

DETERMINANTS OF INTERNATIONAL MIGRATION: THE NIGERIAN EXPERIENCE

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Abstract

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This paper examines some determinants of international migration in Nigeria using annual time series data spanning the period 1991–2011. Using ordinary least square regression method, the results indicate that the level of unemployment, migrants' remittances and population growth are the key determinants of emigration from Nigeria to other countries, statistically significant at 0.01 level.

In a country where unemployment rate is very high, this movement is likely to help in reducing pressures on the labour market. Migrants' remittances might also help in alleviating poverty within households. Migrants' remittance to Nigeria has surpassed both Foreign Direct Investment and Net Official Development Assistance inflows, making it one amongst the major sources of foreign earnings to Nigeria. Nigerians will continue to migrate to other parts of the world so long as the reasons or causes for their movement are not fully addressed i.e. if political and socioeconomic issues in the country do not improve. The Nigerian government should as a matter of urgency, create better jobs and conducive environment in order to stop people from migrating while at the same time encouraging its skilled labour abroad to return home to help in national development.

Keywords: cross-border migration, remittances, unemployment rate, poverty, population growth

INTRODUCTION

International migration all over the world has been playing important roles in the respective economies. Cross-border migration is among the strong factors that are driving globalization in recent decades. The patterns of this movement over the years have been changing the size, structure and efficiency of labour markets, culture, political situations, and people in many countries across the globe.

There is continuing debate about the impact of international migration on the sending and receiving countries as well as on the migrants themselves. What will happen if both highly skilled and unskilled workers from poor countries move large numbers to advanced countries?

Different countries, organizations and scholars, have different perceptions about migration issues.

Many developed countries have opened their doors for highly-skilled labour from developing countries to migrate. High movement of people can negatively affect the vibrancy in countries' labour markets whilst others might see the benefits more than the costs of cross-border migration.

Despite the implications of cross-border migration to both sending and receiving countries that need global attention, research on the subject matter is still scanty, hence, the significance of this study. The aim of this paper is to analyse some of the causes of international migration in Nigeria. The paper seeks to investigate some of the determinants or push factors appeared to be influencing Nigerians to move to the other part of the world in recent years. Some policy recommendations geared towards addressing cross-border migration issues will be profiled.

Theoretical Framework and Literature Review

Sjaastad first postulated the theory of migration (1962) known as Sjaastad's human investment theory of migration, which treats the decision to migrate as an investment. The model looks at migration both at macro and micro-level factors that determine the "pressure" to migrate (Sjaastad, 1962). Todaro (1969) further developed this theory in his model of labour migration and urban unemployment in developing countries. He takes into account the (anticipated) probability of obtaining employment after migration. Todaro hypothesized that people migrate as long as the wage differential is large, even if the unemployment rate in the receiving area is high. He stressed that people weigh both costs and benefits before moving to other areas.

Migration can also be understood by using some models, though, without a rigorous statistical test, one of such popular models is the pull-push model also known as the Lee model (1966). The basic assumption of the push-pull model is hinged on the fact that there exist push factors such as poverty, unemployment, insufficient basic socioeconomic infrastructure, and lack of economic opportunities, which compel people to move out of their locality to another in search of better opportunities. While the pull factors such as better job opportunities, living conditions, political and, or religious freedom, better education, medical care, family reunion, which attract people to move to these areas.

The dual labour market theory posits that international migration stems from intrinsic labour demands of modern industrial countries. Migration is mostly caused by pull factors in more advanced economies, not from rational choice decisions not push factors (Massey *et al.*, 1993).

Based on the world systems theory, the neo-classical theories of migration argued that, international migration is nothing but a by-product of global capitalism. That the core (developed countries) has created more opportunities due to its industrialization, and this has encouraged the periphery to migrate to the core nations (Sassen,

1988). To buttress this point, the International Organization for Migration (2010) maintained *'higher demand for labour in the developed economies and availability of labour in underdeveloped economies has set global labour migration in motion. The huge global labour market has offered employers the chance to hire migrant workers as part of their cost minimization strategies. Moreover, globalization with its associated forces has increased the mobility of labour across borders. It has already reinforced the movement of skilled workers. Multinational corporations favour the movement of labour, especially highly skilled labour.'*

Reasons for International Migration and the Nigerians Abroad

Many studies on international migration have confirmed that economic factors play a very dominant role in people's decision to migrate across borders (ILO, 2010). Before the colonial era (pre-colonial times) in Nigeria, cross-border migration was mainly involuntary as many people were forced out of the country due to the slave trade. During that period, many developing countries' citizens were forced to migrate to the western world especially to the Americas or the 'New World' to work in the plantations. Nowadays, globalization has made this movement inevitable.

