The Impact of Migration on Economic Growth in Nigeria: Evaluating the Role of Macroeconomic Policies

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Abstract: This study examined the relationship between migration and economic growth in Nigeria using annual time series data spanning from 1981 to 2022. The study employed Johansen Co-integration and Vector Error Correction Mechanism. The findings showed that the variables in the study were co-integrated affirming the existence of long-run relationship among the variables. The results revealed that migration (MIG) has a positive and significant impact on economic growth in Nigeria compared with Foreign Direct Investment (FDI) which has no significant impact on economic growth. Conversely, Trade Openness (TRO) has a negative and insignificant impact on economic growth whereas Government Expenditure (GOV) also has a positive and insignificant impact on economic growth in Nigeria. The paper concludes that migration positively impacts economic growth in Nigeria. This implies that migration enhances labor market flexibility by filling labor gaps and addressing skill shortages leading to increased economic output. This result also affirms that migration could contribute to gross domestic product (GDP) growth through consumption and production in the host country. The outcome of the study also implies that migration can result in human capital transfer as skilled migrants can bring new skills, knowledge, innovation and expertise to the host country by boosting output and impacting the economy positively. In the light of this, the study recommends that migration should be facilitated through safe and legal channels as this step will enhance integration and quicker adjustment of migrants to the new labor market in the host country for improved productivity and sustainable economic growth with empirical evidence from Nigeria.

Keywords: Foreign Direct Investment, Government Expenditure, Migration, Trade Openness.

JEL Classification: E2, E6

1. Introduction

Migration is defined as the movement of people from one location to another in a country or from one country to another for the purpose of establishing a new residence (Adeagbo and Ayansola, 2014). According to (Iheanacho and Ughaerumba, 2015) migration can be traced to the existence of the first set of humans on earth. Migration has taken various patterns in the course of slave trade, colonization, urbanization, industrialization and globalization. Movement of persons (migrants) from one place to another has been a trend adopted by various individuals. Although the definition of migration varies from different perspectives, there is a consensus that it involves the movement of people across a recognized political boundary to establish permanent or semi-permanent residence. The period of residence also varies, but most experts believe that six months of residence in a new location is enough to categorize one as a migrant (World Bank, 2016).

Migration also refers to the movement of individuals across national or regional boundaries for economic, social, or political reasons (Khan, 2025). International migration in developing countries is often motivated by wage differentials and employment opportunities in destination countries (Ogbu et al., 2025). Economic growth is defined as the sustained increase in real gross domestic product or real income per capita over time (Ihezie et al., 2025). Remittances are financial transfers made by migrants to their countries of origin, typically to support household consumption and investment (Ozoh et al., 2025). The migration–growth nexus explains how remittances, labor mobility, and demographic changes interact to influence economic performance (Khan, 2025). In developing countries, remittances often exceed foreign aid and serve as a stable source of external finance (Afen-Okhai, 2023). However, migration may reduce domestic labor supply and human capital through the emigration of skilled workers (Ogbu et al., 2025).

Migration has become a critical component of economic development discourse, particularly in developing countries experiencing high labour mobility and remittance inflows (Khan, 2025). The movement of people across borders influences economic growth through remittances, labour supply dynamics, and human capital transfers (Ihezie, Okoro, and Chinatu, 2025). Developing countries such as Nigeria experience significant emigration due to unemployment, income inequality, and institutional challenges (Ogbu, Oniore, and Aigbedion, 2025). Remittances sent by migrants constitute an important source of foreign exchange and household income in many developing economies (Ozoh et al., 2025).

Migration has become a central feature of globalization, influencing labour markets, demographic structures, and economic performance across nations. Particularly

in developing countries, migration takes two major forms: (a) emigration of workers abroad and (b) inward remittance flows from those migrants. These phenomena interact with growth through both financial and human capital channels. Remittances—money sent home by migrants—are increasingly significant contributors to national incomes, often competing with foreign direct investment and official development assistance as sources of external finance. Migration policy, labor mobility, and the socioeconomic context of origin countries collectively shape how migration affects economic growth outcomes (Bobeva, 2025). Migration also involves the movement of human capital**.** While migrants gain skills and income abroad, their departure may reduce the supply of skilled workers at home. This brain drain can weaken productivity and innovation if not balanced by human capital accumulation strategies or brain gain effects through returns, knowledge transfer, or diaspora networks (Faini, 2007; Adeagbo, 2025).

