

DETERMINANTS OF AGRICULTURAL LABOUR CHANGE IN NIGERIA: THE CASE OF BENIN REGION

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Abstract

Agriculture is a veritable tool used in unlocking stagnated economic potentials, growth and employment of labour of any country. In recent years, agricultural labour deficit has been one of the major concerns in developing countries Nigeria inclusive. The aim of this paper is to examine the determinants of agricultural labour change in Nigeria, the case of Benin region. Purposive sampling was used in selecting two (2) rural areas each from the seven (7) local government areas that make up the Benin region while systematic random sampling technique was used in selecting household farmers who were directly involved in farming. Data were collected through structured questionnaire interviews and data were analyzed using bar chart, percentages, tables, descriptive statistics and frequency counts. The ranking methods were used to identify the most rated factors. The findings revealed that majority of the respondents were subsistence farmers. Also, the results of five-point likert analysis showed that out-migration was the major factor that determines agricultural labour change in the Benin region. It was recommended that Government should, as a matter of priority, provide basic socio-amenities in all the rural areas. This will serve in discouraging out migration of youths from the agricultural sector in the Benin region.

Keyword: Agricultural labour change; Determinant factors, Benin Region, Agricultural sector

Agriculture is a veritable tool used in unlocking stagnated economic potentials, growth and employment of labour of any country. In recent years, agricultural labour deficit has been one of the major concerns in developing countries Nigeria inclusive. Economic history has shown that agricultural revolution is a fundamental pre-condition for economic growth, especially in developing countries (Eicher and Witt, 1964; Oluwasanmi, 1966; Woolf & Jones, 1969). Ukeji (2003) submits that in the 1960's,

agriculture contributed up to 64% to the total GDP but gradually declined in the 1970's to 48%. National Bureau of Statistics (NBS) in 2008 reported that agriculture contributed 42% of Nigeria's gross domestic product (GDP). However, despite having grown at an annual rate of 6.8% from 2002 to 2006, 2.8% higher than the sectors annual growth between 1997 and 2001, food security remains a major concern due to several factors including the subsistence nature of the country's agriculture (Nwafor, 2008). Unfortunately, the report by International Food Policy Research Institute (IFPRI) (2008), had noted that the declining importance of agriculture in the Nigerian economy can also be seen in the steady fall in the share of the population residing in rural areas, the share of the labour force employed in agriculture, and the share of the nation's export earning derived from agricultural commodity exports. On the other hand, other studies have shown that the declining farm labour force is compounded by the fact that the agricultural sector, with a few exceptions, has the worst poverty conditions (Ruben and van der Berg 2001). Studies have also indicated that shortage in farm labour supply results in low farm productivity which eventually culminates in poverty among rural farming communities in Nigeria. This situation has been considered a major problem especially in developing countries (Gebremedhin and Switon, 2001).

Nigerian youths in recent years tend to look down on farm labour but prefer to migrate from rural areas to urban centers for better job opportunities and other social amenities. This development is the main problem confronting the availability of rural agricultural labour force.

Years after independence in Nigeria, agricultural labour supply particularly in the Benin region was mainly provided by household farm family labour. Agricultural productivity during this era depended on household family size. Sadly, the discovery of crude oil in Nigeria and the subsequent out migration of agricultural labour force from rural areas in search of formal jobs gave rise to the present study on the determinants of agricultural labour change in Nigeria. This scenario has created a lot of concern by researchers on the possible determinant of agricultural labour shift. In recent times, the Benin region has witnessed an emergence of inflow of farm labourers from other Nigerian rural towns. Given the wide spread poverty in our rural communities, food insecurity and unemployment in Nigeria, there is the need to critically evaluate the factors that influence agricultural labour change as such information is key in policy making process for achieving food sustainability. The aim of this study therefore is to examine the determinants of agricultural labour change in Nigeria, the case of the Benin region.

Methodology

The study area, the Benin region, is in the southern part of Edo State, Nigeria and comprises the Bini speaking people. The local government areas in the region namely Egor, Ikpoba-Okha, Oredo, Ovia South West, Ovia North East, Orhionmwon and Uhunmwode have rural communities which are predominantly involved in agricultural based economy as their main source of livelihood. The population of the

urban area and the resultant effect of rural labour force shortage has grown overtime. The reason for the rapid population explosion is largely traced to rural-urban migrations from the surrounding hinterland into the urban centres.

Source of Data: Primary and secondary data were used in the study. Primary data were obtained by means of oral interviews, focus group discussions with the community leaders through the use of questionnaire instrument. Questionnaires were designed and administered to indigenous household farmers who were directly involved in agricultural activities in the Benin region.

The Sample Size: The population of 14 rural areas selected for this study in the Benin region according to 2015 National Population Projection is 164, 325 persons. Looking at the sample size calculation, the ideal sample size of 164, 325 persons is 384 with an error margin of 5 per cent accuracy and 95 % confidence level (David Van Amburg of Market Resource Inc., cited in Mark L. Mitchell and Janina M. Jolley, 2007). This is however, not feasible because the spatial spread of the sample may affect the manipulation of the data. To avoid this, the study adopted Onaiwu (2015) sample size determination based on the research aim and assumptions. A sample fraction of 0.005 was applied on the total household resident population of 164 325 people in the selected rural areas and it yielded a sample size of 821 persons to be interviewed. A total of 821copies of questionnaires were administered to the farmers and a total of 761 were retrieved with 92.69 percentage rate. Therefore, 761 respondents were interviewed (see Table 1).

