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Gender analysis of factors influencing livelihood choice among migrants in cocoa-producing communities of Ondo State, Nigeria

Fakoyede, F. D. and Faborode, H. F. B.*

Department of Agricultural Extension and Rural Development, Obafemi Awolowo University Ile-Ife, Nigeria.

*Corresponding author. Email: hfbfaborode@yahoo.com

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ABSTRACT: The study analysed gender specific factors influencing livelihood choice among migrants in cocoa-producing communities of Ondo State Nigeria to enhance inclusiveness and gender equity in rural economy. A multi-stage sampling procedure was adopted to select 220 respondents across the study area. Structured interview schedule was used to elicit information. Data were summarised with percentages, mean and standard deviation, while factor analysis was used to categorise and isolate the gender specific factors influencing migrants' livelihood choice. Results revealed that 51.4 percent of the migrants were male and 48.6 percent were female with mean ages of 44.6 ± 13.3 and 42.0 ± 13.3 years, respectively. The mean annual income for male and female were 459,769.91 ± 409,365.69 Naira and 247,607.48 ± 207,169.69 Naira, respectively. On-farm livelihood category was the most popular choice of both male (100.0%) and female (93.5%) while more female (50.5 and 38.3%) than male (38.1 and 28.6%) engaged in off-farm and non-farm categories respectively. For the male, five crucial factors (socio-economic status, labour resource, financial accessibility, external orientation and farm holding) were isolated with a total explained variation of 74.4 percent, whereas financial resource, labour resource, socio-economic and group benefit factors were among the six factors (with explained variation of 72.1%) found to influence livelihood choice of female migrants. These findings revealed gender-based differentiation in the factor influencing the choices of male and female migrants. These factors were major determinants of livelihood choice of migrants. Therefore, focusing on gender-specific factors influencing the livelihood choice of migrants is crucial to any planned intervention to enhance cocoa production in the study area.

Keywords: Influencing variables, migration, non-farm activities, off-farm activities, on-farm activities.

INTRODUCTION

Migration according to Food and Agriculture Organisation (FAO) is an important livelihood strategy used by many rural households for diversifying their household income, minimizing competition for productive resources and reducing risks (FAO, 2016; Ajaero and Madu, 2014) and it is of different types. In Nigeria, the most distinctive type of internal migration is the rural-urban type, which is the movement of people from rural to urban areas mainly in search of better socio-economic conditions. Nevertheless, rural-rural and urban-rural types of migration are equally on the rise, especially in cocoa-producing communities, which attract many migrants from various towns and cities, seeking to explore the numerous economic opportunities which the crop has to offer. Nigeria is ranked in the fourth position in global cocoa production with production estimate of 350.146 metric tonnes (MT) (FAOSTAT, 2021). According to the National Bureau of Statistics (NBS) in Nigeria, fourteen states (the cocoa belt) are actively involved in cocoa production, of which Ondo State is the highest producer (92.22 MT) and a popular migrant destination (National Bureau of Statistics, NBS, 2013; Carl LeVan et al., 2018; RAAMP, 2018). Most of these migrants fill the critical labour gaps, caused by the rapid out-migration of rural youths who are growing less passionate about agriculture and seeking "greener pastures" in urban areas.

The means through which these migrants earn their living is generating interest among many development experts and scholars (Nwaogwugwu and Mathew-Njoku, 2015; Adisa et al., 2016; Yendaw et al., 2019). Apart from the significant roles they play for enhancing cocoa production in Ondo State, they engage in diverse on-farm, off-farm and non-farm activities. This strategy is known as livelihood diversification since a single enterprise may not generate enough income to meet their numerous responsibilities that could improve their levels of living and help them cope with adverse risks that affect agricultural production (Ellis and Freeman, 2011; Farinde et al., 2015). Despite the efforts of development agencies to enhance rural livelihood in Nigeria, rural migrants are constrained by limited access to government services and other essential services such as healthcare (Carl LeVan et al., 2018) and are marginalised in terms of political representtation, services and assets in their host communities (British Council, 2012).

