Characteristics of Cross-border Migration in Nigerian Border Communities

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Abstract

This study examines the characteristics of cross-border migration in the border communities of Ogun State, Nigeria. A multistage sampling procedure was used to select 331 cross-border migrants in the study area. The analysis revealed that few employment opportunities, bad economic conditions, poverty, wage differentials, soil infertility, natural disasters, and drought were the underlying push factors predicting the need to earn better income among the migrants, whereas more job opportunities, better economic conditions, less environmental degradation, good access to land, commerce, marriage, the chance to join other family members, better income, good harvest, and soil productivity were the underlying pull factors predicting the choice of destination in Nigeria. Therefore, the study concluded that economic and environmental considerations were the push factors predicting the need to earn better income, whereas environmental, economic, and social considerations were the pull factors predicting the choice of destination in Nigeria.

Keywords

cross-border migration, migrants, characteristics, push and pull factors, border communities

Introduction

Issues related to cross-border migration have generated interest in academic and research circles for decades (Afolayan, 1988; Adepoju, 2004; Di Giovanni, Levchenko, & Ortega, 2015; Fadeyi, 2010; Genov, 2018; Waldinger, 2015). Resulting from the continuous movement of the human population across continents, regions, and countries, cross-border migration has become a global issue and is currently one of the major forces shaping human societies worldwide. Historically, the simultaneous existence of prosperous regions and lagging ones has engendered the need for movement. Movement between these two types of regions as a result of push and pull factors is central to the understanding of migration flow across countries. According to Popoola, Oladehinde, and Fatusin (2017), pull factors refer to features that people find elsewhere, particularly abroad, that draw them in, whereas push factors refer to features found at home that discourage people from staying there. These factors not only cause the movement of people within a region but also engender such movement across international borders. Movement across international borders irrespective of its length, purpose, or composition is known as cross-border migration (Oladehinde, 2016; Popoola, 2016; Popoola, Oladehinde, & Fatusin, 2017).

Research has shown that the number of people moving beyond international borders is increasing. For instance, the International Organisation for Migration (IOM) estimated that the number of people/migrants living outside their countries of origin increased from 158 million in 1990 to 221 million in 2010. Furthermore, the number of people living outside their countries of origin was estimated to be 281 million, representing 3.60% of the global population, in 2020 (IOM, 2022). Although Nigeria is the country of origin of a significant percentage of African migrants to Europe, the United States, Canada, Australia, and South Africa, among other countries, it is still regarded as a major destination country of migration in West Africa (Fadeyi, 2010). The rate of immigration in Nigeria was previously small but has gradually increased in the last three decades (Hargrave, 2021). For example, 456 621 migrants, representing 0.48% of the country's population, were recorded in 1990; this number rose to 969 171, representing 0.69% of the population, in 2005 and further increased to 1 308 568, representing 0.63% of the population in 2020. The majority of

migrants in Nigeria (81.53%) are nationals from neighbouring countries belonging to the Economic Community of West African States (ECOWAS), specifically Benin (28.82%), Ghana (18.21%), Mali (13.18%), Togo (12.09%), and Niger (9.23%) (United Nations Department of Economic and Social Affairs (UN DESA, 2020). Some studies have determined the reason behind the increase in the rate of immigration across international borders into Nigeria. Folami and Folami (2012) stated that most border areas in Nigeria are porous and have failed to curtail the influx of migrants into the country. Furthermore, Daramola, Amali, and Bello (2014) claimed that there is no clear demarcation between Nigeria and its neighbours and that people can enter and exit the country freely. Constanze (2014) argued that the neighbouring countries' vulnerability to disaster, environmental degradation, crises and conflicts, food shortages, and diseases tends to encourage migrants to leave their countries of origin. Oladehinde (2016) observed that the lack of adequate regulation has allowed a significant influx of irregular migrants from neighbouring nations to settle down in rural border communities and engage in economic activities. According to Samaddar (2003) and Oladehinde (2016), people's reasons for selecting Nigeria as a destination country include the cost of migration, opportunities, and distance, as well as social, capital, and support networks.

A cursory review of the literature shows that studies on cross-border migration exist. The focus of these studies ranges from cross-border migrants' integration (Popoola, 2016), gender analysis of cross-border migration (Popoola, Oladehinde, & Fatusin, 2017), the determinants and flow of cross-border migration (Adepoju, 2004; Uzomah et al., 2019), cross-border migration and human security (Adeola & Oluyemi, 2012; Okoye, 2022), and cross-border migration and trading (Afolayan, 2010). Despite the multiplicity of these studies, the characteristics of cross-border migration have not been documented properly in the literature. In addition, with the increasing rate of cross-border migration into Nigeria, there is a dearth of studies on the characteristics of migration in rural border communities. Hence, there is a need for an empirical study that examines the characteristics of cross-border migration into Nigeria using rural border communities as a case study.