Lack of employment opportunities in the developing countries especially Nigeria is another strong push factor for cross-border migration. Fig. 1 and Tab. I show a drastic increase in the unemployment rate in Nigeria over the past two decades, from 3.1% in 1991 to 23.9% in 2011. What would happen to the Nigerian labour market if all Nigerians abroad returned home when the unemployment rate in the country has been steadily increasing in recent years? Such a situation might lead to more social unrest and political instability in Nigeria.

According to ILO (2004) migration has absorbed a considerable number of young people entering labour markets of the advanced countries, while also generating remittances to the sending countries. As presented in Fig. 1 and Tab. I the cross-



1: Unemployment rate (%) in Nigeria, 1990–2011

I: *Distribution of Selected Unemployed Persons by Educational Level, 2009–2011*

Educational Level	2009			2010			2011		
	Urban	Rural	Composite	Urban	Rural	Composite	Urban	Rural	Composite
Never Attended	20.6	20	20.1	19.2	17.1	19.9	19	22.8	22.4
Primary	15.1	14.7	14.8	21.8	21.8	21.8	15.5	22.7	21.5
NCE/ND/Nursing	15.1	5.7	8.3	22.3	20.4	21.5	17.2	22.5	20.2
B. A/B. Sc. /HND	19.1	5.1	8.9	24	21.5	23.1	16.8	23.8	20.2
Master's Degree	1.5	0.1	0.5	20.7	18.5	20.1	3.2	8.3	5.1
Doctorate	-	-	-	19.6	19.6	19.6	11.1	7.7	9.1
National	19.2	19.8	19.7	22.8	20.7	21.4	17.1	25.6	23.9

Source: National Bureau of Statistics, 2011

II: *Emigrant Population: Persons Born in Nigeria Living Abroad, 2000–2006*

	2000				2005/06		
	All destinations	OECD destinations			OECD destinations		
Population 15+	Total	Men	Women	Total	Men	Women	Total
Emigrants population (thousands)	438.4	142.9	118.2	261.1	205	175.4	380.5
Recent emigrants (thousands)	-	30.3	29.4	59.7	59.6	50.9	110.6
15–24 (%)	18.4	12.2	15.6	13.8	12.7	12.9	12.8
25–64 (%)	78.2	85.9	81.9	84.1	84.5	82.7	83.6
65 +	3.4	1.9	2.5	2.2	2.8	4.4	3.5
Low-educated (%)	42.8	12.4	20.3	16	9.3	15.8	12.3
Highly educated (%)	34.5	61.1	47.1	54.8	65	55.2	60.5
Emigration rates (%)	0.6	0.4	0.3	0.4	0.5	0.4	0.5
Emigration rates of highly edu (%)	2.8	2.4	3.2	2.7	3.2	4.6	3.7

Source: OECD, 2012

border migration has partially reduced the pressure on the labour market in this country. Presently, there is a significant number of unemployed young graduates in Nigeria, and the situation is not getting better, which is likely to push them to emigrate. Nigerian emigrants are not willing to return home, arguably, the prevailing conditions at home is not favourable for them to return.

Brain drain can be referred to as the large migration of individuals with technical skills from one country to the other with the purpose of finding better quality of life and jobs. Many Nigerians who studied abroad (see Tab. II) had refused to return home after completing their studies partly because the possibility of getting better job and higher living standards as experienced abroad are low.

Other reasons for international migration especially from developing countries include humanitarian crisis such as forced displacement as a result of civil wars, natural disasters and ethnic conflicts. Some of the people also emigrate due to political persecution by their home governments. General unattractiveness of farming, lack of basic amenities (roads, electricity, water, and health care facilities) which prevent industrial ventures has made international migration inevitable.

Data available from OECD shows the level of education among Nigerian emigrants in 2000,

in all OECD countries indicated that, about 34.5% of the migrants had tertiary education (OECD (2012). Similarly, about 83% of the Nigerian emigrants in the United States and 46% in Europe were highly skilled workers (Docquier & Marfouk, 2004).