Also, livelihood choice differs by gender and the disparity has often been attributed to traditionally ascribed gender roles, perception, personal preferences, time use patterns, access to productive resources amongst others (World Bank, 2013). This gender-based differentiation is an integral and inseparable part of rural livelihood (Kamwi et al., 2018). For instance, freedom of mobility and power over household resources reside mainly with the men while the women are subject to them. To this end, the application of gender analytical techniques for unveiling social issues is imperative and factors influencing livelihood choice is one of such issues. The development and use of gender analytical tools have gained significant attention (Okali, 2006).

Thus, several types of gender analytical tools exist which includes the Harvard analytical framework developed in the early 1980s by the Harvard Institute of International Development in conjunction with USAIDs women in Development Office (UNRWA, 2011). The three main elements of the Harvard analytical framework are activity profile, access and control profile and influencing factor profile. The influencing factor profile indicates the factors that have effects on division of labour and productive resources of male and female such as economic, demographic, political and social factors (Ludgate, 2016).

Consequently, these underlying forces amongst others limit migrants' choice of livelihood activities. Several studies have highlighted social, economic, cultural, personal factors influencing choice of specific livelihood activities and a combination of livelihood activities among rural dwellers (Ifeanyi-Obi and Mathew-Njoku, 2014; Nwaogwugwu and Mathew-Njoku, 2015; Gelan et al., 2016). However, limited gender disaggregated data exist on the factors influencing livelihood choice of migrants, particularly in cocoa-producing communities of Nigeria. Also, cocoa production in Nigeria, particularly in Ondo State is threatened by inadequate labour mainly due to the gap created by rural youth migration to urban centres. This critical labour gap is filled by migrants who work mainly as farmers or labourers (RAAMP, 2018). Improving the livelihood opportunities of these migrants will not only enhance rural household economy in the study area but also integrate them into the host communities for sustainable cocoa production. In view of this, the study specifically described the socio-economic characteristics of migrants on a gender basis, isolated and categorized their livelihood choice and gender specific factors influencing livelihood choice among migrants in the study area.

MATERIALS AND METHODS

Location of study area

The study was carried out in Ondo State located between latitude 5°45′ and 7°52′ North and longitude 4°20′ and 6°5′ East. The state covers an area of approximately 15,500 square kilometers. The state enjoys luxuriant vegetation with high forest zone (rain forest) in the south and sub-savannah forest in the north (OSBS, 2019). It has a mean annual rainfall of 2002.4 mm with bimodal rainfall pattern (June and July, and September as peak periods), relative humidity of 77.4 percent with a minimum and maximum temperature of 20.1 and 30.6^{o}C respectively (Olubanjo and Alade, 2018). Ondo State ranked highest among cocoa producing states in Nigeria and the rural communities were chosen based on the preponderance of cocoa production in the state.

Sampling procedure and study population

A multi-stage sampling procedure was adopted to select the respondents for the study, who are non-indigenes or born by non-indigenes and are making a living in enterprises along the agricultural value chain. Five Local Government Areas (LGAs) from the total number of eighteen in the state were purposively selected, based on the amount of cocoa production. At the second stage, two communities were purposively selected from each of the LGAs based on the preponderance of cocoa production, to make a total of ten communities. At the third stage, twenty-two migrants were selected from each community using snowball technique to aid easy identification of 220 respondents for the study. Using structured interview schedule, data were obtained from 113 and 107 male and female migrants respectively.

Statistical analysis

Data were analysed using Statistical Package for the Social Sciences (SPSS) version 20. Descriptive (frequencies, percentages, means and standard deviation) and multivariate (factor analysis) statistics were used to summarise data. Factor analysis and Harvard gender analytical framework were adapted to determine the crucial factors influencing livelihood choice among male

and female migrants. The three main elements of the Harvard analytical framework include the influencing factor profile which indicates the factors having effects on division of labour and productive resources of male and female such as economic, demographic, political and social factors (Ludgate, 2016). The variables were grouped using principal component analysis with varimax rotation. The cut-off point for constant loading was 0.3; loadings less than 0.3 were eliminated as suggested by Madukwe (2004), Enete and Amusa (2010) and Famakinwa et al. (2019). Based on Kaiser's criterion, factors with Eigenvalues greater than 1 were retained while factor labeling criteria followed the procedure of Oboh and Ajomale (2006), Alabi et al. (2013) and Famakinwa, et al. (2019) following the researcher's subjective interpretation, using synonyms of the highest loaded variables on each other, or retaining the name of high loading variable to each factor