Nigeria plays an important role in African migration and other parts of the world. As the most populous African country, Nigeria has become increasingly involved in international migration to Europe, Gulf countries and South Africa. The economic reasons for migration in most cases are related to wage differentials, differences in GDP per capita, large economic disparities among regions and also unemployment differentials (Adenike, 2021).Whatever the causes of migration (climate change, poverty, food insecurity, labor market failure, politics or conflicts, wage inequality, level of countries development, etc.), the contribution of migrant to the economic development of countries of origin continues to be the subject of debates within political and various scholars (Benhamou and Cassin 2021).Drinkwater, Lotti and Pearlman (2003) asserted that migration may drain away valuable talents, since educated and motivated people are in most cases likely to migrate in search of greener opportunities. They explained further that in 2000, about 10.7% of highly skilled work force (trained in Nigeria) migrated to abroad most especially to Organisation for Economic Cooperation and Development (OECD) countries. Further Fadahunsi and Rosa (2002) noted that 64% of Nigerian emigrants (on the average) have attained tertiary level of education. All these are strong evidence in support of the assertion that many trained professionals, athletes and other skill work force, who could have contributed to the development of Nigeria should they be engaged, might have abandoned the nation and used their skills and intellect to aid the development of other countries.

There is still gap in the literature that is yet to be properly identified, most especially as it affects developing countries and Nigeria in particular. The direct impact of migration on economic growth is an area not very much studied in the literature. This present study is to investigate this gap for the Nigerian economy. The study focuses on the impact of migration on economic growth in Nigeria by evaluating the role of macroeconomic policies. For the purpose of this study, the years considered span a period of forty-one years from 1981 to 2022.The main justifications for this period is to get accurate

regression result on the effect of migration on growth in Nigeria. A time series samples of thirty years is needed for accurate regression result.

2. Literature Review

Adarkwa (2015) defines migration as the movement of a person or people from one country, locality, place of residence, etc., to settle in another location. Migration is, first and foremost, a normal human activity. Human beings have always moved from one country, locality, [and] place of residence to settle in another. Migration is the movement of either people or animals from one area to another. Migration can be used for the journey from one place to another or for the act of movement.

Some of the recent literature on migration and economic development often see migration as an alternative for economic growth in developing countries. These debates have created two major opposing schools of thought which are migration optimists and migration pessimists. The first view is developmental optimism. This ideology was developed and popular in the 1950s and 1960s. Development optimists' views are dated back to the period of massive labor migration from developing countries to developed ones. This period was termed the "dawning of a new era". Governments of some developing countries encouraged emigration during this period because they believed in its contribution to the development of their countries. These theorists hold that migrants are agents of change, innovators, and investors because their acquired wealth of knowledge and skills often aid development in their countries of origin (Odozi et al. 2010).

2.1 Theoretical Review

Recent growth theories emphasize that migration affects economic growth through human capital reallocation, productivity, and capital accumulation, rather than labor quantity alone (Peri, 2016). For Nigeria, this framework is particularly relevant because migrants are disproportionately young and educated, implying potential productivity losses domestically but gains through remittances and skill transfers.

Endogenous growth models suggest that migration can support growth in developing economies like Nigeria if remittances finance investment and if return migration or diaspora networks facilitate technology transfer (Docquier et al., 2018). However, where institutional quality is weak, migration may reduce growth by depleting skilled labor (brain drain).

Neoclassical Theory of Migration

The neoclassical migration theory explains migration as a response to wage differentials between countries, suggesting that labour moves from low-wage to high-wage economies (Todaro and Smith, 2015). According to this theory, migration can improve global efficiency but may reduce labour availability in origin countries (Todaro and Smith, 2015). The new economics of labour migration theory views migration as a

household strategy to diversify income and reduce risk, particularly in developing countries with weak credit markets (Khan, 2025). This theory argues that remittances generated by migrants help households overcome liquidity constraints and invest in productive activities (Ozoh et al., 2025).

Human capital theory emphasizes that migration involves the movement of skills and education, which can lead to brain drain in origin countries (Ogbu et al., 2025). However, the brain gain hypothesis suggests that migration may encourage skill acquisition and knowledge transfer through return migration and diaspora engagement (Khan, 2025).

These theories collectively explain the mixed impact of migration on economic growth in developing countries (Ihezie et al., 2025).

