

Labour Use Pattern among Farmers in Ife Central Local Government Area of Osun State

Awotodunbo, A. A.

Rural Enterprise Development Department, Leventis Foundation (Nig.) LTD/GTE, Agricultural Training School, Dogon Dawa, Kaduna, Kaduna State
e-mail: bayoawotodunbo67@yahoo.com

Abstract: The inequitable distribution of income arising from low productivity of labour input and rising labour shortage in Ife Central Local Government area of Osun state, Nigeria has called for a research into the Labour use pattern among farmers in the area. The sample for the study consists of 100 farmers randomly selected from 10 villages in the area. Relevant data needed for the study were obtained from the respondents through the use of questionnaire.

Findings revealed that majority of the respondent (71%) were male, 82% were above 40 years and 75% were married. The study also revealed that 81% employed between 11 to 30 labourers per season while none of the respondents employed hired labourers for the whole farm work. Labour is rarely available (94%) and rarely used (88%) by the respondents. The correlation analysis revealed that farmers' age ($r=0.20$), labour cost ($r=0.46$), labour input productivity ($r=0.46$) were positively correlated with labour use pattern; with all the relationship in each case being significant at $p=0.05$. It was also revealed that labour availability ($r=0.20$) was not significantly correlated with labour use pattern. The relationship between crop types grown by the farmers and labour use pattern was found to be significant ($\chi^2=29.68$; $p=0.05$). It is recommended that rural labour market be organized to ensure continuous availability of labour; especially at the peak of production season. There should also be parity in rural wage structure comparable with urban non-skilled wages to reduce rural-urban migration as an impetus for Agricultural development.

Keywords: Labour use, Rural-urban migration, Labour productivity, Wage structure, Agricultural development

INTRODUCTION

The Agricultural sector plays a major role in domestic employment and external trade. From 1980 to 1986, agriculture contributed 34% of the total Gross Domestic Product (GDP); employed 80% of the labour force and accounted for about 26% of foreign exchange earnings (Mkadawire; 1987). For the past two decades however; agricultural sector in Nigeria had declined or remained stagnant in terms of its ability to provide man's needs- food, shelter and clothing. Harwood (1990) observed that Nigeria had experienced a

decline in per capita food production during the last two decades. The decline in agricultural sector is due to the nature of agricultural production and problems underlining its improvement. Farmers have little or no ability to expand their farm size, while production is mostly through the use of outdated farm implements. They have little or no access to external fund for proper farm finance, lack proper agricultural advisory services and have access mainly to their own labour and those of their families. These force farmers to depend on their own labour and

could not make any appreciable improvement in their production. The most influential of the problems is low labour availability and utilisation, which may have resulted from labour migration from rural to urban cities. The above therefore points to the importance of labour, which involves all human efforts employed in production. The labour use patterns thus go a long way to affect farmers' yield and the drive at achieving food security.

Objectives of the study

The general objective of this study is to determine the labour use pattern among farmers in the study area. The study will specifically attempt to:

- i. determine the demographic characteristics of the farmers,
- ii. identify the crop types grown by the farmers,
- iii. identify the sources of labour supply to farmers,
- iv. determine the labour use pattern of the farmers,
- v. determine the availability of labour to farmers,
- vi. estimate the cost at which farmers hire labour and
- vii. determine farmers' labour input productivity,

Hypotheses

The following hypotheses are stated in null form for pursuit by the study.