RESULTS AND DISCUSSION

Socio-economic characteristics of migrants

Results in Table 1 reveal that majority of male and female migrants were within the mean age of 44.6 ± 13 and 42.0 ± 13 years respectively. This result evidently shows that the migrants were in their productive and active ages which could influence their livelihood choice. Also, 89.4 and 90.7 percent of the male and female migrants respectively were married. This finding agrees with the earlier reports (Ekpenyong and Daniel, 2015; Adisa et al., 2016) that most migrants in rural communities were married, hence they could be active players in cocoa production since they would command respect of the host community. This could guarantee better integration into the host communities and opportunities for livelihood diversification. The average years of formal education of male (8.9 ± 4.5 years) and female (6.9 ± 5.0 years) migrants revealed that both male and female had few years of formal education but the males had higher years of formal education than the female. The observed educational advantage of the male over the female was similarly reported in previous studies (Shimeles, 2010; WRC, 2010; Birchall, 2016; Fleury, 2016). Gender disparity in access to education might have resorted to unequal access to productive resources (especially extension services) despite being crucial to making informed decisions on livelihood choice. Also, there exists gender differentiation in mean annual income for the male (NGN 459,769.91 ± 40,936.69) and female (NGN 247,607.48 ± 20,716.69) migrants with the females earning about half of the income of the male. Although, both male and female earned low income, the females were more affected. This income inequality as reported in literatures (Oyelere, 2008; Adeyemo, 2012; British Council, 2012; Olaniyi, 2018) may further perpetuate feminization of poverty if adequate action is not taken.

The results also revealed that both male and female migrants had few (three and two) number of information sources respectively which could limit their knowledge and understanding about available livelihood opportunities with serious implications on their livelihood choice. This calls to question the effectiveness of the services provided by the extension agents who have the mandate to provide rural dwellers with needed information on their livelihood activities. On the average, both male and female migrants enjoyed only two benefits by virtue of being members of social/professional associations. This is clearly an indication of non-inclusiveness which may portend great danger for enhanced production of cocoa since the ageing indigene farmers largely depend on the migrants' labour force.

Also, majority (92.9 and 98.1%) of male and female migrants had travelled outside their communities of residence, an indication of high levels of external orientation and exposure that could enhance their enlightenment and afford them opportunities to learn about innovations from other people to enhance their livelihood. Both male and female migrants have small (about 2.0 ha) total farm size which may be due to the fragmented nature of farmlands in many rural communities of Nigeria. This finding corroborates the assertion of Awoke and Okorji (2004) that small scale farmers have land holding capacity of between 1 and 5 hectares.

Livelihood activities of migrants

Figure 1 shows the categorisation of male and female migrants' livelihood choice with all the male and majority (93.5%) of the female engaged in on-farm activities. This further affirmed the crucial role played by women in agriculture. Also, about one-third of the male and half of the female migrants engaged in off-farm livelihood activities while more female (38.3%) than male (28.6%) engaged in non-farm activities. These findings imply that on-farm livelihood activities such as arable and tree crop production were their most preferred choice which may be due to the lucrative nature of the activities especially during harvest season. If provided with needed incentives such as land and credit facilities, cocoa production could be substantially enhanced.

Evidently, more female than the male engaged in non-farm (such as petty trading and tailoring) and off-farm (such as agro-processing and agro-marketing) livelihood activities. These are activities that could be practiced during off-season period to complement the on-farm livelihood activities and to support their families during off season period or in case of crop failure. More importantly, the engagement of more female than male in non- and off-farm livelihood activities may not be unconnected to the traditionally ascribed gender differentiated roles. This report supports the finding of Fabusoro et al. (2010) that

Table 1. Respondents' socio-economic characteristics.