Understanding the characteristics of cross-border migration through an examination of the underlying causes, patterns, and purposes of cross-border migration as well as the socioeconomic status of migrants is critical in the migration context, as the literature has traditionally emphasised the causes of international migration out of the place of birth (push factors) without exploring the potential considerations (pull factors) behind the choice of destination. Moreover, it has become difficult to empirically explain the circumstances that can encourage migrants to become cross-border migrants.

Therefore, the current study examines the characteristics of cross-border migration in the rural border communities of Nigeria, with the aim of producing empirical evidence that could be used in developing policies to manage migration flow. For this purpose, the study answers the following research questions: (1) Who are the cross-border immigrants in the rural border communities of Nigeria? (2) What is the pattern of their migration? (3) What are the underlying causes (push and pull factors) of their cross-border migration?

Literature review

Theory of the pull and push factors of migration

Migration is as old as human history, thus forming one of the major features of the human species. Migration is best understood as the temporary or permanent geographical change in residence of an individual. The theory of migration was put forward by Everett Lee, who categorised the decisions and processes related to migration into four groups: factors associated with the area of origin, factors associated with the area of destination, intervening obstacles, and personal factors (Bean & Brown, 2014). Lee further elaborated that different factors can play a role in driving people away from an area or in retaining people in an area or attracting them to it. Intervening obstacles include obstacles (such as technological advances, distance, and transportation) that must be overcome before migration can occur. Personal factors refer to individual perceptions of the factors influencing the actual act of migration. This theory is known as the push and pull theory (Faridi, 2018). People's decisions to move from one geographical location to another are influenced by pull

and push factors (Popoola et al., 2017), which can either induce people to migrate to a new location or prompt them to leave old residences.

The pull factors influencing migration involve the conditions in certain places that attract people to these places. Pull factors can be categorised into economic, social, political, and environmental factors. Economic factors such as the provision of job opportunities, better income, and better economic conditions are the most significant determinants of migration (Weldemeriam et al., 2023; Zoelle, 2011). Social factors that influence migration decisions include family ties, the chance to join friends, marriage, and social networks (Kuhnt, 2019; Neumann & Hermans, 2017). Moreover, political factors such as the absence of crime, the absence of conflict, and political stability as well as environmental factors such as favourable climate, soil productivity, good access to land, and good harvest affect the choice of destination.

In contrast, push factors refer to the circumstances that force an individual to leave their country of origin. These factors can also be categorised into economic, social, political, and environmental factors. Few employment opportunities, wage differentials, bad economic conditions, poor income, poverty, and low living standards comprise economic push factors that engender migration from developing to developed countries (Hatch, 2016; Ibrahim et al., 2019; Popoola et al., 2017). Social factors driving push migration include the lack of a good healthcare system, a poor education system, and the lack of good public transport (Doerschler, 2006; Novotna, 2010). Political factors such as war, terrorism, political instability, conflict, crime, and bad governance as well as environmental factors such as soil infertility, unfavourable climatic conditions, and natural disasters also influence push migration (Urbański, 2022; Wadsworth, 2011).

The push and pull theory emphasises the structural factors of attraction and repulsion in areas of origin and areas of destination in the formation and regulation of migration patterns. This theory is relevant to this study as it states that push and pull factors affect the reasons (causes) for cross-border migration, particularly between countries. In this study, the areas of origin include other West African countries, while the destination area is Nigeria. Push factors in other West African countries are those that repel people from them and push these people to migrate to Nigeria. They cause an individual to be dissatisfied with their present location. For example, push factors could include the lack of employment and other opportunities, bad climate conditions, the lack of health services, natural disasters, the lack of political or religious freedom, discrimination, poor chances of marrying, war, and criminality. In contrast, pull factors could include benefits or opportunities that can be found in Nigeria but not in the area of origin. Such opportunities hold people within a region or attract them to it. Employment opportunities, a high standard of living, political and religious freedom, education opportunities, good state of health services, attractive climate, security, and good chances of marrying are examples of pull factors. Both other West African countries of origin and Nigeria as a destination country have push and pull factors, and these are complementary.