- i. There is no significant relationship between age of the farmers and their labour use pattern,
- ii. There is no significant relationship between the crop types grown by the farmers and their labour use pattern,
- iii. There is no significant relationship between labour availability and farmers' labour use pattern,

- iv. There is no significant relationship between labour cost and labour use pattern and
- v. There is no significant relationship between labour input productivity and labour use pattern

METHODOLOGY

The study was carried out in Ife Central Local Government Area of Osun State. The Local Government shares boundary with the Ife East, Ife North, Ife South and Atakunmosa Local Government Areas of Osun state. The inhabitants of the area, though engaged in other income generating activities, are predominantly farmers who specialize in the cultivation of both food and cash crops like maize, yam, cocoyam, cassava, cocoa, kolanut, palm oil etc. They also keep poultry birds. Rainfall in the area is adequate with a relatively high humidity. From about 33 villages in the area, about 10 villages were randomly selected and from each village, at least 8 farmers were sampled for inclusion in the study. A total of 100 farmers were sampled, though, all farmers in the area constitute the population for the study. Information were collected from respondents through the use of questionnaire which was face validated by experts. The data were analysed using descriptive statistics like frequencies and percentages. The relationship between some variables measured at interval level of measurement were analysed using Pearson Product Moment Correlation; while Chi-square was used to test the relationship between the crop types grown, which was categorized as Food, Cash and Food and Cash crops; and the labour use pattern, which was measured at interval level and then operationalised as low and high labour use.

Measurement of Variables - The dependent variable measured in this study is Labour use pattern. This is measured by asking the respondent to indicate the number of labour employed, frequency of use of labour and the proportion of farm work for which labour is used for some farm operations like bush clearing, ridge making, planting, weeding, harvesting, processing and marketing. A maximum score of 5 was assigned for 5 or more labourers used for any operation while 4 scores, 3 scores, 2 scores and 1 score were assigned to 4, 3, 2 and 1 labour employed, respectively. Frequent use of labour for any farm operation was scored 3, 2 for rarely use and 1 score for not using labour. Use of labour for the whole farm work was scored 5, use of labour for three-quarter of the farm work was scored 4, use of labour for half of the farm work was scored 3, Use of labour for a quarter of the farm work was scored 2 and None use of labour at all was scored 1. The maximum labour use score was 81 while the least was 21. Labour use scores of between 21 and 50 was categorised as Low labour use while scores of between 51 and 81 was categorized as high labour use.

The independent variables measured were:

Age: Respondents were asked to indicate their actual age in years

Crop types grown: Respondents were asked to indicate the crop types grown as food crops only, cash crops only, food and cash crops.

Labour availability: Respondents were asked to indicate if labour is readily, rarely or not available

for some farm operations like bush clearing, ridge making, planting, weeding, harvesting, processing and marketing. Any farm operation for which labour is readily available was scored 3; any farm operation for which labour is rarely available was scored 2 while any farm operation for which labour is not available was scored 1. The maximum labour availability score was 21 while the least was 7

Labour cost: The actual amount the farmers spent on hired labour per season per unit area of land for the last cropping season was used.

Labour input productivity: This was measured by finding the ratio of the crop output obtained to the man-hour of labour employed.

RESULTS AND DISCUSSION

Table 1 shows that 71% of the respondents are male while 29% are female; implying that men are more actively engaged in farm work than women; although the kind of farm works engaged in by men are different from women. This supports the observation of Khabele (1980) that labour can be divided and used for different operations depending on the age and sex, the nature of the task to be performed and the size of land to be cropped.

Table 1: Demographic characteristics of the farmers (n=100)

Characteristics	Frequency	Percentages
Gender		
Male	71	71
Female	29	29
Age		
21-40	18	18
41-60	67	67
61 and Above	15	15
Education level		
No formal Education	62	62
Standard six	12	12
Primary School	10	10
Secondary School	8	8
Post Secondary School	1	1
Others		
Marital Status:		
Single	6	6
Married	75	75
Widowed	16	16
Separated	3	3
Crop Types Grown		
Food crops only	19	19
Cash crops only	3	3
Food and cash crops	78	78
Labour Sources		
Self and Family	2	2
Hired Labour only	14	14
Self, family and hired	57	57
Self, family and communal	2	2
Self, family, hired and communal	25	25
Reasons for using hired labour as against other labour sources		
Family size is small	60	60
It is more readily available and cheap	5	5
Other sources are less popular	35	35