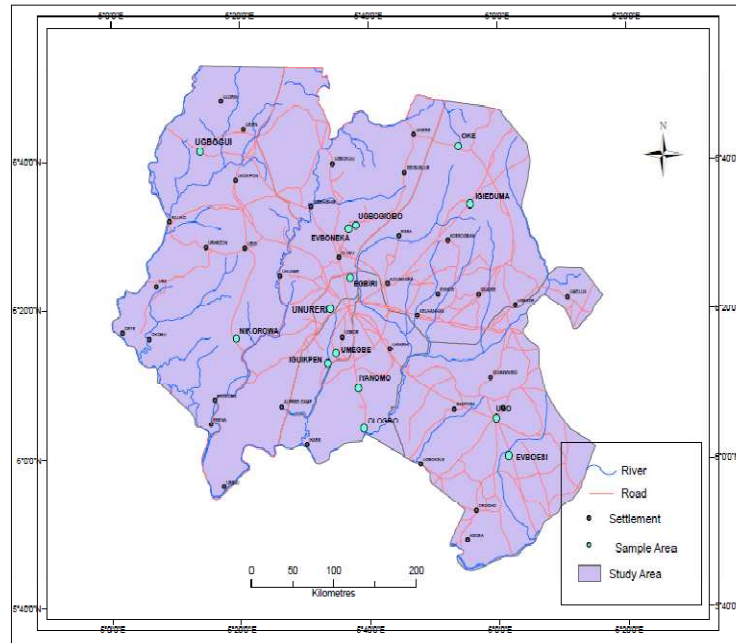


Figure 1: The Benin Region showing the areas of study

Source: Ministry of Lands and Survey, Edo State.

Table 1: Sample Size of Selected Areas

s/ n	Local Government Areas	Zones	Rural Communities Selected	Population Size	Sample Size	Sample Size
					Previous	Retrieved
1	Oredo	A	Umegbe and Egbiri	10,431 and 17,485	52 and 87	52 and 75
2	Egor	B	Iguikpe and Unureri	11,173 and 17,666	56 and 88	52 and 81
3	Ikpoba-Okha	C	Ologbo and Iyanomo	18,371 and 3,420	92 and 17	78 and 17
4	Ovia South-West	D	Nikorowa and Ugbogui	11,552 and 11,106	58 and 56	56 and 53
5	Orhionmwon	E	Ugo and Evboesi	11,225 and 11,432	56 and 57	53 and 51
6	Ovia North East	F	Ugbogiobo&Evbonaka	13,220 and 10,748	66 and 54	62 and 51
7	Uhunmwode	G	Igieduma and Oke	10,014 and 6,479	50 and 32	48 and 32
Total: 7			Total : 14 Rural Communities	Total: 164 325	Total: 821	Total: 761

Sampling Techniques: In this study, purposive sampling was used in selecting two (2) rural areas each from the various local governments that make up the Benin region based on the high rate of agricultural activities in the sampled areas. The systematic random sampling technique was used in selecting household farmers who were directly involved in farming.

Data Analysis: Bar chart, percentages, tables, descriptive statistics and frequency counts and ranking method were used to identify the most rated factors. Furthermore, the study took a coding pattern of 1 to 5 (five-point likert analysis) for responses ranging from Strongly Agree (SA) to Strongly Disagree (SD). The implication is that the response with the lowest mean value (\bar{X} = Mean) is the most chosen factor while the response with the highest mean value portrays the factor least chosen by the respondents.

Results and Discussion

In Table 2, the type and/or pattern of farming the respondents were engaged in, whether subsistence or commercial are presented. Generally, the result indicated that majority (89.6%) of the respondents were subsistence farmers, only 10.4% were commercial farmers (table 2). It could therefore, be deduced that majority of the farmers in the Benin region engaged in subsistence farming. It means that most rural dwellers in the region lack financial strength to run commercial farm suggesting the reason for higher number of subsistence farming. The low proportion of commercial farming could

also be attributed to food shortage experienced in the country. On local government bases, in Oredo, 81 were into subsistence farming while 23 represented those that were into commercial farming. In Egor, 151 respondents out of the total 156 respondents were engaged in subsistence farming while the remaining (6%) were into commercial farming. Also, in Ikpoba-Okha, out of the 95 sample respondents, 67 were into subsistence farming and the remaining 28 respondents practised commercial farming. Data in Ovia S.W showed that 105 respondents were involved in subsistence farming while (7%) were commercial farmers. Out of 104 respondents in Orhionmwon, 97 respondents' were subsistent farmers and the remaining (12%) said they were commercial farmers. While in Ovia N.E., out of 113 sample farmers, 104 were into subsistence farming while (15%) were commercial farmers. An investigation from Uhunmwode showed that out of the total 80 sample farmers, 77 respondents were subsistence farmers while the remaining (7.3%) were into commercial farming. From the level of rural communities, only one respondent was into commercial farming in Oke, Ugbogui and Egbiri. Ununeri had the highest number (77) of subsistence farmers; while proportionally, Egbirialso had the highest proportion (98.7%) of subsistence farmers. On the other hand, Ologbo had the highest number (22) of respondents who were commercial farmers followed by Umegbe village who had 16 respondents as commercial farmers.

