

AN ASSESSMENT OF YOUTH MIGRATION AND FOOD SECURITY AMONG FARMING HOUSEHOLDS IN KWARA STATE, NIGERIA

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Abstract. Food insecurity is quickly becoming a key topic in economic growth and development. The Nigerian food insecurity situation is deteriorating due to the frequent migration of energetic and able-bodied youth from rural to urban areas. Hence, this study examined the food security status before and after youth migration and assessed the impact of youth migration on farming household food security. A two-stage sampling technique was employed to obtain data from 240 respondents. The data were analysed using descriptive statistics, the food security index and binary logistic regression. The results revealed that most (86.3%) of the respondents were males with an average age of 48.5 years. The reasons behind youth migration are poor roads, the search for white-collar jobs and the laborious nature of farming. Furthermore, the average yield before and after youth migration was 1878.8 kg/ha and 885.9 kg/ha of grain equivalent, respectively. Moreover, 61.7% of households were food-secure while 38.3% were food-insecure before youth migration. Worse still, after youth migration, 70% of the households were food-insecure and 30% were food-secure. The variables determining the food security of a given area were the ratio of rural youth migrants to household size, crop yield difference, level of education, household size, food crop losses, the volumes of cereal, legume, and root and tuber crops consumed and access to remittances. Governments at all levels should provide basic infrastructural facilities in rural areas to encourage youth to stay home. Young people should also be made aware of the negative consequences of migration. Policies aimed at household size reduction should be implemented to increase household food security as well.

Keywords: households, infrastructures, Kwara, logistic regression, migration, Nigeria, remittances and youth

INTRODUCTION

Food is a basic necessity of life. It is considered one of the elementary means of livelihood and moderate food consumption in terms of quantity and quality is essential for healthy and fruitful life (FAO, 2005). Food security exists when all people, at all times, have physical, social and financial means to access enough safe and nourishing food to satisfy both their dietary requirements and food choices to enable an energetic and beneficial life. On the other hand, food insecurity occurs when everyone, at all times, cannot afford secure and nutritious food to maintain a healthy and fruitful life (FAO, 2006). The issues related to food insecurity present a growing challenge and have been increasing since 2015 all over the world (FAO et al., 2018). Global estimates suggest that one in three people are affected by malnutrition (FAO et al., 2017). These trends are disturbing and worrisome. According to FAO and IFAD (2017), all forms of malnutrition will universally increase and affect one in two people by 2030.

The Nigerian food insecurity situation is aggravated by the frequent migration of energetic and able-bodied

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people from rural to urban areas. Evidence shows that rural youth are the ones most likely to migrate, as they often cannot find gainful employment and lack the entrepreneurial skills needed to work in the agricultural sector. Strategic investment in the empowerment, education and labour market opportunities are needed in all areas with a high youth population to enable such people to live to their full potential at home and migrate by choice rather than by necessity (FAO, 2018).

According to the International Organisation for Migration (IOM), migrants are people who move or have moved either across international borders or within state boundaries and live away from their habitual place of residence, regardless of their legal status, cause of migration, length of stay or the migration itself being voluntary or not (Agenzia..., 2017). Migration can be both regular and irregular. Irregular migration refers to ‘movement that takes place outside the regulatory norms of the sending, transit and receiving countries’ (Andersson, 2014). In the case of regular migration, such rules and laws are respected and migration takes place legally. Migration has contributed to the formation of societies in which we live today, and as such, it is part of our shared history. Both the causes and consequences of migration are complicated and multifaceted. While many people leave their homes as a result of conflict or poverty, others move during times of peace, political stability and economic development. People may also leave to study, reunite with family members, or in an attempt to find work and support their families back home financially.

The global population is growing rapidly, especially in the developing world. According to the United Nations, by 2050 the world population will increase by approximately 2.5 billion people, with the majority of this increase occurring in the developing world. Much of this growth will be among youth, who are expected to make up half of the world’s population by 2050. This study measured the food security status before and after youth migration, examined the effect of youth migration on food security and identified the causes of youth migration in the Kwara State of Nigeria.