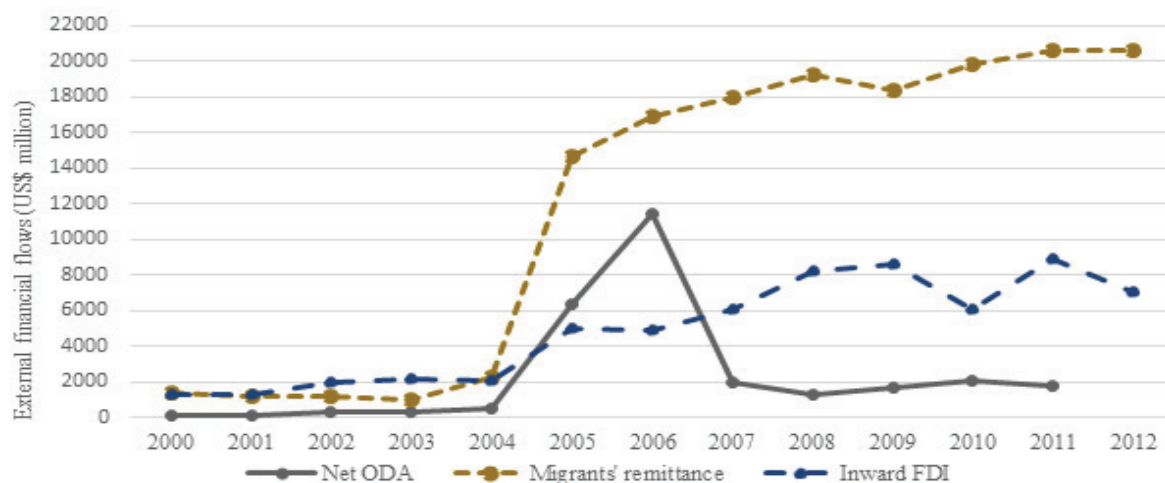
Estimated data on Nigeria health professionals abroad in 2000 (see Tab. II) showed that more than 4,856 or 13.6% Nigerian physicians were working abroad and out of this 90% of them lived and worked in the USA and the UK. Over 12,579 or 11.7% professional nurses, who were born and trained in Nigeria, lived and worked abroad (Clemens and Pettersson, 2008).

Over several decades, international migration was not given serious attention by the Nigerian government. However, in recent years, the government and Diaspora associations have started making efforts to look at the arguments for and against international migration. The aim is to promote the good effects of migration while finding ways to eliminate or reduce the negative consequences on the country's socioeconomic development. To achieve this initiative, Nigerians in Diaspora Organization (NIDO) was established in 2001 by the government of Nigeria that aimed among others to encourage Nigerians abroad to contribute and play a vital role in national development.

III: Top Recipient Countries of Remittances (US\$ billion), 2008–2012

Country	2008	2009	2010	2011	2012
India	49.98	49.47	54.04	63.01	69.35
China	47.49	47.93	52.27	61.37	60.25
Philippines	18.63	19.77	21.43	23.07	24.45
Mexico	26.04	22.08	22.08	23.59	23.22
Nigeria	19.21	18.37	19.82	20.62	20.57

Source: UNCTADSTAT, 2013



2: Inflows of remittances, net ODA and FDI to Nigeria (US\$ millions), 1982–2012

Source: Authors' analysis based on UNCTADSTAT, 2013

Impact of International Migration

Migration, economic growth and development are interwoven in various ways. Migration has contributed to poverty reduction, national security, political stability and a reduction in unemployment in many sending countries like Nigeria (GCIM, 2005). Cross-border migration generates significant economic gains for the migrants in the first place, and then for both the sending and receiving countries (World Bank, 2006).

Tab. I shows top ten recipients of international migrant remittances in the world between 2008 and 2012. In 2012, India recorded highest with \$69.35 billion, and then followed by China (\$60.25 billion), Philippines (\$24.45 billion) Mexico (\$23.22 billion) and Nigeria (\$20.57 billion). Most remittances are used at micro levels for investment in businesses and human capital, family contributions, weddings, donations to charitable organizations, tithes in churches and festive celebrations.