Table 2: Respondents Data Based on Farming Type

LGAs	Villages	Variable (FARMING TYPE)	Frequencies and (%)*	
			Subsistent Farming	Commercial Farming Total frequency
OREDO	Iguikpe	45 (86.5%)	7 (13.5%)	52
	Umegbe	36 (69.2%)	16 (30.8%)	52
EGOR	Egbiri	74 (98.7%)	1 (1.3%)	75
	Unureri	77 (95.1%)	4 (4.9%)	81
IKPOBA-OKHA	Ologbo	56 (71.8%)	22(28.2%)	78
	Iyanomo	11 (64.7%)	6 (35.3%)	17
OVIA S-WEST	Ugbogui	52 (98.1%)	1 (1.9%)	53
	Nikorowa	53 (94.6%)	3 (5.4%)	56
ORHIONMWON	Ugo	49 (92.5%)	4 (7.5%)	53
	Evboesi	48 (94.1%)	3 (5.9%)	51
OVIA N- EAST	Ugbogiobo	56 (90.3%)	6 (9.7%)	62
	Evboneka	48 (94.1%)	3 (5.9%)	51
UHUNMWODE	Igieduma	46 (95.8%)	2 (4.2%)	48
	Oke	31 (96.9%)	1 (3.1%)	32
Overall =		682 (89.6%)	79 (10.4%)	761

Source: Fieldwork, 2016

*.The percentages are in parentheses

In Fig. 2, Egor had the highest proportion (97%) of respondents who were subsistence farmers while Uhumwode, Ovia South West, Orhionmwon, Ovia North East, Oredo and Ikpoba-Okha followed in that category at 96%, 96%, 93%, 92%, 78% and 70% respectively. On the other hand, Ikpoba-Okha and Oredo had the highest percentage (30% and 22%) of commercial farmers. This could be attributed to the relationship and closeness of the farmers with the urban centers (LGAs) and the rural communities which had the finance to run large farms.

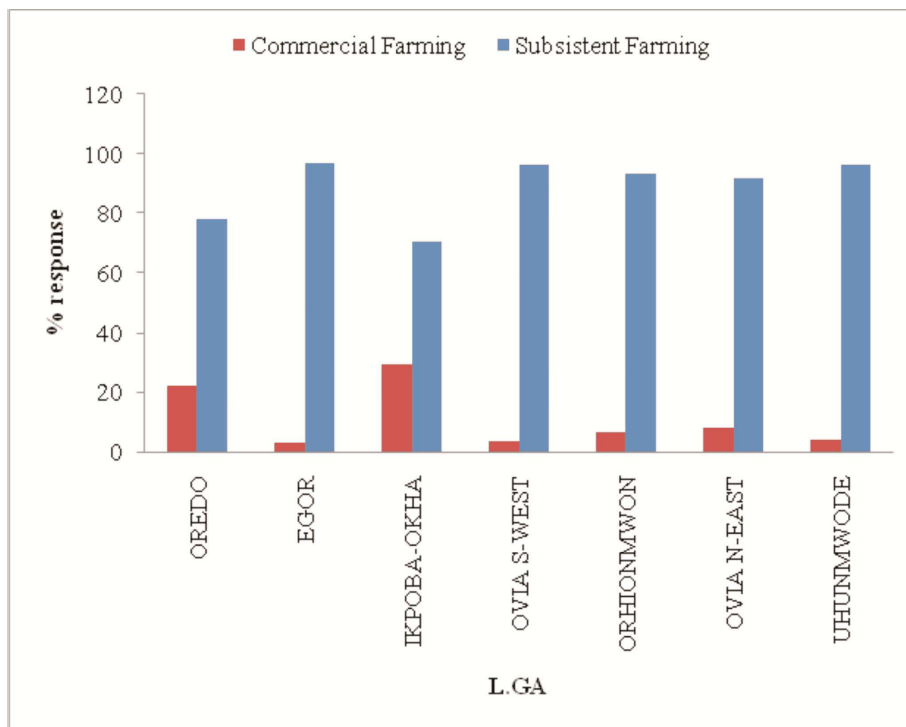


Fig.2: Percentages of Respondents' Farming Type Among the LGAs

In Table 3-9, the respondents' perceptions of the Determinants of Agricultural Labour Change in the study area are presented.

In Oredo Local Government Area as shown in Table 3, 80 (76.9%) and 19 (18.3%) respondents "strongly agree" and "agree" that out-migration (of family members) was the major determining factor in agricultural labour change from previously used family labour to more reliance on hired (wage) labour while the least respondents' 5(4.8%) opinions were on "strongly disagree". Thus, out-migration with the lowest mean value emerged as the most vital factor that determines agricultural labour change in Oredo LGA. The next determinant according to the respondent farmers, was aging, with a total of 58 (55.8%) and 37 (35.6%) respondents "strongly agree" and "agree" that if farmers are getting old, they rely more on hired labour work force while about 2(2.9%) respondents' opinions were "disagree". This therefore suggested that the second most important factor that determines agricultural labour change was aging. The result further showed that "lack of interest in farming by family members" was the 3rd most possible determinant with about 79% of the respondents "agreed" while the least opinion of 12.5% "disagree" that lack of interest in farming by

family members was another determinant of agricultural labour from family farm to hired labour in Oredo LGA. Other determining factors like the need for increased agricultural output, availability of immigrant farmers, the quest for increased agricultural income 26 (25%), 12 (11.5%), 12 (11.5%) and respondent farmers' opinions "strongly agree" followed in that order. The least possible determinant with the highest mean value according to Oredo respondents, was 1(1%) "gender" (i.e., having more female family members). The factor was suggested due to the fact that families that had more female members may lack labour workforce hence the possibility of swinging into other kind of labour use.