Source: Field Survey 2007

This result however contradicts the observation of Okoriji (1990) in his study of women's labour household management and agricultural technology in a rural farming community of Anambra state that women take less part in off-farm employment compared with men; and do not engage actively in community development projects. He reported further that farm and household chores compete for women's labour in the area; and compared with men, women work more hours per day (14 hours on the average) to perform their duties to be able to meet the

competing labour demand. The Table further shows that 82% are old; above 40 years while 18% are young; below 40 years. This age structure implies that labour would likely be low as the strength to work on the farm declines as one advances in age. The study also revealed that 62% have had no formal education, 12% completed standard six, 10% and 8% completed primary and secondary schools respectively, 1% had some form of tertiary education while 7% attended some other higher schools. The Table also shows that 75% are married, 6% are single

while 16% and 13% are widowed and separated respectively. Most married respondents have more than one wife and this supports the assertion of Ekong (1988) that farmers marry many wives to raise large families that could cope with labour required in farms. The analysis of the crop type grown reveals that 78% cultivate both cash and food crops, 3% grow cash crop only while 19% grow food crops only. This shows that farmers cultivate crops not only for consumption but also for income. Results presented in Table 1 also show that most respondents relied on more than one source of labour. Labour supply through self and family is low (2%); and this supports the findings of Babiker and Mohammed (1987) that family participation rate was low in their study of labour supply for cotton picking in the Blue Nile Agricultural Scheme (BNAS) of the Sudan. This, however, does not support Olayide and Atobatele (1980) in their studies of peasant farms in Kwara state, those family members and friends constitute the major source of farm labour. They reported that 27% of respondents in the survey indicated heavy reliance on family labour; and that while 43% of the respondents used hired labour all year round; most farmers used seasonal hired labour during specific peak farm activities and operations. This, however, amplifies the findings of this research since majority (57%) relied more on family and hired labour; 14% of the respondents relied solely on hired labour while 2% employed family and communal labour. This corroborates the submission of Oluwasanmi (1966) that communal labour is declining very fast because of the loosening of tribal ties, development of commercial agriculture as well as expansion of education and migration. The result further reveals that 60% relied on hired labour because their family

size is small and hence low family workforce. This may be due to movement of farmers' dependants away from the communities to more urban centres. Five percent of the respondents used hired labour because they considered it cheaper and readily available while 35% used hired labour because other labour sources are no longer popular. The implication is that labour cost may be high as hired labourers may have free days in charging higher prices for their services.

Table 2 shows that 81% employed between 11 and 30 labour per season, 10% employed above 30 labours while 9% employed between 1 and 9 labour per season. This may be due to high cost of labour resulting from labour unavailability. None of the farmers employed labour for the whole farm-work, 9% employed labour for none of their farm-work. Also, 20% and 7% of the respondents respectively cultivated less than 1 hectare and above 2 hectares of farmland while 73% cultivated farmland of between 1 and 2 hectares.

Respondents would need additional labour force to cope with work on the farm since they operated a fairly large farm size in the traditional rural settings. Any reduction in farmers' internal labour force would force them to seek labour such as hired and other forms.

Table 2: Distribution of Respondents according to the Number of Labour employed per Season, Proportion of Farm-work for which Labour is employed and Farm Size (n=100)

Characteristics	Frequency	Percentages
Number of labour employed per season		
1-10	9	9
11-20	53	53
21-30	28	28
31 and above	10	10
Proportion of farm-work		
The whole farm-work	-	-
Three-quarter farm-work	13	13
Half farm-work	38	38
One-quarter farm-work	40	40
None of the farm-work	9	9
Size of farmland (hectare)		
Less than 1	73	73
1 - 2	7	7
Above 2		

Source: Field Survey, 2007

Results in Table 3 reveal that labour is rarely available (92%). Few (2%) of the respondents claimed that labour is readily available to them. This implies that there is labour shortage in the area. This is expected to affect farmers' output especially if the shortage is experienced at the peak of production. This may lead the few available labourers to charge very high for their services; and, hence produces a dwindling effect on income accruable to farmers from sales of farm produce. The Table also reveals that 9% use labour regularly while 88% rarely use labour for their farm operations. This is expected to consequently limit the farm size, which could be cropped, the output and farmers' net income. Majority (74%) spent as high as N30,000.00 on labour per cropping season. Kigbu (2006) commented that high cost of labour reduces farmers'

income significantly and affect their standard of living drastically.