MATERIALS AND METHODS

Study area

This study was carried out in Kwara. The latitudinal and longitudinal range of the Kwara State is 8°–10° North and 3°–6° East, respectively. It occupies an area of 35,705



Fig. 1. Map of the Kwara State, Nigeria
Source: adapted from Ibiremo et al., 2010.

square kilometres, has a population of 193,392,500 people (NPC, 2016) and is bounded by the Republic of Benin to the West and Niger to the north. It also links the Oyo, Osun and Kogi states to the southwest, southeast and east, respectively (Fig. 1).

The climate includes wet and dry seasons, with each lasting for about six months. The wet season starts in April and ends in October while the dry season begins in November and lasts until March; the annual rainfall is about 1318 mm. Temperature ranges between 33°C and 34°C. The main occupation of the local population is agriculture. The most common crops include cassava, millet, maize, okra, sorghum, beniseed, cowpea, yam, sweet potatoes and palm trees. The state has about 1,258 rural communities and rural people are the majority of its inhabitants (KWADPs, 2010). It is split into four Agricultural Development Project (ADP) zones based on ecological features, cultural practices and management convenience. These zones are: Zone A: Baruteen and Kaima Local Government Areas (LGAs); Zone B: Edu and Patigi LGAs; Zone C: Asa, Ilorin East, Ilorin South, Ilorin West and Moro LGAs and Zone D: Ekiti, Ifelodun, Irepodun, Offa, Oyun, Isin and Oke-Ero LGAs (KWADPs, 2010).

Data collection and sampling methods

Data were collected using structured interview schedules and phone calls. The phone numbers of migrants were collected from the household heads to facilitate the collection of the relevant data from the migrants. The data collected concerns the last 5 years.

Table 1. Village distribution

Zone	Village distribution	Sampled villages	Sampled households	Selected Villages
A	217	217/1248 x 15 =3	45	Boriya, Venra, Oguniyi
B	237	237/1248 x 15 =3	45	Gana gagi, Yawu, Maji
C	483	483/1248 x 15 =6	90	Apa-Ola, Lasoju, Solu, Budo-Are, Oloru, Okaka
D	311	311/1248 x 15 =4	60	Budo-Alfa, Koro, Ajegunle and Ajase-Ipo
Total	1 248	16	240	

Source: adapted from Muhammed-Lawal (2008).

A two-stage sampling technique was used to select 240 rural farming households for this study (Table 1). The first stage involves a proportional selection of 16 villages from the 4ADP zones. In the second stage, fifteen households were randomly chosen from each village selected.

Analytical techniques

The tools used to conduct the analysis were descriptive statistics, a food security index and logistic regression. The socio-economic features were explained using descriptive statistics. Two stages of analysis were utilised to examine the variables explaining household food security status. First, a food security index (Q_i) was constructed and the food security status was determined based on the food security level of 2260 kcal. Households with a daily per capita calorie intake equal to or greater than 2260 kcal were determined to be food-secure while those below 2260 kcal were deemed food-insecure (Babatunde et al., 2007). The index is provided as follows:

$$Q_i = \frac{M_i}{H} \quad (1)$$

Food security index (Q_i) is the ratio of the daily calorie intake (M_i) to the recommended daily calorie intake (H).

Secondly, binary logistic regression was employed to identify the drivers of food security status among farming households.