Table 3: Respondents' Perception of Factors Determining Agricultural Labour Change in Oredo L.G.A

s/n	ITEMS	SA (%)*	A (%)	UD (%)	D (%)	SD (%)	\bar{X}	Rk
1.	Out migration and/or Loss of Family Members	80 (76.9)	19 (18.3)	-	5 (4.8)	-	1.33	1 st
2.	With hired labour, a farmer can achieve increased output	26 (25)	55 (52.9)	6 (5.8)	17 (16.3)	-	2.13	4 th
3.	The quest for increased agricultural income	12 (11.5)	49 (47.1)	15 (14.4)	27 (26)	1(1)	2.58	6 th
4.	Aging farmers	58 (55.8)	37 (35.6)	6 (5.8)	2 (2.9)	-	1.56	2 nd
5.	Availability of immigrant [farmers]	12 (11.5)	69 (66.3)	9 (8.7)	14 (13.5)	-	2.24	5 th
6.	Affordable cost of hired labour	58 (55.7)	5 (4.8)	-	31 (29.8)	10 (9.6)	2.93	7 th
7.	Financial remittance from migrant households	1 (1)	22 (21.2)	26 (25)	52 (50)	3 (2.8)	3.33	9 rd
8.	Lack of interest in farming by family member(s)	35 (33.7)	47 (45.2)	9 (8.7)	13 (12.5)	-	2.00	3 th
9.	Availability of loans from banks	-	46 (44.2)	6 (5.8)	31 (29.8)	21 (20.2)	3.26	8 th
10.	Gender (having more female family members)	1 (1)	22 (21.2)	33 (31.7)	26 (25)	22 (21.2)	3.44	10 th

Source: Fieldwork, 2016 *Percentages are in parenthesis

SA = Strongly Agree; A = Agree; UD = Undecided; D = Disagree; SD = Strongly Disagree; \bar{X} = Mean; Rk = Rank

In Egor L.G.A as depicted in Table 4, a total of 112 (71.8%) and 43 (27.6%) respondent farmers had the lowest mean value "strongly agree" and agree" that out-migration of family members was the most relevant determinant of agricultural labour change while only 1(0.6%) respondents' opinion was undecided and none was recorded on "strongly disagree/ disagree". Just as in the Table 3, 108 (69.2%) and 40 (25.6%) respondents' opinions were "strongly agree and agreed" that age was the second most relevant factor

that can influence the drastic shift of agricultural labour in farming while only 4 (2.6%) opinions were on “disagree. The quest for increased agricultural income, lack of interest in farming by family members and with hired labour, a farmer can achieve increased output appeared third, fourth and fifth on the order of respondents’ opinions on “strongly agree” 69 (44.2%), 47 (30.1%) and 44 (28.2%) respectively. While the highest mean value was affordable cost of hiring labour and was the least causation factor 1 (0.6%) respondents’ opinion was “strongly agree” and 87 (55.8%) respondents’ opinion was “disagree”. Thus, that appeared likely as most respondents suggested that hiring labour was quite expensive.

Table 4: Respondents’ Perception of Factors Determining Agricultural Labour Change in Egor L.G.A

s/n	ITEMS	SA (%)*	A (%)	UD (%)	D (%)	SD (%)	\bar{X}	Rk
1.	Out migration and/or Loss of Family Members	112 (71.8)	43 (27.6)	1 (0.6)	-	-	1.29	1st
2.	With hired labour, a farmer can achieve increased output	44 (28.2)	89 (57.1)	14 (9)	9 (5.8)	-	1.92	5th
3.	The quest for increased agricultural income	69 (44.2)	69 (44.2)	12 (7.7)	6 (3.8)	-	1.71	3rd
4.	Aging farmers	108 (69.2)	40 (25.6)	4 (2.6)	4 (2.6)	-	1.38	2nd
5.	Availability of immigrant [farmers]	29 (18.6)	105 (67.3)	8 (5.1)	14 (9)	-	2.04	6th
6.	Affordable cost of hired labour	1 (0.6)	41 (26.3)	18 (11.5)	87 (55.8)	9 (5.8)	3.40	10 th
7.	Financial remittance from migrant households	5 (3.2)	85 (54.5)	35 (22.4)	25 (16)	6 (3.8)	2.63	7th
8.	Lack of interest in farming by family member(s)	47 (30.1)	94 (60.3)	5 (3.2)	10 (6.4)	-	1.86	4th
9.	Availability of loans from banks	1 (0.6)	65 (41.7)	17 (10.9)	59 (37.8)	14 (9)	3.13	8th
10.	Gender (having more female family members)	33 (21.2)	9 (5.8)	39 (25)	48 (30.8)	27 (17.3)	3.17	9th