Table 3: Distribution of Respondents According to Labour Availability, Frequency of Use and Labour Cost (n=100)

Characteristics	Frequency	Percentage
Labour Availability:		
Readily Available	2	2
Rarely Available	92	92
Not Available	6	6
Frequency of Use:		
Regular	9	9
Rarely	88	88
Not Use	3	3
Labour Cost (N):		
Less than 10,000.00	4	4
10,001.00	- 6	6
20,000.00	16	16
20,001.00	- 42	42
30,000.00	32	32
30,001.00	- 0	0
40,000.00	0	0
Above 40,000.00	0	0

Source: Field survey, 2007

Testing Hypotheses

H₀₁: There is no significant relationship between age of the farmers and their labour use pattern

The result of the correlation analysis of the relationship between the age and the labour use pattern of farmers in Table 4 shows a statistical significant relationship ($r=0.36$; $p=0.05$). This implies that older farmers use more labourers on their farms than the younger and more agile ones. This supports the fact that the strength to work on the farms decreases as one advances in age.

Table 4: Relationship between Age of farmers and their Labour Use Pattern

Characteristic	Df = (N-2)	r-value @ p=0.05		Decision
Age	98	Cal	Tab	Significant
		0.36	0.2050	

Source: Field Survey, 2007

H₀2: There is no significant relationship between crop type grown by the farmers and their labour use pattern

Chi square analysis of the relationship in Table 5 shows that there is a statistical significant relationship between the tested variables ($X^2=29.68$; $P=0.05$). This implies that the cultivation of both Food and Cash crops together requires higher labour input than the cultivation of either cash or food

crops solely. This is supported by Bello (2005) and Kayode (2006) that the maintenance of cash crops requires higher labour input than food crops, but also require much more labour input when combined with food crops.

Table 5: Relationship between Crop type grown by farmers and their Labour Use Pattern

Characteristic	df=(r-1) (c-1)	X2 value @p=0.05		Decision
		Cal	Tab	
Crop type grown	2	29.68	5.99	Significant

H₀3: There is no significant relationship between Labour Availability and Farmers' Labour Use Pattern

In Table 6, it is revealed that a statistical significant relationship does not exist between the

variables tested ($r=0.20$; $p=0.05$). This implies that the availability of labour does not explicitly explain the labour use pattern of the farmers.

Table 6: Relationship between Labour Availability and Farmers' Labour Use Pattern

Characteristic	Df = (N-2)	r-value @p=0.05		Decision
		Cal	Tab	
Labour availability	98	0.20	0.2050	Not Significant

Source: Field Survey, 2007

H₀4: There is no significant relationship between Labour Cost and Farmers' Labour Use Pattern

Findings in Table 7 reveals that there is a statistical significant relationship between the variables ($r=0.46$; $p=0.05$). This indicates that labour cost is increased with increase in labour use. This means as more labourers are hired, more

expenses are incurred on labour. This is supported by Alabi (2006) that labour cost increases as more labour is hired; and this causes a reduction in the farmer's net income.

Table 7: Relationship between Labour Cost and Farmers' Labour Use Pattern

Characteristic	Df = (N-2)	r-value @p=0.05		Decision
		Cal	Tab	
Labour Cost	98	0.46	0.2050	Significant

Source: Field Survey, 2007

H₀5: There is no significant relationship between Labour Input Productivity and Farmers' Labour Use Pattern

The findings in the Table 8 shows a statistical significant relationship between labour input productivity and farmers' labour use pattern tested ($r=0.46$; $p=0.05$). This implies that labour

use contributes conspicuously to farmers' output. The more the labour employed on the farm, the higher the farmers' output and hence, their income. This is in line with the assertion of Alabi (2006) that the shorter the farm distance from farmer's

residence, the more productive his labour input. He stressed further that a direct relationship exists between labour employed and the farm output, under good labour management.