Furthermore, migration from other West African countries to Nigeria may not occur if there are intervening obstacles between them in the form of restrictions and entry requirements. According to Lee's theory, the more the number of intervening variables present, the smaller the number of migrants. Receiving countries regulate immigration through their policies. Such policies can either tighten national immigration restrictions in case of immigration surplus or loosen them in case of labour demand. In the case of West Africa, the formulation of the ECOWAS Policy has increased migrant movement from other West African countries to Nigeria. Cross-border migrants can now move freely (in and out) without any form of restriction. The push and pull theory is especially relevant in identifying likely variables regarding the causes (push and pull factors) of cross-border migration. Furthermore, it is relevant in identifying basic factors that influence cross-border migration in Sub-Saharan Africa with evidence from Nigerian border communities.

Empirical review

Research findings have shown that issues on cross-border migration have been expanded in the literature. Most existing studies have focused on cross-border migration and social inequalities (Faist, 2018), cross-border migration and trade (Afolayan, 2010; Yendaw, 2022), cross-border migration and human security (Adeola & Oluyemi, 2012; Okoye, 2022), cross-border cooperation

(Fiagbe, 2023), cross-border integration (Popoola, 2016), and cross-border migration and climate (Beltran & Hadzi-Vaskov, 2023). However, none of these studies have specifically examined the push and pull factors influencing cross-border migration in the current study area.

Furthermore, numerous studies have been carried out on the factors influencing cross-border migration from non-neighbouring countries (Abdou, 2020; Chandler & Tsai, 2001; Gupta, 2019; Sahatcija, Ferhataj & Ora, 2020; Urbański, 2022). For instance, Urbański (2022) discovered that pull factors have a greater influence on migration between two countries, Poland and Romania. Using reliability tests, validity tests, and correlation analysis, the study determined that five out of six pull factors (i.e., economic, political, and social factors in Poland and economic and political factors in Romania) were significant compared to two out of six push factors (i.e., social factors in both Poland and Romania). Urbański (2022) concluded that economic factors, including the hope of finding better jobs and better lives in foreign countries, are the major factors influencing migration and that political problems (e.g., an unfair legal system, violent conflicts, underdevelopment, poverty, political instability, and corruption) should be addressed to control issues related migration.

Sahatcija, Ferhataj, and Ora (2020) examined the push and pull factors of present-day migration in Albania. It was found that economic conditions, conflict, unemployment, and discrimination were the push factors and career advancement, improvement in the quality of life, and the quality of the educational system were the pull factors influencing students' decision to migrate. Furthermore, Zanabazar, Kho, and Jigjiddorj (2021) examined the push and pull factors affecting the migration of Mongolians to South Korea. They determined that economic factors such as low or unstable income, the economic downturn, and poverty were the major push factors, whereas the pull factors were high wages, well-being, opportunities to save money, and social factors such as quality education, the cultural experience, and the chance to join family members. In the same vein, Khan et al. (2023) asserted that push factors such as lack of jobs, low wages, poor financial conditions, debt, social insecurity, and social discrimination as well as pull factors such as better employment opportunities, improved living standard, personal development, the presence of relatives, and an attractive environment play a significant role in Gulf migration.

Despite the existence of multiple studies on the push and pull factors influencing cross-border migration, none of the reviewed studies focused on cross-border migration across neighbouring countries, with the exception of Uzomah, Madu, and Ajaero (2019), Popoola, Oladehinde, and Fatusin (2017), and Mlambo (2018). Uzomah, Madu, and Ajaero (2019) examined the determinants of the cross-border migration of ECOWAS citizens into Nigeria. The study used principal component analysis to extract seven components influencing cross-border migration. It was discovered that sociopolitical issues were the most significant underlying determinants of migration in the study area. Other determinants of migration were inadequate infrastructure and public services, better fishing opportunities, economic issues, and bad agricultural conditions. The study concluded that economic issues contributed immensely to the determinants of migration in the study area.

Similarly, Popoola, Oladehinde, and Fatusin (2017), who conducted a gender analysis of cross-border migration in the rural border communities of Ogun State, Nigeria, discovered that economic (poor income, bad economic conditions, poverty, and few employment opportunities) and environmental (unfavourable climatic conditions) factors were the push factors influencing cross-border migration among male migrants, whereas economic (poor income and poverty) factors were the main considerations cited by female migrants. Furthermore, it was asserted that environmental (good access to land) and economic (commerce and better income) factors were the pull factors influencing the choice of destination among male migrants, whereas environmental (good access to land), social (marriage and the chance to join family members), and economic (better income) factors were the pull factors influencing the choice of destination among female migrants. The study concluded that the patterns and factors (push and pull) of cross-border migration vary depending on gender. In addition, Mlambo (2018) observed that better salaries, better standards of living, and economic buoyancy were the motivations behind the cross-border migration of migrants from Southern African Development Communities (SADC) to South Africa and Botswana.