The model is as follows:

$$Z_i = n_0 + n_1K_1 + n_2K_2 + \dots + n_{10}K_{10} + e_i \quad (i = 1,2, 3--240)$$

where:

Z_i – the binary food security status. Its value is 1 if food-secure and 0 if not

n_0 – constant

e – error term

The explanatory variables are:

K_1 – the ratio of rural youth migrants per household to household size

K_2 – crop yield difference (proxied by the difference in yield before and after youth migration, kg of grain equivalent))

K_3 – the household head educational status (years)

K_4 – household size (adult equivalent)

K_5 – gender of the household head (D = 1 if male, 0 if otherwise),

K_6 – food crop losses (kg of grain equivalent),

K_7 – the volume of cereals consumed (kg)

K_8 – the volume of legumes consumed (kg)

K_9 – the volume of roots/tubers consumed (kg)

K_{10} – access to remittance (D = 1 if the household has access to remittance, 0 if otherwise)

RESULTS AND DISCUSSION

Socio-economic characteristics of the respondents

The majority (86.3%) of the respondents were males. Male respondents traditionally have rights to farmland more often than females (Table 2).

The mean age of the respondents was 48.5 years with an average number of youth migrants being 5 persons. This suggests that most of the respondents were quite advanced in age. Age is an important variable which can affect one's agility and working capabilities which allow the head to satisfy the household's food

Table 2. Socio-economic characteristics of the respondents

Characteristics	Frequency	Percentage	Mean
Age (years)			
21–40	56	23.3	48.5
41–60	158	65.8	
61–80	23	9.6	
81–100	3	1.3	
Gender (sex)			
Male	207	86.3	
Female	33	13.8	
Education (years)			
1–5	112	46.7	6.38
6–10	94	39.2	
11–15	34	14.2	
Farming Experience (years)			
1–10	11	4.6	23.8
11–20	128	53.3	
21–30	48	20.0	
31–40	53	22.1	
Non-farm monthly income (₦)			
1–50,000	125	52.1	63,625
51,000–100,000	58	24.2	
101,000–150,000	46	19.2	
151,000–200,000	11	0.5	
Rural farming households' access to credits			
No	123	51.3	
Yes	117	48.8	
Farm size (ha)			
1–5	197	82.1	1.64
6–10	32	13.3	
11–15	7	2.9	
16–20	4	1.7	
Crop yield (kg/ha of grain equivalent)			
1–500	20	9.6	885.92
501–1,000	149	62.1	
1,001–1,500	57	23.7	
1,501–2,000	14	4.6	
Number of youth migrants/household			
1–5	194	80.8	5 persons
6–10	39	16.3	
11–20	7	2.9	

Source: field survey, 2019.

needs. Aged household heads are likely to have larger households and may lack the capacity to work to support their families. About 51% of the rural farming households do not have access to credits. This suggests that rural households are at a higher risk of food insecurity, particularly in the case of a drop in crop production. About 43% of household heads are literate as well. Hence, they are expected to make good decisions which may influence their food security situation (Babatunde et al., 2007). The average farm size is 1.64 hectares. The area cultivated may influence the level of output and food security of the respondents (Akinsanmi and Doppler, 2005). Furthermore, the study revealed that the average monthly income from non-agricultural jobs is N 63,625.

Reasons for rural youth migration

Poor road facilities ranked first, with a mean score of 2.85. The search for white-collar jobs (MS = 2.80), laborious nature of farming (MS = 2.58) and poor educational facilities (MS = 2.51) were other most critical factors affecting youth migration and were ranked second, third and fourth, respectively (Table 3).

Moreover, high rate of unemployment (MS = 2.47), seasonality of farming (MS = 2.36), wanting to learn to trade in the urban areas (MS = 2.37), wanting to do business (MS = 2.24) and low returns from farming (MS = 2.04) were critical factors influencing youth migration as well. Poor health care facilities (MS = 1.94) and crop failure (MS = 1.70) were the less critical variables for youth migration in the study area.

Farming household yield before and after youth migration

Table 4 indicates that the average yield before and after youth migration was estimated at 1878.8 and 885.92 kg/ha of grain equivalent, respectively. The reduction in yield is a result of labour shortage, high cost of labour, low output and decreased income following the migration. Due to labour shortages, farmers are left with the option of cultivating small plots of land or using crops that require less pre-planting, planting and post-planting activities. The mean farm size was estimated at 2.57 hectares before youth migration, however, it dropped drastically to just 1.64 hectares afterwards. This implies that youth migration has reduced the average size of crop cultivation areas for local households.

