in Nigeria. Out of the Local Governments Areas (LGAs) in Ondo State, Ondo East is one of the major cocoa producing LGAs in the State.

Sampling Technique
Multistage random sampling was used to select cocoa farmers. Ondo East Local Government Area was purposively selected from the State and from the LGA, Laagba community was also purposively selected because cocoa farmers are mostly concentrated in the community. Simple random sampling technique was used to collect data from a total of 144 farmers randomly selected from the community. Data were collected from the respondents with the aid of structured questionnaire and the data obtained from the questionnaire were analysed using Descriptive analysis. Descriptive Statistics was used to describe the socio-economic characteristics of the farmers as well as the structure and use of labour pattern in the study area

Analytical Procedure
Descriptive Statistics was used to describe the socio-economic characteristics of the farmers as well as the structure and use of labour pattern in the study area.

Results and Discussion
The result of the socio-economic characteristics of the farmers is shown in Table 1. The table shows that 74.99% of the total respondents are above 50 years of age indicating that the proportion of old people among the respondents is very high. Meanwhile, only 25.01% of the

total respondents were 50 years and below. The lowness in the proportion of the youths is a bad pointer to cocoa production efficiency as younger farmers are more active on farm work than the aged ones. Oluyole *et al*. 2013 affirmed that the provision of infrastructure in rural areas would attract more youth to the rural areas. Table 1 also shows that 79.17% of the respondents were males. This is quite obvious in that farm work is a tedious work and is only men that could cope effectively with it. Apart from this, most of the farms were inherited and some traditional cultures permit only the male children to inherit farms. As regards the educational level of the respondents, the result of the analysis shows that 75.07% of the respondents were having formal education. This would improve the efficiency of the farmers in as much that literate farmers would find it easier to adopt new technologies on cocoa than the illiterate ones. The analysis on farm size shows that 66.67% of the respondents had farm size of 5 hectares and below which shows that most of the farmers are small scale farmers. Table 1 also shows that 50.0% of the farmers had the age of their farms greater than 30 years showing that most of the farms are old and hence the farm's productivity would reduce, therefore such farms needs to be rehabilitated. This is a good pointer to an increased productivity. Table 1 also revealed that majority (75.00%) of the farmers had purchased farms while just 12.5% inherited their farms.

Table 1: Socioeconomic Characteristics of Farmers

Variables	Frequency	Percentage
Age of farmers (years)		
≤ 30	6	4.17
31-40	6	4.17
41-50	24	16.67
51-60	48	33.33
>60	60	41.66
Total	144	100.00
Sex of farmers		
Male	114	79.17
Female	30	20.83
Total	144	100.00

Educational Status		
No formal education	36	25.00
Primary education	36	25.00
Secondary education	54	37.50
Tertiary education	18	12.50
Total	144	100.00
Marital Status		
Single	0	0.00
Married	126	87.50
Widow/widower	12	8.33
Divorced	6	4.17
Total	144	100.00
Farm size (Ha)		
≤ 5	96	66.67
6-10	30	20.83
11-15	18	12.50
Total	144	100.00
Age of farm (years)		
≤ 10	6	4.17
11-20	24	16.66
21-30	42	29.17
31-40	36	25.00
41-50	18	12.50
>50	18	12.50
Total	144	100.00
Nature of ownership		
Inherited	18	12.50
Purchased	108	75.00
Rented	12	8.33
Sharecropping	6	4.17
Total	144	100.00

Table 2 shows the structure of labour according to the different types of labour used for different activities in cocoa farming. The table shows that contract type of labour is majorly used for most activities in cocoa farming. However, cooperative labour was seldom used for any activity showing that cooperative labour is no more utilized in cocoa farming in the study area. Family labour is also utilized for all activities but at different magnitude. Activities such as land clearing, planting, weeding, application of chemicals, removal of mistletoes, harvesting of cocoa pods, conveyance of cocoa pods to the pod breaking point, breaking of cocoa pods and conveyance of cocoa beans to the point of fermentation were majorly carried out by contract labour. This is because 75.0%, 83.32%, 95.83%, 91.67%, 87.50%, 87.50%, 95.83%, 100.0% and 88.33% of the farmers respectively indicated that they utilized contract labour for such activities. However, activities such as drying of cocoa beans, parking of dried cocoa beans and preservation of cocoa beans were majorly carried out with family labour.

Table 2: Distribution of labour by types of labour used for different activities in cocoa farming

Activities	Types of Labour					
	Family		Contract		Cooperative	
	Freq	%	Freq	%	Freq	%
Land clearing	36	25.00	108	75.00	0	0.00
Planting	18	12.5	120	83.33	0	0.00
Weeding	6	4.17	138	95.83	0	0.00
Application of chemicals	24	16.67	132	91.67	0	0.00
Application of fertilizer	12	8.33	108	75.00	0	0.00
Removal of mistletoes	6	4.17	126	87.50	0	0.00
Harvesting of cocoa pods	30	20.83	126	87.50	0	0.00
Conveyance of cocoa pods to the point of pod breaking	24	16.67	138	95.83	0	0.00
Breaking of cocoa pods	42	29.17	144	100.00	0	0.00

Conveyance of cocoa beans to fermentation spot	42	29.17	120	88.33	0	0.00
Fermentation of cocoa beans	42	29.17	96	66.67	0	0.00
Conveyance of cocoa beans from the fermentation spot to the drying spot	38	25.00	108	75.00	0	0.00
Drying of cocoa beans	144	100.00	12	8.30	0	0.00
Parking of dried cocoa beans	144	100.00	6	4.17	0	0.00
Preservation of cocoa beans	144	100.00	0	0.00	0	0.00

Source: Field survey, 2021.