The above discussion shows that studies on cross-border migration, especially across neighbouring countries, are scant in the literature. The rate of cross-border migration, especially across neighbouring countries, in West Africa is increasing due to the porosity of the border, the lack of

clear demarcation between member states, and the existence of policies favouring cross-border migration across West Africa. Therefore, understanding the characteristics of cross-border migration through an examination of the underlying causes (push and pull factors) and patterns of cross-border migration is crucial. This study aims to fill this research gap.

Methods and materials

Study area

This study covers two major local government areas (LGAs) in Ogun State, namely Yewa North and Ipokia LGAs. These LGAs are regarded as border LGAs. Ogun State shares boundaries with Ondo State in the east, while Lagos State and the Atlantic Ocean are to the south. It also shares borders with Benin in the west and with Oyo State in the north. Ogun State is situated between latitudes 6.2^0N and 7.8^0N and longitudes 3.0^0E and 5.0^0E of the Greenwich Meridian (see Figure 1). The geographical location and position of Ogun State facilitate access to most of the other developed areas in Nigeria.

Method

Primary data were collected through a well-structured questionnaire administration in the selected rural border communities of Ogun State using a multistage sampling procedure. Ipokia and Yewa North LGAs were selected based on the degree of closeness to the international border (Popoola, 2016). Rural border communities, namely – Idabata, Paagbon, Bode Ase, Ago Egun, Pedepo, Gbokoto, Abule Idi, and Ijoko were selected through a simple random process in Ipokia and Yewa North. The migrants' enclaves were mapped out during the pilot survey, and the sampling frame was drawn from the residential houses in the migrants' enclaves within the selected rural communities. Residential buildings were identified and selected through a systematic random method. The first building was randomly selected, and the next unit of selection was every fourth residential building in the study area. Through this procedure, questionnaires were administered to the head of each household, totalling 331 questionnaires.

Data analysis

The data obtained from the survey were analysed using descriptive and inferential methods. Data on the socioeconomic characteristics of the respondents and pattern of migration were analysed using a frequency table and percentages, whereas the causes of cross-border migration were analysed via multiple regression. Two multiple regression models were generated. The first regression model was used to examine the underlying causes of migration from the country of origin (push factors) to Nigeria (destination), which were predicted by the income of the respondents. The second model was used to assess the pull factors influencing the choice of destination in Nigeria, which was explained by the reasons for the selection (economic and non-economic reasons).

Model

Previous studies on migration have utilised inferential statistics (Bahuguna & Belwa, 2013; Ebrahim & Biru, 2022; Ghosh & Chakraborty, 2022; Su et al., 2022; Tatoğlu, 2017). These studies have used multiple regression and binary regression to examine various factors influencing migration from one place to another. The advantage of these regression models is that they can be used to examine the causal influence of predictive factors on dependent variables (Adetayo et al., 2021; Oladehinde, Popoola, & Makinde, 2021; Oladehinde et al., 2024). The current study used multiple regression models to examine the extent of the influence of the dependent variables, namely income and the reasons for the choice of destination in Nigeria, on the selected independent variables. To examine the factors, two equations were formulated. For example, in Equation (1),

multiple regression was used to examine how the underlying causes of cross-border migration from the country of origin to Nigeria (push factors) were predicted by the income of the respondents.

$$Y = \alpha + \beta_1\chi_1 + \beta_2\chi_2 + \beta_3\chi_3 + \ldots\ldots + \beta_{14}\chi_{14} + \varepsilon \quad (1)$$

Y represents the income of the respondents; χ_1, χ_2, χ_3, χ_4, χ_5, χ_6, and χ_7 denote few employment opportunities, bad economic conditions, poor health services, inadequate facilities, poverty, wage differentials, and poor education, respectively, while, χ_8, χ_9, χ_{10}, χ_{11}, χ_{12}, χ_{13}, and χ_{14} denote the lack of public transport, unfavourable climatic conditions, soil infertility, insecurity/conflict, natural disaster, poor access to land, and drought, respectively. Furthermore, α represents the constant, and β_1, β_2, β_3 …… β_{14} denote the respective coefficients of the independent variables. Finally, ε is the error term in the model.