There is a continuing debate over emigration that has resulted in the loss of highly-skilled workers from many developing countries like Nigeria. The question is, does this movement lead to brain drain or brain gain? Statistical data available from the National Bureau of Statistics (2011) showed Nigeria relative poverty rate, which has drastically increased from 54.4% in 2004 to 69% in 2010 and 71.5 in 2011. On the other hand, migrant remittances have drastically increased in recent years from

\$1 billion in 2003 to \$20.6 billion in 2012 (see Tab. III and Fig. 2). Migrants' remittances have surpassed both inflows of FDI and net official development assistance (ODA) to Nigeria. This to some extent has partly contributed to international migration drift.

To some migrant sending countries, emigration is seen as making a net contribution to national development (ILO, 2004). Whether or not migration contributes to national development to countries like Nigeria depends on some factors such as the forms of migration taking place, whether countries are introducing policies to manage migration and how well they are doing it. Migration can contribute positively to the development where a country is already poised to develop, but it cannot, however, create such a condition (ILO, 2010).

MATERIALS AND METHODS

Sources of Data

This study uses mainly secondary data such as books, journals, articles and internet resources. For the empirical and descriptive analysis: Data for migrants' remittances, foreign direct investment (FDI), and real gross domestic products (GDP) were obtained from the United Nations Conference on Trade and Development (UNCTAD). Total international migrant stock and population were obtained from the United Nations Department for Economic and Social Affairs (UNDESA),

and the Organization for Economic Co-operation and Development (OECD). While data on unemployment and poverty rates were obtained from the Nigerian the National Bureau of Statistics (NBS). We used econometric software Gretl 1.9.14 for the multiple regression analysis.

Model Estimation

The multiple regression model is specified as follow:

$$\text{EMIGRANTS} = f(\text{UEMP}, \text{REMIT}, \text{POPGR}, \text{RGDPKG}). \quad (1)$$

Thus, the econometric model 1 is mathematically specified as follow:

$$\ln \text{EMIGRANTS}_t = \beta_0 + \beta_1 \ln \text{UEMP}_t + \beta_2 \ln \text{REMIT}_t + \beta_3 \ln \text{POPGR}_t + \beta_4 \text{RGDPKG}_t + \varepsilon_t, \quad (2)$$

where:

$\ln \text{EMIGRANTS}_t$the natural log of Nigerians abroad,
 $\ln \text{UEMP}_t$the natural log of the unemployment rate in Nigeria,
 $\ln \text{REMIT}_t$the natural log of the inflows of international migrant remittances (US\$) to Nigeria captured for economic benefit of migration,
 $\ln \text{POPGR}$the natural log of annual population growth in Nigeria, and
 RGDPKG_tthe real gross domestic product per capita growth rate.

RESULTS AND DISCUSSION

Unit Root Test

Given that time series' data is subject to spurious regression results; we have carried out a unit root test prior to estimating the econometric model. Tab. IV shows ADF test. Apart from $\ln \text{EMIGRANTS}$ variable that was stationary without differencing, all other variables have become stationary after first differencing. After unit root test, we then proceeded to run ordinary least square regression (OLS) method as presented in Tab. V.

Since all variables are stationary at levels, we have decided to use OLS estimation method. It appears that the estimated model (see Tab. V) is a good fit given that about 98% of the adjusted R-square of the variability in the dependent variable is fully captured in the model. The estimated model diagnostics seem to satisfy all the classical assumptions. All the variables are statistically significant, except for real GDPKG which shows a negative coefficient with Nigerian emigrants and also was not statistically significant.

IV: Unit Root Test

Variable	Level	ADF Test	Inference
$\ln \text{EMIGRANTS}$	Level	-4.16894***	1(0)
$\ln \text{UNEMP}$	Level	-0.449039	1(1)
	First diff	-3.86919***	1(0)
$\ln \text{REMIT}$	Level	-2.63218	1(1)
	First diff	-5.66907***	1(0)
$\ln \text{POPGR}$	Level	-2.41546	1(1)
	First diff	-3.45064**	1(0)
RGDPKG	Level	-2.98905*	1(1)
	First diff	-6.79287***	1(0)

The asterisks (*, **, ***) denote statistical significance at 0.1, 0.05, and 0.01 levels respectively

V: Estimated Regression Model – OLS, Using Observations 1991–2011 (T = 21)