Source: Fieldwork, 2016 *Percentages are in parenthesis

SA = Strongly Agree; A = Agree; UD = Undecided; D = Disagree; SD = Strongly Disagree; \bar{X} = Mean; Rk = Rank

In Ikpoba-Okha L.G.A , majority of the respondents had the lowest mean value with 74 (77.9%) “strongly agree”, that out-migration of family members was the most relevant determinant of agricultural labour change in their local government followed by “agree” 15 (15.8%) see table 5. That again aligned with the opinion of the respondents from Oredo and Egor LGAs. Only 1 (1.1%) respondent was on “strongly disagree”. Also, the perception that with hired labour, farmers could achieve increased agricultural produce and aging farmers tended to change to hired labour came second and third as possible determinants of agricultural labour change with a total respondents of 37 (38.9%), 42

(44.2%) and 21 (22.1%), 55 (57.9%) opinions that chose “strongly agree” and agree” respectively. The perceptions of farmers that chose lack of interest in farming by family members and the quest for increased agricultural income as possible factors that can influence changes in agricultural labour were fourth and fifth on the ranking table with a total response rate of 21 (22.1%), 56(58.9%) and 16 (16.8%), 56 (58.9%) opinions “strongly agree and agree” while a total of about 11 (11.5%) and 5 (5.3%) chose “disagree”. The table further revealed that respondents’ opinions on whether or not financial remittances from migrant households could facilitate labour change were least fancied by the respondents in Ikpoba-Okha, hence it took the tenth position in the rating and/or ranking and had the highest mean value with about 69 (73%) “disagreed”. What could be deduced from the opinion was that loss of household agricultural labour through migration was the major determinant factor of agricultural labour change while some respondents saw remittances as the least possible determinant of the agricultural labour shift in Ikpoba-Okha.

Table 5: Respondents' Perception of Factors Determining Agricultural Labour Change in Ikpoba-Okha L.G.A

s/n	ITEMS	SA (%)*	A (%)	UD (%)	D (%)	SD (%)	\bar{X}	Rk
1.	Out migration and/or Loss of Family Members	74 (77.9)	15 (15.8)	1 (1.1)	4 (4.2)	1 (1.1)	1.35	1 st
2.	With hired labour, a farmer can achieve increased output	37 (38.9)	42 (44.2)	13 (13.7)	2 (2.1)	1 (1.1)	1.82	2 nd
3.	The quest for increased agricultural income	16 (16.8)	56 (58.9)	18 (18.9)	4 (4.2)	1 (1.1)	2.14	5 th
4.	Aging farmers	21 (22.1)	55 (57.9)	9 (9.5)	10 (10.5)	-	2.08	3 rd
5.	Availability of immigrant [farmers]	15 (15.8)	51 (53.7)	15 (13.7)	13 (13.7)	1 (1.1)	2.31	6 th
6.	Affordable cost of hired labour	2 (2.1)	26 (27.4)	17 (17.9)	48 (50.5)	1 (2.1)	3.23	9 th
7.	Financial remittance from migrant households	1 (1.1)	10 (10.5)	15 (15.8)	60 (63.2)	9 (9.5)	3.69	10 th
8.	Lack of interest in farming by family member(s)	21 (22.1)	56 (58.9)	7 (7.4)	10 (10.5)	1 (1.1)	2.09	4 th
9.	Availability of loans from banks	5 (5.3)	40 (42.1)	17 (17.9)	29 (30.5)	4 (4.2)	2.86	8 th
10.	Gender (having more female family members)	18 (18.9)	21 (22.1)	26 (27.4)	22 (23.2)	8 (8.4)	2.80	7 th

Source: Fieldwork, 2016 *Percentages are in parenthesis

SA = Strongly Agree; A = Agree; UD = Undecided; D = Disagree; SD = Strongly Disagree; \bar{X} = Mean; Rk = Rank

In Ovia South West, respondents' opinion differed compared to that of the first three LGAs examined. (Table 6). From the table, all the respondents 75 (68.8%), 32 (29.4%) chose "strongly agree and agree" except one (0.9%) that disagreed, and another (0.9%) that was undecided. They were of the opinion that 'aging of farmers' is one of the major causes that determine agricultural labour change hence age was the possible factor of change in agricultural labour supply. The next determinant factor, according to the responses, is "Lack of interest in farming by family members" with a total response rate of 56 (51.4%), 37 (33.9%) that picked "strongly agree and agree" while undecided were 16 (14.7%) farmers. It aligned with the first factor because when the existing farmers fade out due to old age and the upcoming members are not interested in farming activities, the only option would be to engage hired labourers in order to keep-up the family and farming job, especially as most of the indigenes were subsistence farmers. The table further showed that out-migration was another determinant of labour change which stood as the third perception ranking while the availability of immigrants [farmers] was seen as the fourth most important push factor of agricultural labour change with 32 respondents of 32 (29.4%), 73 (67%) and 32 (29.4%), 73(67%) that

chose “strongly agree” and agree” options respectively. The least factor that determined agricultural labour shift in Ovia S.W. LGA was “having more of female family members’ with 1(0.9%) respondents’ opinion “agreed” while majority of the farmers 86(78.9%) “disagree” that gender was not a possible cause of farm labour change. It aligned with the opinions of Ordeo respondents. The analysis further revealed that availability of loans from banks equally came ninth in the ranking meaning that it was not considered as a possible determinant factor of agricultural labour change in Ovia South West LGA as majority of sampled respondents of about 89(81.6%) “disagree” while only 12 (11) respondents “agree” that loan could likely cause agricultural labour shift.