In Equation (2), multiple regression was used to determine the factors responsible for the choice of the selected village in Nigeria.

$$Y = \alpha + \beta_1\chi_1 + \beta_2\chi_2 + \beta_3\chi_3 + \ldots\ldots + \beta_{13}\chi_{13} + \varepsilon \quad (2)$$

Y represents the reason for the choice of settlement in Nigeria (i.e., the place where the respondents finally settled down). In addition, χ_1, χ_2, χ_3, χ_4, χ_5, χ_6, and χ_7 denote job opportunities, better economic conditions, better health services, better education services, less environmental degradation, good access to land, and commerce, respectively, while, χ_8, χ_9, χ_{10}, χ_{11}, χ_{12}, χ_{13}, and χ_{14} denote less crime, marriage, the chance to join other family members, better income, good harvest, soil productivity, and the chance to join friends, respectively. Furthermore, α represents the constant, and β_1, β_2, β_3 …… β_{14} denote the respective coefficients of the independent variables. Finally, ε is the error term in the model.

Findings and discussion

Socioeconomic attributes of the respondents

The distribution of the respondents' countries of origin showed that more than one-third of the respondents (84.6%) were from Benin, while 5.1% and 4.6% were from Togo and Ghana, respectively. In addition, 5.7% were migrants from other countries, such as Burkina Faso, Niger, and Mali. Most of the respondents were male (71.6%), while 28.4% were female. Furthermore, most of the respondents (72.2%) were in the 31–60 age bracket, while 23.9% and 3.9% were within the age brackets of 0–30 years and above 60 years, respectively. In addition, 70.1% of the respondents were married, and 11.5% were single, while 12.1% and 6.3% were separated and widowed, respectively. The majority of the respondents earned 18 001–55 000 per month (67.7%), while 29.6% and 2.7% earned below 18 000 and above 55 001, respectively, per month. More than half of the respondents (52.6%) did not have formal education, 33.2% had primary school education, 11.8% had secondary school education, and 2.4% had tertiary education. More than half of the respondents (74.6%) were in the farming sector, and 12.1% were in the trading sector; furthermore, 11.1% and 2.1% were self-employed and unemployed, respectively. The findings of this study are consistent with those of Dreier and Sow (2015), who noted that migration is often linked to the informal sector and mainly involves agricultural workers in search of employment in the agricultural sector. For instance, Ba and Kouton (2006) asserted that most people who migrate from Benin to neighbouring countries seek employment in the informal sector.

Patterns of cross-border migration

As shown by the findings in Table 1 regarding the duration of stay in the country of origin before relocating to Nigeria, 41.6% of the respondents spent less than 10 years in their countries of origin before migrating to Nigeria; furthermore, 26% spent 11–15 years, 20.5% spent 16–20 years,

and 11.8% spent over 21 years in their countries of origin before relocating to Nigeria. In addition, more than half of the respondents (53.5%) spent less than 10 years in Nigeria; furthermore, 27.2% spent 11–15 years, 10.8% spent 16–20 years, and 8.8% spent over 21 years in Nigeria. Most of the respondents chose the destination in Nigeria (67.1%) for economic reasons, while 32.9% chose it for non-economic reasons. More than half of the respondents still visited their countries of origin (93.1%), while 6.9% did not. Information on the frequency of visits to their countries of origin shows that most of the respondents visited their countries of origin once a year (23.6%), followed by those who visited twice a month (19%), once every two months (17.2%), two to four times a year (12.1%), four times in a month (11.2%), once a month (7.9%), rarely (2.1%), and never (6.9%). The highest percentage of respondents visited their countries of origin for weddings and funerals (25.6%); others visited for attending religious celebrations such as Easter/Christmas (24.1%), seeing parents (15.2%), attending festivals (13.3%), seeing family members (11.7%), seeing friends (5.8%), and addressing medical issues (4.4%).

Table 1. Patterns of cross-border migration

Pattern of cross-border migration	Frequency	Percentage
Length of stay in the country of origin before relocating to Nigeria		
1–5 years	69	20.8
6–10 years	69	20.8
11–15 years	86	26.0
16–20 year	68	20.5
Over 21 years	39	11.8
Length of stay in Nigeria		
1–5 years	100	30.2
6–10 years	77	23.3
11–15 years	90	27.2
16–20 years	35	10.6
Over 21 years	29	8.8
Reasons for choosing the destination in Nigeria		
Economic reasons	222	67.1
Non-economic reasons	109	32.9
Do you still visit your country of origin?		
No	23	6.9
Yes	308	93.1
Frequency of visit to your country of origin		
Once a month	26	7.9
Twice a month	63	19.0
Four times a month	37	11.2
Once every two months	57	17.2
Once a year	78	23.6
Two to four times a year	40	12.1
Rarely	7	2.1
Never	23	6.9

Table 2. Purpose of visits to the country of origin

Purpose of visit	Responses	
	N	Percentage
Attending weddings and funerals	241	25.6
Attending religious celebrations such as Easter/Christmas	227	24.1
Seeing your parent	143	15.2
Attending festivals	125	13.3
Seeing family members	110	11.7
Seeing friends	55	5.8

Table 2. – cont.