Variables	Male (N = 113)			Female (N = 107)		
	Freq.	%	Mean ± SD	Freq.	%	Mean ± SD
Age (Years)						
≤ 30	21	18.6	44.6±13	30	28.0	42.0±13
31 – 50	60	53.1		54	50.5	
51 – 70	30	26.5		21	19.6	
>70	2	1.8		2	1.9	
Marital status						
Single	10	8.8		0	0.0	
Married	101	89.4		97	90.7	
Widowed	2	1.8		10	9.3	
Years of formal education						
0	12	10.6	8.85±4.5	30	28.0	6.9±5.0
< 7	29	25.7		25	23.4	
7 – 12	55	48.7		47	43.9	
>12	17	15.0		5	4.7	
Number of information sources						
1 – 3	97	85.8	2.7±0.9	103	96.3	2.3±0.6
>3	16	14.2		4	3.7	
Number of benefits from associations						
0	30	26.5	2.3±2.0	36	33.6	1.54±1.0
1 – 5	75	66.4		71	66.4	
>5	8	7.1		0	0.0	
Cosmopoliteness						
Did not travelled	0	0.0		1	0.9	
Travelled within the LGA	2	1.8		1	0.9	
Outside the LGA	2	1.8		1	0.9	
Outside the state	105	92.9		105	98.1	
Outside the country	3	2.7		0	0.0	
Annual income (₦)						
≤ 200,000	42	37.2	459,769.91 ± 40,936.69	70	65.4	247,607.48 ± 20,716.69
201,000 – 400,000	28	24.8		18	16.8	
401,000 – 600,000	17	15.0		12	11.2	
601,000 – 800,000	9	8.0		5	4.7	
>800,000	17	15.0		2	1.9	
Total farm size (ha)						
<1	30	26.5	2.2±0.8	50	46.7	1.8±0.8
1 – 2	35	31.0		32	29.9	
>2	48	42.5		25	23.4	

₦ = Nigerian Naira (NGN); SD = Standard deviation.
Source: Field survey, 2019.

rural farm families in Ogun State, Nigeria engaged fully in agricultural activities despite diversification into off-farm and non-farm activities. More livelihood diversification by the female migrants could provide them with opportunities to cope with the risks associated with seasonal cocoa farming, rain dependent agriculture and climate variability that could lift them out of poverty. Therefore, any intervention to improve rural household livelihood should focus on strengthening livelihood diversification since cocoa production is a seasonal activity.

Factors influencing livelihood choice of male migrants

The results presented in Table 2 show the varimax rotated factor loadings for each of the variables influencing the livelihood choice of male migrants. A total of eighteen variables were profiled and subjected to factor analysis with variable selection based on a minimum loading of 0.3 and level of significance. Thus, factor analysis helps in the reduction of redundant variables to generate few factors that are descriptive of the entire variables. The 18