Table 3. Reasons behind rural youth migration

Variable	VC (freq)	C (freq)	LC (freq)	MS	Ranking
Low returns from farming	39 (16.3)	171 (71.3)	30 (12.5)	2.04	9 th
Search for white collar jobs	200 (83.3)	33 (13.8)	7 (2.9)	2.80*	2 nd
High rate of unemployment	127 (52.9)	98 (40.8)	15 (6.3)	2.47	5 th
Poor educational facilities	130 (54.2)	102 (42.5)	8 (3.3)	2.51*	4 th
Poor health care facilities	56 (23.3)	110 (45.8)	74 (30.8)	1.93	10 th
Laborious nature of farming	161 (67.1)	58 (24.2)	21 (8.8)	2.58*	3 rd
Learning to trade in the urban areas	111 (46.3)	107 (44.6)	22 (9.2)	2.37	7 th
Crop failure	23 (9.6)	121 (50.4)	96 (40)	1.70	11 th
To do business	98 (40.8)	102 (42.5)	40 (16.7)	2.24	8 th
Poor road facilities	205 (85.4)	33 (13.8)	2 (0.8)	2.85*	1 st
Seasonality of farming	120 (50.0)	87 (36.3)	33 (13.8)	2.36	6 th

VC – very critical; C – critical; LS – less critical reasons; MS – mean score.
Source: field survey, 2019.

Table 4. Rural farming household yield

Yield	Average land area (ha)	Average yield (kg/ha) grain equivalent	N	SD	Z-score
Before youth migration	2.57	1 878.8	240	1 618.52	713.38
After youth migration	1.64	885.92	240	752.91	460.41

Source: field survey, 2019.

Rural farming household food security status

About 62% of the households were food-secure while 38 % were food-insecure before youth migration. The situation deteriorated after youth migration, with 70% and 30% of the households being food-insecure and food-secure, respectively (Table 5).

Effects of rural youth migration on food security

The logistic regression indicated an R^2 value of 58.46%. This implies that the independent variables explained about 58% of the total variation in the dependent variable. The main drivers of food security are crop yield

Table 5. Households' food security status

XXX	Before youth migration		After youth migration	
	food-secure	food-insecure	food-secure	food-insecure
Percentage	61.7	38.3	30	70
Frequency	148	92	72	168

Source: field survey, 2019.

Table 6. Determinants of food security

Food security	Coefficient	Std. error	Sig.
Number of youth migrants	-0.0659060	0.0417698	0.0146060**
Crop yield difference	-0.0000555	0.0000217	0.0107235**
Years of education	0.3659490	0.1630813	0.0248345**
Household size	-0.3321875	0.0580699	0.0000000***
Gender	0.0468010	0.4471801	0.9166464
Food crop losses	-0.0014776	0.0004659	0.0015149***
Volume of cereals consumed	-0.0009527	0.0147753	0.0002890***
Volume of legume consumed	0.1949050	0.0570907	0.0006403***
Volume of root and tuber crops consumed	0.0656752	0.0147084	0.0003570***
Access to remittance	0.1567815	0.3611693	0.0642200*
Constant	0.7455288	1.0382706	0.0003092

R² (58.46%).

*, **, *** significant at 1%, 5% and 10% levels respectively.

Source: own elaboration.

difference, the ratio of youth migrants to household size, food crop losses, the volumes of cereals, legume and roots and tubers consumed, level of education, household size, gender and access to remittance (Table 6).