Purpose of visit	Responses	
	N	Percentage
Addressing medical issues	41	4.4
Total	*942	100.0

Note: * Higher than the total survey responses because of multiple responses

Causes (push and pull factors) of cross-border migration

Push factors of cross-border migration from the country of origin to Nigeria

The results of the multiple linear regression based on Equation (1) are shown in Tables 3a–3c. Table 3a presents the model summary of the dependent (income) and independent variables (few employment opportunities, bad economic conditions, poor health services, inadequate facilities, poverty, wage differentials, poor education, the lack of public transport, unfavourable climatic conditions, soil infertility, insecurity/conflict, natural disaster, poor access to land, and drought). The model showed that the independent variables (push factors) could be explained by the income of the respondents, suggesting that the reason for cross-border migration from the country of origin to Nigeria was the need to earn better income. The model result of the factors showed that 21.5% (R^2 = 0.215) could be explained by the income of the respondents; furthermore, the coefficient of correlation between the variables (dependent and independent variables) was 0.464, which was significant at the 0.05 confidence level.

Table 3a. Model summary

Model	R	R^2	Adjusted R^2	Std. error of the estimate
1	0.464[a]	0.215	0.180	12,573.37399

[a] Predictors: (Constant), drought, few employment opportunities, poor education, natural disaster, soil infertility, wage differentials, insecurity/conflict, inadequate facilities, the lack of public transport, poverty, unfavourable climatic conditions, bad economic conditions, poor access to land, poor health services

Furthermore, the analysis of variance (ANOVA) test presented in Table 3b was used to determine whether the underlying factors were significant in the regression analysis. The table shows that F = 6.184. All the factors were significant at the 95% (p = 0.05) confidence level. Therefore, all the factors (predictors) in the ANOVA table seemed to be significant.

Table 3b. ANOVA test[a]

Model		Sum of squares	Df	Mean square	F	Sig.
1	Regression	13,686,896,447.793	14	977,635,460.557	6.184	0.000[b]
	Residual	49,956,355,818.068	316	158,089,733.601		
	Total	63,643,252,265.861	330			

[a] Dependent variable: Monthly income of the respondents

[b] Predictors: (Constant), drought, few employment opportunities, poor education, natural disaster, soil infertility, wage differentials, insecurity/conflict, inadequate facilities, lack of public transport, poverty, unfavourable climatic conditions, bad economic conditions, poor access to land, poor health services

Table 3c reveals the coefficient of regression analysis for the independent variables. It can be seen that the identified push factors could be explained by the income of the respondents. Out of the 14 independent variables, the unstandardised coefficients of seven independent variables were significant at the 0.05 confidence level: few employment opportunities (β = 4,537.9), bad economic conditions (β = 4,881.2), poverty (β = 4,226.5), wage differentials (β = 5,831.7), soil infertility (β = 3,559.8), natural disaster (β = -5,351.8), and drought (β = -3,491.1). The seven significant variables were predicted by the income of the respondents. In other words, these seven factors were the reasons for cross-border migration from the country of origin to Nigeria and were dependent on the need to earn better income. This indicates that economic (wage differentials, few employment

opportunities, bad economic conditions, and poverty) and environmental (soil infertility, natural disasters, and drought) factors were the underlying push factors predicted by the need to earn better income. Hence, for most respondents, economic and environmental conditions in their countries of origin contributed to the reasons for cross-border migration. This supports the IOM's (2012) report, which identified an increase in the number of Beninese nationals migrating to other West African countries as a result of poverty, unemployment, increased living costs, difficult climatic conditions, and dwindling natural resources. Furthermore, the IOM (2011) stated that approximately 69% of the 4.4 million people from Benin migrated to Nigeria. This finding also supports the observations of the United Nations (2013) and UN DESA (2020) regarding migration flow in Togo, Mali, and Niger. Moreover, the current study findings are in accordance with those of Trivedi and Vyas (2018), who observed that most of the reasons for migration could be explained by the need to earn better income. They further identified four main reasons for migration, namely migration for a better life, migration due to bad economic conditions, migration due to family conditions, and migration due to uncontrolled conditions. The current study also agrees with the assertion of Usman, Naeem, and Khan (2008) that economic factors, especially getting better jobs and enhancing income, play a dominant role and that non-economic factors are dependent on economic factors in the process of migration from one country to another.