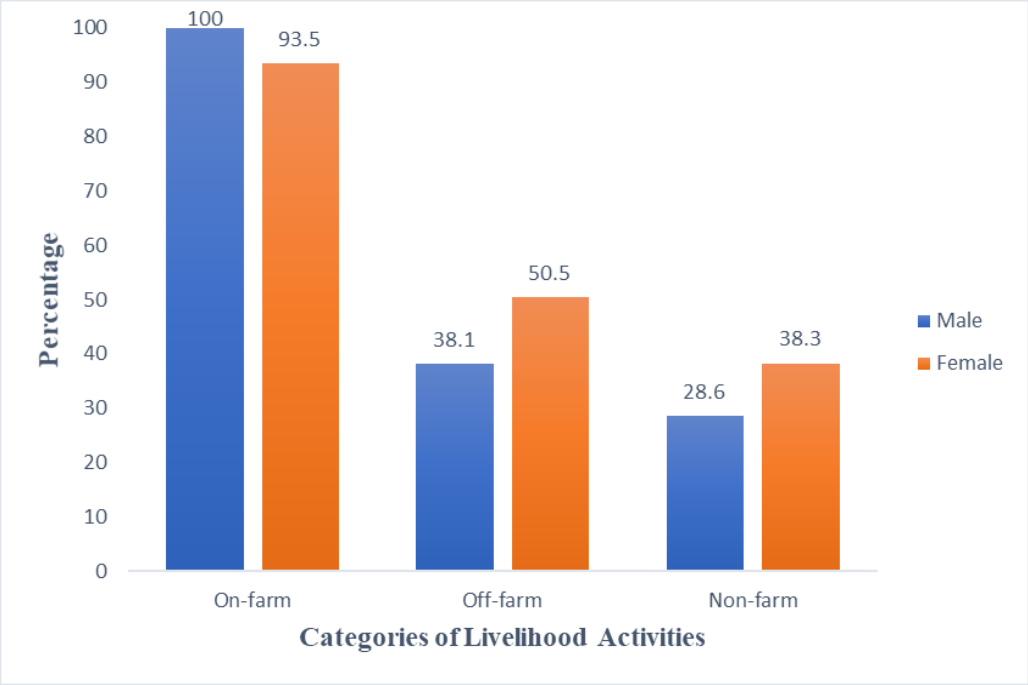

Figure 1. Distribution of livelihood choice categories among male and female migrants in the study area (**Source:** Field survey, 2019).

Table 2. Varimax rotated factor matrix showing correlation coefficient of significantly loaded variables and extracted factors influencing male migrants' livelihood choice (N = 113).

Variables	Factors				
	1	2	3	4	5
Age	0.709**				
Years of formal education	0.895**				0.598**
Annual income	0.652**				
Years of residence in community	0.644**				
Farm size	0.619**				
Cosmopoliteness					
Land accessibility				0.864**	0.746**
Labour accessibility		0.834**			
Duration of work (labour provision)		0.333**			
Accessibility to cash income		-0.308	0.622**	0.623**	
Accessibility to credit			0.888**		-0.352
Accessibility to remittances		-0.350	0.728**		
Number of information sources				0.625**	
Number of benefits from associations			0.511**		0.301**
Number of sources of credit facilities					
Number of sources of credit facilities					
Frequency of engaging labour		0.747**			
Frequency of providing labour		0.684**			

** Significant at $p < 0.01$ (Source: Field survey, 2019).

variables were summarised and reduced to five factors which cumulatively explained 74.39 percent of the total variations of the factors influencing the choice of livelihood activities of male migrants. The eigenvalue showed the order of importance of each contributing factor in livelihood choice of the male migrants to the total explained variation

Table 3. Principal component analysis showing the Eigenvalues and percentage variation accounting for each factor influencing male migrants' livelihood choice (N = 113).

Component number	Factor label name	Eigenvalue	% of Variance	Cumulative %
1	Socio-economic status	3.268	20.600	20.600
2	Labour resource	3.153	18.962	39.560
3	Financial accessibility	2.956	15.864	55.424
4	External orientation	2.324	11.133	66.577
5	Farm holding	1.431	7.835	74.392
6	Unknown factors	<1.000	25.608	100.00

Source: Field survey, 2019.

(Table 3). Factor 1 (socio-economic status) explained 20.60 percent, factor 2 (labour resource) contributed 18.96 percent, factor 3 (financial accessibility) accounted for 15.86 percent, factor 4 (external orientation) and factor 5 explained 11.13 and 7.62 percent of total variation respectively. The order of these factors indicated their relative power (contributions) in the choice of livelihood activities. As major determinants of livelihood choice of male migrants, these factors should be given utmost consideration in any intervention to enhance rural household livelihood options.

Contributions of variables to factors influencing choice of livelihood of male migrants

The results in Table 4 profiled and summarised all the factors and indicated the contributing variable loadings. For the socio-economic factor, years of formal education (L = 0.895), age (L = 0.709), annual income (L = 0.652) and years of residence (L = 0.644) were the contributing variables. There is high correlation between the socio-economic factor and contributing variables. The higher their age, years of formal education, number of years of residence in a community and income, the more experience they gain about available livelihood options to make informed livelihood choice. Similar variables (age, years of education and income) were reported by Ifeanyi-Obi and Mathew-Njoku (2014) and Alarima (2018) to significantly influence livelihood choice of rural dwellers in Southeast States (Anambra, Imo, Enugu, Abia and Ebonyi) and Osun State, Nigeria respectively.