Table 8: Relationship between Labour Input Productivity and Farmers' Labour Use Pattern

Characteristic	df = (N-2)	r-value @p=0.05		Decision
Labour Input Productivity	98	Cal	Tab	Significant
		0.46	0.2050	

SUMMARY

The inequitable distribution of income arising from low productivity of labour input and rising labour shortage in Ife Central Local Government area of Osun state, Nigeria has called for a research into the Labour use pattern among farmers in the local government area; with the aim of identifying the crop types grown in the area and the sources of labour available to farmers; determine labour availability, labour input productivity and labour use pattern, and to estimate the cost of labour in the area. The data for the study was collected through the use of face validated questionnaire in 1997 for the purpose of Master degree thesis but was updated in 2007. Appropriate statistical tools were employed in the analysis of data. It was revealed that labour for farm work is scarce and the available few are still not optimally utilized in the area. The organisation of rural labour market to ensure continuous labour supply throughout the production season is recommended.

Conclusion

The research findings reveal that Labour is still not optimally utilized in the Area. This may be due to the fact that labour is not readily available during the cropping season, and partly due to high cost of the available labour. If labour availability and labour use continue at this present rate, farmers may become more impoverished for a long time.

Recommendations

In the light of this research into the Labour use pattern among farmers in the area; and the need for optimal labour use on small-scale farms, it is pertinent that programmes which will encourage able-bodied youth, who could provide labour needed to boost agricultural production in their communities, be put in place by all stakeholders in agriculture at all levels, to restrict youths movement to cities in search of jobs. These include adequate development of rural infrastructures; and institution of policies that will reduce the gap in the structure of rural and urban wages of non-skilled workers.

REFERENCES

- Alabi S.O.W (2006), "Small farmer and labour utilisation " Paper presentation at the National Fadama Development Project Stakeholders workshop, Abuja
- Babiker I.B and Mohammed A.R.A (1987), "Labour Supply for Cotton picking in the Blue Nile Agricultural Scheme of the Sudan" in Agricultural Administration and Extension vol. 28, pp 217-225
- Bello F.G (2005), "Labour use efficiency on small farms" Paper presented at a workshop on Improvement in Wheat production in Kano state, Nigeria

- Ekong E.E (1988). An Introduction to Rural Sociology. Ibadan; Jumak Publishers Ltd; pp 45-51
- Harwood R.R (1990), Small Farm Development U.S.A; Westview Press Inc; 160p
- Kayode O.S (2006), “Labour for food and cash crops in Nigeria” Text of paper presented at the LFN training workshop for Ex-trained farmers, 11-13, March.
- Khabele A. (1980), “Labour use in Agriculture”. Bulletin of the South African Labour Institute iv (2): 10-21
- Kigbu E. (2006) “Economies of labour in a small farm setting” Text of paper presented at the LFN short training workshop for local farmers in Kaduna, Nigeria.
- Mkadawire, R. (1987), Food Policy and Agriculture; South Africa, Richy Press; pp 2-4
- Okoriji A.A (1990), “Women’s labour; household management and Agricultural technology in a rural farming community of Anambra State; Nigeria”. Journal of Rural Development, vol. 6 (6): 110-112
- Olayide S.O. and Atobatele J.T (1980), “Farm Labour Use and Nigerian Small Farmers” in S. Olayide; J.A. Eweka and V.E. Bello-Osagie (eds) Nigerian Small Farmers. Problems and Prospects in Integrated Rural Development; Ibadan; CARD; pp149-160
- Oluwasanmi, H.A (1966). Agriculture and Nigerian Economy Development, London; Longman Press; pp 74-78