Table 6: Respondents’ Perception of Factors Determining Agricultural Labour Change in Ovia South West L.G.A

s/n	ITEMS	SA (%)*	A (%)	UD (%)	D (%)	SD (%)	\bar{X}	Rk
1.	Out migration and/or Loss of Family Members	32 (29.4)	73 (67)	1 (0.9)	2 (1.8)	1 (0.9)	1.78	3 rd
2.	With hired labour, a farmer can achieve increased output	14 (12.8)	13 (11.9)	4 (3.7)	74 (67.9)	4 (3.7)	3.38	6 th
3.	The quest for increased agricultural income	4 (3.7)	22 (20.2)	5 (4.6)	70 (64.2)	8 (7.3)	3.51	7 th
4.	Aging farmers	75 (68.8)	32 (29.4)	1 (0.9)	-	1 (0.9)	1.35	1 st
5.	Availability of immigrant[farmers]	17 (15.6)	69 (63.3)	14 (12.8)	7 (6.4)	2 (1.8)	2.16	4 th
6.	Affordable cost of hired labour	-	3 (2.8)	28 (25.7)	65 (59.6)	13 (11.9)	3.81	8 th
7.	Financial remittance from migrant households	4 (3.7)	9 (8.3)	54 (49.5)	37 (33.9)	5 (4.6)	3.28	5 th
8.	Lack of interest in farming by family member(s)	56 (51.4)	37 (33.9)	16 (14.7)	-	-	1.63	2 nd
9.	Availability of loans from banks	-	12 (11)	8 (7.3)	77 (70.6)	12 (11)	3.82	9 th
10.	Gender (having more female family members)	1 (0.9)	-	22 (20.2)	65 (59.6)	21 (19.3)	3.96	10 th

Source: Fieldwork, 2016 *Percentages are in parenthesis
 SA = Strongly Agree; A = Agree; UD = Undecided; D = Disagree; SD = Strongly Disagree; \bar{X} = Mean; Rk = Rank

In Orhionmwon, it could be observed that 99% (62.5%, 36.5%) of the respondents (103) agreed that out migration was the most relevant determinant of agricultural labour change (see Table 7). Furthermore, the findings revealed that the above determinant factor had the lowest mean value of 1.39 among the others. The result again aligned with the previous three tables that showed out migration as a possible cause of agricultural labour change in the Benin region while ‘aging of farmers’ came

second as another determinant of agricultural labour change. The respondents' opinions were 42 (40.4%), 59 (56.7%) "strongly agree" and "agree" respectively while 3% "disagree". It is suggested that as farmers gradually get old and weak to fully perform farm activities, they resort to hiring farm labour as an alternative means of farm work resulting to change in agricultural labour. The table further revealed that "lack of interest in farming by family members" was the next possible determinant factor of agricultural labour change with a total response rate of 45 (43.3%), 51(49%) that chose both "strongly agree" and "agree" options respectively while about 5(4.8%) respondents "disagree". Furthermore, availability of immigrant farmers was the fourth option with respondents rate of 87(83.6%) "agree". The positions and rankings of the factors appeared to align with those of Oredo, Egor and Ikpoba-Okha. The highest mean value in those categories that stood as the least determinant of agricultural labour change according to the respondents in this LGA was "Availability of loans from banks"80 (76.9%). It represented those that chose "disagree" followed by "having more female family members (74%)" which aligned with the opinion of Ovia South West respondents.

Table 7: Respondents' Perception of Factors Determining Agricultural Labour Change in Orhionmwon L.G.A

s/n	ITEMS	SA (%)*	A (%)	UD (%)	D (%)	SD (%)	\bar{X}	Rk
1.	Out migration and/or Loss of Family Members	65 (62.5)	38 (36.5)	-	1 (1.0)	-	1.39	1 st
2.	With hired labour, a farmer can achieve increased output	16 (15.4)	25 (24)	17 (16.3)	40 (38.5)	6 (5.8)	2.95	5 th
3.	The quest for increased agricultural income	15 (14.4)	13 (12.5)	11 (10.6)	59 (56.7)	6 (5.8)	3.27	6 th
4.	Aging farmers	42 (40.4)	59 (56.7)	-	3 (2.9)	-	1.65	2 nd
5.	Availability of immigrant[farmers]	18 (17.3)	69 (66.3)	10 (9.6)	6 (5.8)	1 (1.0)	2.07	4 th
6.	Affordable cost of hired labour	1 (1.0)	8 (7.7)	7 (6.7)	83 (79.8)	5 (4.8)	3.80	8 th
7.	Financial remittance from migrant households	6 (5.8)	19 (18.3)	15 (14.4)	51 (49)	13 (12.5)	3.44	7 th
8.	Lack of interest in farming by family member(s)	45 (43.3)	51 (49)	3 (2.9)	4 (3.8)	1 (1.0)	1.70	3 rd
9.	Availability of loans from banks	-	5 (4.8)	13 (12.5)	75 (72.1)	11 (10.6)	3.88	10 th
10.	Gender (having more female family members)	5 (4.8)	5 (4.8)	17 (16.3)	54 (51.9)	23 (22.1)	3.82	9 th