For labour resource factor, the four variables with high contributions are; labour accessibility (L = 0.834), frequency of engaging labour (L = 0.747), frequency of providing labour (L = 0.684) and duration of work (labour provision) (L = 0.333). This implies that accessibility to labour for on-farm, off-farm and non-farm activities would enhance choice of livelihood activities among male migrants. Apart from this, ability to provide and engage in labour work for longer periods of time, especially during off-season could greatly influence their livelihood choice.

For the financial accessibility factor, the variables that define it are; access to credit (L = 0.888), access to remittances (L = 0.728) and access to cash income (L = 0.622). The inference from this is that the choice of livelihood activities of male migrants is a function of their level of access to financial resources from numerous sources, such as cash income at hand, credit facilities and remittances from external financial resources (both within and outside their communities) and the higher their access to these resources, the better their livelihood choice. Findings by Debele and Desta (2016) revealed that access to cash and credit facilities significantly enhance choice of livelihood opportunities since this will afford them better access to needed resources to improve yield.

For the external orientation factor, the three variables that contributed significantly are the; number of benefits from association (L = 0.622), number of information sources (L = 0.635) and cosmopoliteness (L = 0.864). It can be inferred that the male migrants with high external orientation such as travelling to other communities had better exposure to information. This could enhance their opportunity to learn about innovations/new emerging livelihood activities from other people, thereby enhancing their ability to make informed livelihood choice. Access to information on improved skill and technology has been found to significantly improve the livelihood choice of migrants (Kassie et al., 2017).

For the farm holding factor, only two (land accessibility; L = 0.746 and total farm size = 0.598) out of four variables significantly contributed to the factor. The size of farm holdings available for livelihood activities depend on land accessibility by the farmers. Therefore, the size of farm land available and accessible to male migrants would significantly enhance their livelihood choice, especially for livelihood diversification. A similar observation was made by Aababbo and Sawore (2016) that the more the land holding size, the more engaged the migrants would be in on-farm than non- and off-farm activities.

Factors influencing the livelihood choice of female migrants

The results of varimax rotated factor loadings for each of

Table 4. Factor analysis showing contribution of variables to the extracted factors influencing the choice of livelihood of male migrants (N = 113).

Profiled factors and contributing variables	L	L^2	λ
Socio-economic factor			
Age	0.709	0.5026	
Annual income	0.652	0.4251	
Years of residence in community	0.644	0.4173	2.580
Years of formal education	0.895	0.8010	
Farm size	0.619	0.3831	
Labour resource factor			
Labour accessibility	0.834	0.6959	
Duration of work (labour provision)	-0.333	0.1109	
Accessibility to cash income	-0.308	0.0949	2.046
Accessibility to remittances	0.350	0.1225	
Frequency of engaging labour	0.745	0.5550	
Frequency of providing labour	0.684	0.4679	
Financial accessibility			
Accessibility to credit	0.888	0.7885	
Accessibility to remittances	0.728	0.5300	1.967
Accessibility to cash income	0.622	0.3869	
Number of benefits from associations	0.511	0.2611	
External orientation			
Number of benefits from associations	0.622	0.3869	
Number of information sources	0.635	0.4032	1.5366
Cosmopoliteness	0.864	0.7465	
Farm holding			
Land accessibility	0.746	0.5565	
Accessibility to credit	-0.352	0.1239	1.1281
Number of benefits from association	-0.301	0.0901	

L = Factor Loading; L^2 = Square of factor loading; λ = Latent root for the factor (summation of the square loading) (**Source**: Field survey, 2019).