Table 3c. Coefficients of regression[a]

Independent variables	Unstandardised coefficients		Standardised coefficients	T	Sig.
	B	Std. error	Beta		
(Constant)	20,490.599	3,039.874		6.741	0.000
Few employment opportunities	4,537.945	1,515.834	0.161	2.994	0.003
Bad economic condition	4,881.240	1,668.909	0.173	2.925	0.004
Poor health services	2,526.617	1,820.247	0.088	1.388	0.166
Poverty	4,226.529	1,612.404	0.139	2.621	0.009
Inadequate facilities	2,020.061	1,792.204	0.068	1.127	0.261
Wage differentials	-5,831.798	1,582.798	-0.210	-3.684	0.000
Poor education	1,555.357	1,579.384	0.055	0.985	0.325
Lack of public transport	1,182.844	1,730.872	0.037	0.683	0.495
Unfavourable climatic conditions	1,443.195	1,705.226	0.050	0.846	0.398
Soil infertility	3,559.843	1,540.345	0.128	2.311	0.021
Insecurity/conflict	550.184	1,504.722	0.019	0.366	0.715
Natural disaster	-5,351.861	1,638.804	-0.187	-3.266	0.001
Poor access to land	1,778.771	1,676.632	0.064	1.061	0.290
Drought	-3,491.162	1,490.614	-0.126	-2.342	0.020

[a] Dependent variable: Monthly income of the respondents

Pull factors responsible for the choice of destination in Nigeria

Following the analysis of the push factors influencing cross-border migration from the country of origin to Nigeria, this subsection examines the pull factors responsible for the choice of destination in Nigeria. Findings of the multiple linear regression based on Equation (2) are shown in Tables 4a–4c. Table 4a presents the model summary of the dependent (the reasons for the choice of destination) and independent variables (job opportunities, better economic conditions, better health services, better education services, less environmental degradation, good access to land, commerce, less crime, marriage, the chance to join other family members, better income, good harvest, soil productivity, and the chance to join friends). The model showed that the independent variables were predicted by the dependent variable, suggesting that the reasons for the choice of destination in Nigeria were influenced by economic, environmental, and social factors. The model result of the factor showed that 49.6% ($R^2 = 0.496$) could be explained by the respondents' reasons for the choice of destination; furthermore, the coefficient of correlation between the variables (dependent and independent variables) was 0.704, which was significant at the 0.05 confidence level.

Table 4a. Model summary

Model	R	R2	Adjusted R2	Std. error of the estimate
1	0.704[a]	0.496	0.474	0.34150

[a] Predictors: (Constant), the chance to join friends, less environmental degradation, better health services, commerce, less crime, soil productivity, job opportunities, better education services, marriage, good access to land, the chance to join other family members, good harvest, better economic conditions, better income

Moreover, the ANOVA test in Table 4b shows the factors that were significant in the regression analysis. It can be seen that all the factors were significant at the 95% confidence level (F = 22.204; p = 0.05), indicating that all the factors in the ANOVA table were significant.

Table 4b. ANOVA test[a]

Model		Sum of squares	Df	Mean square	F	Sig.
1	Regression	36.253	14	2.590	22.204	0.000[b]
	Residual	36.853	316	0.117		
	Total	73.106	330			

[a] Dependent variable: the reasons for the choice of destination

[b] Predictors: (constant), the chance to join friends, less environmental degradation, better health services, commerce, less crime, soil productivity, job opportunities, better education services, marriage, good access to land, the chance to join other family members, good harvest, better economic conditions, better income

Table 4c. Coefficients of regression[a]