Source: Fieldwork, 2016

*.Percentages are in parenthesis

SA = Strongly Agree; A = Agree; UD = Undecided; D = Disagree; SD = Strongly Disagree; \bar{X} = Mean; Rk = Rank

In Ovia North East L.G.A, 75 (66.4%), 36 (31.9%) opinions were “strongly agree” and “agree” that out-migration of family members was the most relevant determinant of agricultural labour change in their local government areas (Table 8). The table further showed that those farmers had the lowest mean value of 1.36. It again aligned with the opinions of the respondents from Oredo, Egor, Ikpoba-Okha and Orhionmwon LGAs as shown in the previous tables, followed by lack of interest by family members 60 (53.1%), 51(45.1%) which also had the option of “strongly agree” and “agree” as determinant of labour change. Aging is another surrogate for agricultural labour change hence age was a significant determinant of farm labour change while availability of immigrant farmers came fourth as a possible determinant of agricultural labour change in Ovia N.E with a total respondents of 58 (51.3%), 52 (46%) and 21 (18.6%), 81 (71.7%) opinions that chose “strongly agree” and “agree” respectively. The least perception response with the highest mean value of 3.79 was availability of loans from banks as a possible determinant that influenced agricultural labour change in Ovia N.E with a total response rate of 89 (78.8%) that “disagree”. It could be deduced

therefore, that out-migration of household farmers to urban areas was a major factor that determines agricultural labour change in Ovia North East LGA.

Table 8: Respondents’ Perception of Factors Determining Agricultural Labour Change in Ovia North East L.G.A

s/n	ITEMS	SA (%)*	A (%)	UD (%)	D (%)	SD (%)	\bar{X}	Rk
1.	Out migration and/or Loss of Family Members	75 (66.4)	36 (31.9)	1 (0.9)	1 (0.9)	-	1.36	1 st
2.	With hired labour, a farmer can achieve increased output	13 (11.5)	30 (26.5)	7 (6.2)	61 (54)	2 (1.8)	3.06	5 th
3.	The quest for increased agricultural income	17 (15)	8 (7.1)	12 (10.6)	65 (57.5)	11 (9.7)	3.40	6 th
4.	Aging farmers	58 (51.3)	52 (46)	-	3 (2.7)	-	1.54	3 rd
5.	Availability of immigrant[farmers]	21 (18.6)	81 (71.7)	7 (6.2)	4 (3.5)	-	1.95	4 th
6.	Affordable cost of hired labour	-	9 (8.0)	35 (31)	61 (54)	8 (7.1)	3.60	7 th
7.	Financial remittance from migrant households	2 (1.8)	16 (14.2)	15 (13.3)	70 (61.9)	10 (8.8)	3.62	8 th
8.	Lack of interest in farming by family member(s)	60 (53.1)	51 (45.1)	-	2 (1.8)	-	1.50	2 nd
9.	Availability of loans from banks	-	7 (6.2)	17 (15)	82 (72.6)	7 (6.2)	3.79	10 th
10.	Gender (having more female family members)	11 (9.7)	1 (0.9)	20 (17.7)	59 (52.2)	22 (19.5)	3.71	9 th

Source: Fieldwork, 2016 *Percentages are in parenthesis

SA = Strongly Agree; A = Agree; UD = Undecided; D = Disagree; SD = Strongly Disagree; \bar{X} = Mean; Rk = Rank

Table 9 showed that the opinions of about 98.7% of the 80 respondents from Uhumwode LGA on the possible factors that determine agricultural labour change in their communities also agreed with the popular perception of respondents from other sampled LGAs that “out-migration” was the most relevant factor that determines agricultural labour change. Furthermore, apart from only 1 (1.3%) respondent who was undecided, the remaining 79 respondents representing about 99% of the entire respondents in Uhumwode agreed that “lack of interest in farming by family members” was the second most relevant factor pushing for agricultural labour change by indigenous farmers. The factor ‘aging of farmers and availability of immigrant farmers’ appeared as the third and fourth most pressing determinant of agricultural labour change in Uhumwode with a mean value of 1.53 and 1.80 respectively. In agreement with the

previous tables, the least graded surrogate of agricultural labour drift according to the respondents in Uhumwode LGA was “having more female family members” and “availability of loans from banks” in the 9th and 10th positions with a mean value of 3.60 and 3.71 respectively.