the variables influencing the livelihood choice of female migrants is presented in Table 5. A total of eighteen variables were profiled and subjected to factor analysis with variable selection based on a minimum loading of 0.3 and level of significance. Again, factor analysis helps in the reduction of redundant variables to generate few variables (factors) that are descriptive of the entire variables. The 18 variables were summarised and reduced to six factors which explained 72.1 percent variation while only 26.9 percent variations were attributed to unexplained factors influencing the choice of livelihood activities. The eigenvalue showed the order of importance of each contributing factor in the livelihood choice of female migrants to the total explained variation (Table 6). Factor 1 (financial resource) explained 19.30 percent, factor 2 (labour resource) contributed 16.80 percent, factor 3 (socio-economic status) accounted for 12.70 percent, factor 4 (group benefit), factor 5 (external orientation) and factor 6 (farm holding) explained 9.50, 7.10 and 6.80 percent of total explained variation respectively. This finding implies that resource related factors (financial and labour resources) were germane to cocoa production.

Contributions of variables to factors influencing choice of livelihood of female migrants

The results in Table 7 summarised all the factors with the contributing variable loadings. For the financial resources factor, accessibility to credit (L = 0.919), number of sources of credit facilities (L = 0.908), accessibility to cash income (L = 0.737) and annual income (L = 0.816) were the contributing variables. Deductions from this factor revealed that access to credit, cash income received from friends and relatives as well as number of sources to credit facilities would enhance diversification in different livelihood

Table 5. Varimax rotated factor matrix showing correlation coefficient of significantly loaded variables and extracted factors influencing female migrants' livelihood choice (N = 107).

Variables	Factors					
	1	2	3	4	5	6
Age			0.707**			
Household size			0.917**			
Years of formal education			0.895		0.768**	
Total farm size					0.480**	0.614**
Annual income	0.816**		0.684**			
Years of residence in community			0.644**			
Cosmopoliteness					0.816**	
Land accessibility						0.718**
Labour accessibility		0.867**				
Duration of work (labour provision)		0.634**		0.870**		
Accessibility to cash income	0.737**					
Accessibility to credit	0.919**					
Accessibility to remittances						
Number of information sources				0.760**		
Number of benefits from associations				0.977**		
Number of sources of credit facilities	0.808**					
Frequency of engaging labour		0.931**				
Frequency of providing labour		0.823**			0.823**	

****** Significant at $p < 0.01$ (**Source:** Field survey, 2019).

Table 6. Principal component analysis showing the Eigenvalues and percentage variation accounting for each factor influencing female migrants' livelihood choice (N = 107).

Component number	Factor label name	Eigenvalue	% of variance	Cumulative %
1	Financial resources	2.943	19.349	19.349
2	Labour resources	2.439	16.772	36.121
3	Socio-economic	2.031	12.728	48.849
4	Group benefit	1.708	9.488	58.337
5	External orientation	1.455	7.082	65.419
6	Land accessibility	1.381	6.670	72.089
7	Unknown factor	<1.000	27.911	100.00

Source: Field survey, 2019.

activities among female migrants. Also, increase in income from other non-farm and off-farm livelihood activities would influence the rate of investment in such livelihood choices among female migrants. This result supports the earlier findings of Samimi and Hosseinmardi (2011), Mentamo and Geda (2016) and Kudama (2019) that access to cash income and credit facilities enhances the livelihood choice of rural migrants.

For labour resource factors, the highly loaded variables are: frequency of engaging labour (L = 0.931), labour accessibility (L = 0.867), frequency of providing labour (L =0.823) and duration of work (L =0.634). The findings imply that livelihood choice among female migrants largely depends on the rate and length of time at which they engage the services of labour providers which could be casual labour, sharecroppers or members of their households. Also, the rate at which female migrants have access to labour may either enable or constraint them in their choice of livelihood activities, especially off-farm and non-farm. For the socio-economic factors, age (L = 0.877), years of formal education (L = 0.419) and years of residence (L = 0.791) were found to have significantly high contribution to socio-economic factors. Productive age can influence the type of livelihood activities that will give room for the productive role. In addition, increase in years of residence in a community can afford female migrants' opportunity to have access to some productive resources and the higher the educational status of female migrants

Table 7. Factor analysis showing variables contributing to the extracted factors influencing livelihood choice among female migrants (N = 107).