Model		Unstandardised coefficients		Standardised coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.802	0.086		9.329	0.000
	Job opportunities	0.246	0.041	0.260	6.063	0.000
	Better economic condition	0.150	0.047	0.150	3.172	0.002
	Better health services	-0.083	0.061	-0.058	-1.354	0.177
	Better education services	-0.082	0.072	-0.048	-1.136	0.257
	Less environmental degradation	-0.307	0.043	-0.303	-7.096	0.000
	Good access to land	0.150	0.047	0.145	3.172	0.002
	Commerce	-0.144	0.042	-0.151	-3.419	0.001
	Less crime	-0.010	0.064	-0.007	-0.158	0.875
	Marriage	0.458	0.041	0.487	11.044	0.000
	Chance to join other family members	0.250	0.043	0.266	5.837	0.000
	Better income	0.119	0.047	0.122	2.540	0.012
	Good harvest	0.105	0.046	0.112	2.294	0.022
	Soil productivity	-0.175	0.044	-0.185	-3.987	0.000
	Chance to join friends	-0.041	0.079	-0.021	-0.523	0.601

[a] Dependent variable: the reasons for the choice of destination (i.e. the specific village)

Table 4c shows the coefficient of regression analysis for the independent variables. It can be seen that the identified pull factors could be explained by the reasons for the choice of destination in Nigeria. Out of the 14 independent variables, the unstandardised coefficients of 10 independent variables were significant at the 0.05 confidence level: job opportunities (β = 0.246), better economic conditions (β = 0.150), less environmental degradation (β = -0.307), good access to land (β = 0.150), commerce (β = -0.144), marriage (β = 0.458), the chance to join other family members (β = 0.250), better income (β = 0.119), good harvest (β = 0.105), and soil productivity (β = -0.175). These 10 variables were significantly predicted by the reasons for the choice of destination in Nigeria. This implies that environmental (less environmental degradation, good access to land, soil productivity, and good harvest), economic (job opportunities, better economic conditions, commerce, and better income), and social factors (marriage and the chance to join other family members) were the underlying factors predicting the choice of destination in Nigeria. These results are in accordance with

those of Dreier and Sow (2014), Popoola, Oladehinde, and Fatusin (2017), and Popoola (2016), who showed that different factors – namely, environmental, economic, and social factors – influence the choice of destination in Nigeria. As most of the migrants from West African countries are farmers, (agricultural workers), the choice of destination tends to be influenced by the extent of soil productivity in Nigeria compared to the soil productivity in their countries of origin. This is because greater soil productivity facilitates successful cultivation and harvesting. In addition, most of the landowners in Nigeria are looking for low-skilled agricultural workers to cultivate their fields through a system of land tenure that involves sharecropping. This phenomenon was observed by Chaveau (2002) in the southern region of Benin, especially with regard to good access to land among agricultural workers seeking land for cultivation. Furthermore, the differences in wages or income and economic conditions favour the selection of Nigeria as a destination area. The economic condition in Nigeria is better than the economic conditions of migrants' countries of origin. Money earned in Nigeria during their stay could be used for several purposes in their countries of origin.

Conclusions and recommendations

This study has examined the characteristics of cross-border migration in Nigerian border communities. It has specifically investigated the socioeconomic characteristics of migrants, their pattern of migration, and the underlying causes (pull and push factors) of cross-border migration from their countries of origin to Nigeria. The results showed that the majority of the respondents were from Benin, while a few were from Togo, Ghana, Burkina Faso, Niger, and Mali. Most of the respondents were male, married, and farmers, with a larger percentage in the 31–60 age bracket. Furthermore, more than one-third of the respondents had spent less than 10 years in their countries of origin before migrating to Nigeria, whereas more than half had spent less than 10 years in Nigeria. In addition, most of the respondents still maintained contact with their countries of origin, and the frequency of visits to their countries of origin varied among the respondents. The study also revealed that economic (wage differentials, few employment opportunities, bad economic conditions, and poverty) and environmental (soil infertility, natural disaster, and drought) factors were the underlying push factors predicting the need to earn better income among the respondents, whereas environmental (less environmental degradation, good access to land, soil productivity, and good harvest), economic (job opportunities, better economic conditions, commerce, and better income), and social (marriage and the chance to join other family members) factors were the underlying pull factors predicting the choice of destination in Nigeria. The study concluded that economic and environmental considerations were the push factors predicting the need to earn better income and that environmental, economic, and social considerations were the pull factors predicting the reasons for the choice of destination in Nigeria.

Therefore, this study recommends that the Nigerian government should develop a comprehensive migration policy that can act as a suitable pull factor in attracting productive migrants for economic development in Nigeria. Furthermore, governments in the countries of origin should improve agriculture, the standard of living, and the economy to reduce their citizens' cross-border migration for economic reasons. In addition, environmental issues causing cross-border migration should be addressed in the countries of origin by their respective governments. Although this study has examined the characteristics of cross-border migration in border communities using a quantitative approach, there is still a need for future research that explores these factors using a qualitative approach.

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