Table 3 shows the distribution of the labour used for cocoa farm activities based on the gender of the labour. The table shows that male labour were mostly utilized for all the activities as indicated by most respondents. On the other hand, female labour were sparingly utilized for some activities such as land clearing, planting, application of chemicals (spraying of chemicals), removal of mistletoes and harvesting of cocoa pods as only 8.33%, 0%, 8.33%, 4.17%, 0% and 12.5% of the farmers respectively indicated that they use female labour for the respective farm activities. However, female labour were mostly used for conveyance of cocoa pods to the point of pod breaking, breaking of cocoa pods, conveyance of cocoa beans to the spot for fermentation and drying of cocoa beans.

Table 3: Distribution of labour by the gender of labour used for different activities in cocoa farming

Activities	Gender of labour			
	Male		Female	
	Freq	%	Freq	%
Land clearing	144	100.00	12	8.33

Planting	144	100.00	0	0.00
Weeding	126	87.50	12	8.33
Application of chemicals	126	87.50	6	4.17
Application of fertilizer	114	79.17	24	16.67
Removal of mistletoes	126	87.50	0	0.00
Harvesting of cocoa pods	114	79.17	18	12.50
Conveyance of cocoa pods to the point of pod breaking	120	83.33	126	87.50
Breaking of cocoa pods	126	87.50	132	91.67
Conveyance of cocoa beans to fermentation spot	144	100.00	138	95.83
Fermentation of cocoa beans	120	83.33	12	8.30
Conveyance of cocoa beans from the fermentation spot to the drying spot	120	83.33	132	91.67
Drying of cocoa beans	138	95.83	120	83.3
Parking of dried cocoa beans	126	87.50	30	20.83
Preservation of cocoa beans	132	91.67	24	16.67

Source: Field survey, 2021.

Conclusion and Recommendation

The study was carried out on the structure and use pattern of labour among cocoa farmers. The study found out that labour could be structured according to the types of labour (family labour, contract/hired labour and cooperative labour) and according to the gender of the labour. The study further revealed that contract labour is mostly used for activities such as land clearing, planting, weeding, application of chemicals, removal of mistletoes, harvesting of cocoa pods, conveyance of cocoa pods to the pod breaking point, breaking of cocoa pods and conveyance of cocoa beans to the point of fermentation while family labour is mostly used for drying of cocoa beans, parking of dried cocoa beans and preservation of cocoa beans. However, cooperative labour is no more used as a form of labour in the study area. Funds should be made available to farmers to contract labour and also the need to use equipments and machineries to reduce drudgery.

References

Adipala, E., and Egeru, A. (2018). Investing in potential: Africa's people and land feeding the world. *RUFORUM Working Document Series*, *16*: 1-17.

Akinsanmi, A., Akinsanmi, O. and Ekundayo, K. (2016). Signal Strength Variation and Propagation Profiles of UHF Radio Wave Channel in Ondo State, Nigeria. *International Journal of Wireless and Microwave Technologies*. 6:12-28.

Ayanwale, B. A. (2002).Family investment in the Education of Children and Adolescents in Rural Osun State, Nigeria. In: Issues in African Rural Development Monograph Series. No. 21 Winrock International.pp. 9.

Emmanuel, A. A., and Oba, O. E. (2019). Assessment of the use of climate smart agricultural practices among smallholder farmers in Ogun state. *Acta Scientific Agriculture*, *3*:47-56.

Gocowski, J., and Oduwole, S. (2003). Labour Practices in the Cocoa Sector of Southwest Nigeria with a special focus on the role of children. STCP/IITA monograph IITA, Ibadan, Nigeria.

Idiake-Ochei, O. (2019). Assessment of Farm Labour Constraints in Esan West Local Government Area of Edo State, Nigeria. *South Asian Research Journal of Agriculture and Fisheries,* 1(1): 12-16.

Lele, U.R., and Stone, S. W. (1989).Population, Resource, the Environment and Agricultural Intensification: Variations on the Boserup Hypothesis. MADIA Discussion Paper No. 4, Washington D.C: The World Bank.

Oluyole, K. A., Oni, O. A., Omonona, B. T. and Adenegan, K. O. (2009). Food Security Among Cocoa Farming Households of Ondo State, Nigeria. *Journal of Agricultural and Biological Science*, 4 (5): 713.

Okuneye, P. A. (2000). "Employment Generating Potentials of Agricultural Processing and Storage Technology: Additional Gain in Increased Food Availability Pursuit" Paper presented at the workshop for local government officials in Lagos state.

Oluyole, K. A., Adebiyi, S., and Adejumo, M. O. (2007). An Assessment of the Adoption of Cocoa Rehabilitation Techniques Among Cocoa Farmers in Ijebu East Local Government Area of Ogun state. *Journal of Agricultural Research and Policies*. 2 (1): 56-60.

Oluyole, K.A., Dada, O.A., Oni O.A., Adebiyi S., and Oduwole, O.O. (2013): Farm Labour Structure and Its Determinants among Cocoa Farmers in Nigeria. *American Journal of Rural Development*, 1(1): 1-5

Saror, S. F., Pinga, E. S., and Gomez, D. (2021). An Assessment of Diverse Labour Sources used in Rice Production in Guma Local Government Area of Benue State. *Gusau International Journal of Management and Social Sciences*, *4*(3):13-13.