The crop yield coefficient before and after the migration was negative and significant at a 5% probability level. A 0.000055% increase in yield difference raises food insecurity by 1%. The coefficient of the rural-youth-migrant-to-household-size ratio was also negative and significant at a 5% probability level, implying that as the number of youth migrants increases, food insecurity increases as well. The coefficient of education was positive, with a 5% probability level. This implies that as the household head's education level increases, food insecurity decreases. The level of education of the household head could help them make viable production and nutrition decisions. The R² value of 58.46% is in line with the findings of Babatunde et al. (2007). The household size coefficient was found to be negative and significant at a 10% probability level. This suggests that as the household size increases, food security decreases. In other words, the smaller the household size, the more likely it is that the household becomes food-secure. This aligns with the findings of Amaza et al. (2008), Muhammed-Lawal (2008) and Babatunde et al. (2007).

The food crop loss coefficient is also significant at a 5% level and shows a negative relationship. The volumes of legume and tubers consumed are all positive and significant at a 10% level. This implies that the lower the volume of legume and tubers consumed by the household, the more food-insecure the household becomes and vice versa. These findings concur with that of Muhammed-Lawal (2008). Interestingly, the coefficient of access to remittance was negative and important at a 5% level. This suggests that as access to remittance increases, food insecurity increases. This may be because remittances were not used for food consumption purposes.

Coping strategies adopted by the farming households

Table 7 below shows the coping strategies employed by households to mitigate the effects of food insecurity.

Consumption of grains (MS = 2.57), engaging in off-farm jobs to increase household income (MS = 2.51) and eating less preferred foods (MS = 2.48) are the most effective coping strategies adopted in the area. Furthermore, reducing the quantity of the food consumed (MS = 2.40), access to remittance to purchase food (MS = 2.38), land rental (MS = 2.38), borrowing money to buy food (MS = 1.80) and sending children to the relatives are

Table 7. Coping strategies adopted by the respondents

Variable	ME Freq	E Freq	LE Freq	MS	Ranking
Using remittances to purchase food	115 (47.9)	102 (42.5)	23 (9.6)	2.38	5 th
Consuming grains only	177 (73.8)	22 (9.2)	41 (17.1)	2.57*	1 st
Consuming less food	152 (63.3)	32 (13.3)	56 (23.3)	2.40	4 rd
Sending children to the relatives	40 (19.2)	72 (30.0)	122 (50.8)	1.68	8 th
Borrowing from friends and relatives	56 (23.3)	110 (45.8)	74 (30.8)	1.64	9 th
Land rental	143 (59.6)	45 (18.8)	52 (21.7)	2.38	5 th
Eating less preferred food	131 (55.4)	89 (37.1)	18 (7.5)	2.48*	3 nd
Borrowing money to buy food	65 (27.1)	63 (26.3)	112 (46.7)	1.80	7 th
Doing off-farm jobs to raise income	130 (54.2)	102 (42.5)	8 (3.3)	2.51*	2 th

*Missing explanation.

ME – most effectual coping strategies; E – effectual; LS – less effectual; MS – mean score.

Source: own elaboration.

other effectual coping strategies adopted by the respondents to mitigate the effects of food insecurity.

CONCLUSION AND RECOMMENDATIONS

This study examined food security and assessed the effect of youth migration on farming household food security in the Kwara State of Nigeria. The study indicated that the average yield before and after youth migration was 1878.8 and 885.9 kg/ha of grain equivalent, respectively. Moreover, 61.7% of the households were food-secure while 38 % were food-insecure before the youth migration. After the youth migration, 70% and 30% of the households were food-insecure and food-secure, respectively. Important variables explaining food security include crop yields, the ratio of youth migrants to household size, food crop losses, the volume of cereals consumed, the volume of legume consumed, the volume of roots and tubers consumed, level of education, household size, gender and access to remittances. Consuming grains only, engaging in off-farm jobs to increase household income, as well as consuming less preferred food items are the most effectual coping strategies adopted in the area.

The following recommendations have been made:

- The government should provide basic infrastructure in rural areas to encourage the youth to stay at home.

- Household heads should be educated to help them make viable production and nutrition choices.
- Introducing policies aimed at reducing household size should be encouraged through the advocacy of enhancing food security.

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