Table 9: Respondents’ Perception of Factors Determining Agricultural Labour Change in Uhumwode L.G.A

s/n	ITEMS	SA (%)*	A (%)	UD (%)	D (%)	SD (%)	\bar{X}	Rk
1.	Out migration and/or Loss of Family Members	74 (92.5)	5 (6.3)	-	1 (1.3)	-	1.10	1 st
2.	With hired labour, a farmer can achieve increased output	26 (32.5)	40 (50)	4 (5)	9 (11.3)	1 (1.3)	1.99	5 th
3.	The quest for increased agricultural income	17 (21.3)	28 (35)	10 (12.5)	25 (31.3)	-	2.54	6 th
4.	Aging farmers	38 (47.5)	42 (52.5)	-	-	-	1.53	3 rd
5.	Availability of immigrant[farmers]	24 (30.0)	50 (62.5)	4 (5)	2 (2.5)	-	1.80	4 th
6.	Affordable cost of hired labour	-	19 (23.8)	9 (11.3)	51 (63.7)	1 (1.3)	3.43	8 th
7.	Financial remittance from migrants households	14 (17.5)	15 (18.8)	15 (18.8)	31 (38.8)	5 (6.3)	2.98	7 th
8.	Lack of interest in farming by family member(s)	40 (50)	39 (48.8)	1 (1.3)	-	-	1.51	2 nd
9.	Availability of loans from banks	2 (2.5)	12 (15)	11 (13.8)	37 (46.3)	18 (22.5)	3.71	10 th
10.	Gender (having more female family members)	7 (8.8)	7 (8.8)	16 (20)	31 (38.8)	19 (23.8)	3.60	9 th

Source: Fieldwork, 2016 *Percentages are in parenthesis

SA = Strongly Agree; A = Agree; UD = Undecided; D = Disagree; SD = Strongly Disagree; \bar{X} = Mean; Rk = Rank

Fig 3, shows the overall percentages of factors determining agricultural labour change in the Benin region, Nigeria. The average of the responses in the “strongly agree” and “agree” categories from all the sampled LGAs in the Benin region was pooled together and converted to percentage. The aim was to find out the proportion of each of the push factors in connection with the determinants of agricultural labour change in the Benin region. From the chart, it was glaring that out migration was the most factor that determines agricultural labour change. The chart also showed that “aging farmers’ and “lack of interest in farming” were jointly the second most paramount factor that determines agricultural labour change. Similarly, availability of immigrant farm

labourers to the rural communities came third at 14% as shown in the chart. Having more female members, loan availability and affordable cost of hiring labour were among the less-significant determinants of agricultural labour change in the Benin region. It could be deduced from these findings that the dominance of out-migration of family farm labour as a result of better urban life as well as lack of social amenities in most rural Nigeria particularly the rural Benin is a major determinant of agricultural labour change in the Benin region. Furthermore, aging of farmers and lack of interest by family members towards agricultural sector in the sampled areas was another surrogate for agricultural labour change “from the traditional and popularly known family labour to hired labour in recent years”. Consequently, out-migration of family labour, aging of farmers and lack of interest in farming by family members had a positive determinant on agricultural labour shift. The findings were consistent with the observation by Ahearn *et al.*, (2006) and Bailey *et. al.*, (2012).

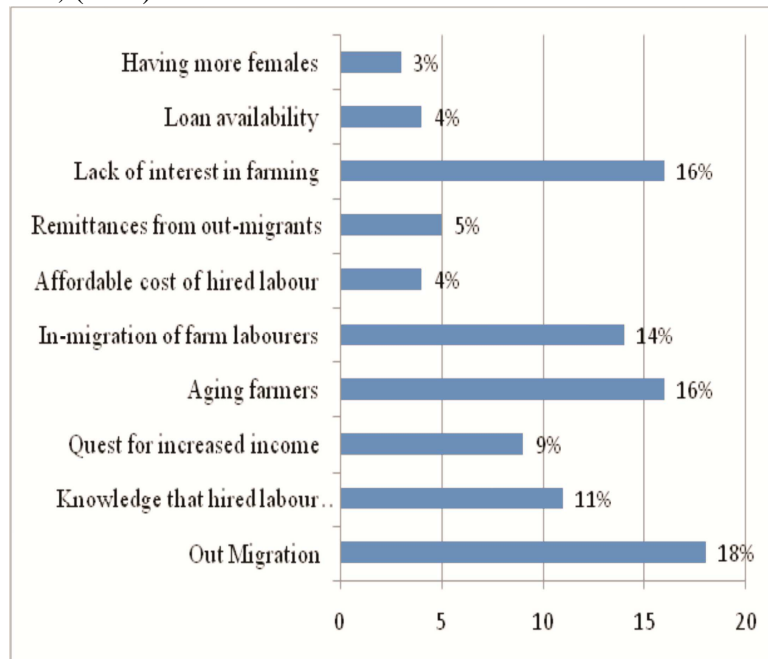


Fig. 3: Over all percentages of factors responsible for the changing patterns of agricultural labour supply in the Benin region

Conclusions and Recommendation

Based on evidence in this study, a few conclusions could be drawn. Majority of the respondents were subsistence farmers while an insignificant number were commercial farmers in the Benin region. It could be attributed to the fact that most farmers lack finance to run large farms. It was clear that out migration was the most important factor

that determines agricultural labour change in the Benin region. The study clearly revealed that the out-flow of able bodied men and women from rural Benin is a fundamental catalyst that determines agricultural labour change while aging farmers and lack of interest in farming were jointly the second most paramount factor that determines agricultural labour change. Availability of immigrant farm labourers in the rural communities followed in that category as third. It was recommended that government should, as a matter of priority, provide basic social amenities in all the rural areas. This will serve in discouraging out migration of youths from the agricultural sector in the Benin region.

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