Factors and contributing variables	L	L^2	λ
Financial resource factor			
Accessibility to cash income	0.737	0.5431	2.8782
Accessibility to credit	0.919	0.8446	
Number of sources of credit facilities	0.908	0.8245	
Annual income	0.816	0.6659	
Labour accessibility			
Labour accessibility	0.867	0.7517	2.6979
Frequency of engaging labour	0.931	0.8668	
Frequency of providing labour	0.823	0.6773	
Duration of work (labour provision)	0.634	0.4020	
Socio-economic factor			
Age	0.877	0.7691	2.4596
Household size	0.686	0.4706	
Years of formal education	0.419	0.1756	
Accessibility to remittances	-0.647	0.4186	
Years of residence in community	0.791	0.6257	
Group benefit			
Duration of work (labour provision)	-0.670	0.4489	1.9810
Number of information sources	0.760	0.5776	
Number of benefits from associations	0.977	0.9545	
External orientation			
Cosmopoliteness	0.816	0.6659	1.4861
Household size	0.480	0.2304	
Years of formal education	0.768	0.5898	
Farm holding			
Total farm size	0.614	0.3770	0.892
Land accessibility	0.718	0.5155	

L = Factor Loading; L^2 = Square of factor loading; λ = Latent root for the factor (summation of the square loading) (**Source:** Field survey, 2019).

the better the chances of accessing information that can enhance their livelihood choices. Findings by Kassa (2019) and Kassie et al. (2017) reported that the better the socio-economic status of migrant farmers the better the choice of livelihood activities.

For the Group benefit factor, the three high loading variables that contributed to this factor are: number of benefits from associations (L = 0.977), number of information sources (L = 0.760), and duration of work (labour provision) (L = 0.670). Social participation in associations provides a number of benefits to members, including greater access to information, access to credit facilities, sharing of experience and learning from others, social support and access to some productive resources such as inputs, enhances livelihood choice among female migrants. External orientation factor has two highly loaded variables which are cosmo-politeness (L = 0.816) and land accessibility (L = 0.768). This factor has the capacity to open up numerous livelihood opportunities for female migrants and increases their search for land, which altogether would greatly influence their choice of livelihood activities. External orientation exposes migrants to new skills and improved farming practices that are capable of enhancing livelihood choice (Gecho, 2017).

Farm holding factor consists of two variables, total farm size and land accessibility with loadings of 0.614 and 0.718 respectively. Inference from this finding revealed that accessibility to land by the female migrants would in no little way enhance livelihood choice among them, especially on-farm livelihood activities. Culturally, the females have poor access to land and being migrants make them more disadvantaged. Some studies (Yizengaw et al., 2015; Aababbo and Sawore, 2016) reported that, the larger the holding size, the more they are able to produce

through farming to enhance their livelihood.

Conclusion and Recommendation

The study revealed that there was overdependence by both male and female migrants on on-farm activities with limited diversification into off-farm and non-farm activities. However, the females were more involved in off-farm and non-farm activities relative to their male counterparts. Also, five crucial factors were found to be associated with the livelihood choice of male migrants in the study area. These are socio-economic status, labour resource, financial accessibility, external orientation and farm holding factors. Similarly, financial resource, labour resource, socio-economic and group benefit factors among others are the factors found to influence livelihood choices of female migrants.

These findings have policy implications for enhancing sustainable livelihood in cocoa producing communities. Policy measures and interventions organised for improving the livelihood options of rural households should target livelihood diversification based on gender equity and for the integration of migrants who are critical to filling the existing labour gap in cocoa producing communities. In this case, the governments at the local, state and federal levels should come up with action plan on gender mainstreaming based on the distinctive factors influencing livelihood choice of male and female migrants. The low engagement of both male and female migrants in off-farm and non-farm activities revealed untapped potentials that could generate all year-round employment opportunities which are indispensable to reducing the risks associated with the seasonal nature of on-farm activities, rain dependent agriculture and the threat of climate variability. The gender related crucial factors isolated in the study which are closely associated to the livelihood choice of migrants should be of utmost importance in any intervention by stakeholders such as government (extension providers), NGOs and other development agencies.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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