Dependent Variable: $\ln \text{EMIGRANTS}$					
	Coefficient	Std. Error	t-ratio	p-value	
Constant	12.794	0.0897129	142.6104	<0.00001	***
$\ln \text{UEMP}$	0.153042	0.0164404	9.3089	<0.00001	***
$\ln \text{REMIT}$	0.0534604	0.0121348	4.4055	0.00044	***
$\ln \text{POPGR}$	11.3592	3.15892	3.5959	0.00242	***
RGDPKG	-0.000741281	0.00175518	-0.4223	0.67840	
Mean dependent var	13.55629		S.D. dependent var	0.290065	
Sum squared resid	0.026378		S.E. of regression	0.040604	
R-squared	0.984324		Adjusted R-squared	0.980405	
F(4, 16)	251.1717		P-value(F)	3.24e-14	
Log-likelihood	40.33949		Akaike criterion	-70.67898	
Schwarz criterion	-65.45637		Hannan-Quinn	-69.54554	
rho	0.109750		Durbin-Watson	1.696932	

The asterisks (*, **, ***) denote statistical significance at 0.1, 0.05, and 0.01 levels respectively

$$\ln \text{EMIGRANTS} = 12.8 + 0.153 \times \ln \text{UEMP} + 0.0535 \times \ln \text{REMIT} + 11.4 \times \ln \text{POPGR} - 0.000741 \times \text{RGDPKG}$$

(0.0897) (0.0164) (0.0121) (3.16) (0.00176) (standard errors in parentheses)

The estimated model provides ample evidence that the international migration (emigrants) is positively associated with the unemployment rate in Nigeria, statically significance at the 0.01 level. This implies that a 1% increase in the unemployment rate in Nigeria is likely to push 0.15% of the inhabitants to migrate to other countries in search of job opportunities. This result is in line with the works by Agbola and Acupan (2010) who also found a positive relationship between emigration and unemployment rate in Philippines.

In Tab. V, further evidence shows that the Nigerian emigration is positively associated with international migrants (workers) remittances to Nigeria, statistically significance at 0.01 level. This suggests that a 1% increase in migrants' remittances will influence or pull Nigerians to move to other countries by 0.053% for economic benefits. Arguably, this confirms the pull factors of migration theory that stressed that people migrate

for economic reasons. The inflow of migrants' remittances to the country is likely to impact both micro and macro levels in the country. Generally, remittances is seen as a vehicle for increase in personal consumption, savings and investment and it's also played an important role in improving individual living conditions and poverty reduction

Similarly, international migration is also positive associated with population growth rate in Nigeria, statistically significance at 0.01 level. This implies that a 1% increase in the population growth, in the country might bring a corresponding increase in the total number of Nigerians to emigrate by 11.35%. This result is in line with the works by Agbola and Acupan (2010) who found positive associations between emigration and population density in Philippines. Arguably, in Nigeria where birth rate is still high (about 2.5%), high population growth without adequate job creation is likely to push people to emigrate.

SUMMARY AND CONCLUSION

The paper deals with some of the determinants of international migration in Nigeria from 1990 to 2011 year period by using ordinary least square regression methods. The result shows strong positive relationships between the numbers of Nigerians abroad (emigrants) and the unemployment rate, migrant remittances and population increase in Nigeria, statistically significance at 0.01 level. This implies that, an increase in the level of unemployment, migrant remittances and population growth are likely to push Nigerians to move to other countries to seek for employment and economic benefits.

In countries like Nigeria, where unemployment is high (23.9%) in 2011, high rate of poverty (71.5%) in 2011 (National Bureau of Statistics, 2011) and high population growth rate (about 2.5%) (UN-DESA, 2013), some citizens would migrate to other countries if they had the opportunity.

Efforts are made by the government of Nigeria and other stakeholders like the agencies of the United Nations, United States and the European Union to help reduce cross-border migration to address the exit of both skilled labour force and to stop human trafficking in all forms. However, these efforts might not yield tangible results if the reasons for migration are not well addressed.

Underdevelopment is a symptom and a cause of migration not only in Nigeria but also in many developing countries across the globe. For Nigeria to drastically discourage her citizens from moving out of the country, it should first and foremost, solve the problems or issues that make people migrate. This could be done by proportionately translating the country's economic growth to developmental projects, such as providing infrastructural facilities, ensuring security of lives and properties, providing better jobs and equal chances to the youths, promoting gender equality and reducing high population growth rates through family planning or other birth control measures. Until these issues are addressed, Nigerians will continue to migrate in large numbers to other countries for better opportunities and living conditions.

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