The neoclassical theory of migration is among the most influential theory of migration. The theory posits that wages differentials and employment conditions between countries as well as on migration costs are factors causing migration. According to this theory intending migrants estimate the benefits and costs of migrating before making such decisions; hence migration occurs if their expected return (ER) is positive (Arango, 2000). "This theory of migration is based on familiar tenets like rational choice, utility maximization, expected net returns, factor mobility, wage differentials and the fact that migration results from the uneven geographical distribution of labor and capital." (Arango, 2000).

According to this theory, workers usually move from countries with abundance of labor and low wages to others that are labor-scarce with higher wages. Hence the principal motivation for migration is the increased welfare that individuals receive from higher labor income or wages. However, the neoclassical theory of migration is argued to suppress the role of non-economic factors which to a large extent play a deterministic role in an individual migrant‟s decision to leave his home country (Arango, 2000). The theory has failed to explain why few people move in view of existing and very large income gaps across countries. One would expect that massive movement of labour would be migrating across countries (that have scarce labor) with new information or the perception of higher returns on labor, but the reality is that existing barriers such as obtaining travel permits, visas and other documents which intending migrants must have, limit the degree of such exchange of labor across countries (labor immobility).

Dual Labor Market Migration Theory

The Dual labor market theory is another important theory applicable to migration. The theory links immigration to the structural requirements of modern industrial societies. The theory states that international migration is largely demand based and is initiated by recruitment on the part of employers in developed societies or by government acting on their behalf; migration is driven by an increasing demand for "cheap" labor. The

dual labor market theory pays more attention to the receiving end of migration in the destination countries or regions (Arango, 2000). Motivated to „make it" in a foreign land, an immigrant accepts relatively low pay and is willing to endure just a little more hardship than natives, to the advantage of profit-motivated employers who gain from cheaper labor. The theory presumes that more developed economies require foreign workers to take up jobs, which local workers have refused (Arango, 2004).

2.2 Empirical Review

Sanderson and Kentor (2009) examine the relationship between globalization, development and international migration from 1970 to 2000 in less developed countries, using cross national empirical analysis was used. The finding shows a significant non-linear relationship between net emigration and economic development. Furthermore, Ramfrez and Gonzalez (2018) investigate the contribution of migration to economic growth in Spain from 2009 to 2015 using input output analysis. The result indicated a positive relationship between migration and economic growth during the reviewed period. Taking this into consideration, Kotani and Kotani(2012) further undertakes an empirical research to understand the effect of net-migration on economic growth relations in Indonesia. The study employed Ordinary Least Square (OLS) regression techniques, using annual time series data ranged from 1993 and 2005 for GDP, population growth, fertility rate and net migration. The study revealed that lagged fertility rate does not affect the economic growth in the two-variable regression; however, there exists a significant negative relationship between population growth and economic growth upon the inclusion of net-migration as a variable in the model. The study therefore concluded that net-migration is a key determinant of economic growth.

Several empirical studies have examined the impact of migration on economic growth in developing countries using panel and cross-country data (Khan, 2025). Khan (2025) finds that remittances have a positive and statistically significant effect on economic growth and human capital development across 61 developing countries. The study concludes that remittances enhance long-term growth when invested in education and health (Khan, 2025). Other studies in Sub-Saharan Africa report that remittance inflows ease foreign exchange constraints and stimulate aggregate demand (Afen-Okhai, 2023). However, some empirical findings show insignificant or negative effects of remittances on growth where financial institutions are weak (Ozoh et al., 2025). These mixed outcomes suggest that institutional quality and macroeconomic stability condition the growth effects of migration (Khan, 2025).

Nigeria has received considerable scholarly attention due to its large migrant population and remittance inflows (Ihezie et al., 2025). Ihezie et al. (2025) use Dynamic Ordinary Least Squares techniques and find that remittances positively and significantly influence Nigeria's economic growth. The same study finds that net migration has a

negative but insignificant impact on economic growth, indicating possible brain drain effects (Ihezie et al., 2025). Ozoh et al. (2025) apply the ARDL approach and report a negative short-run but positive long-run relationship between remittances and economic growth in Nigeria. Ogbu et al. (2025) find that international migration exerts mixed effects on Nigeria's economic growth depending on the period under consideration. The authors argue that the emigration of skilled labor weakens productivity while remittance inflows partially offset this loss (Ogbu et al., 2025). Other studies emphasize that remittances enhance household welfare and financial inclusion, thereby indirectly supporting economic growth in Nigeria (Afen-Okhai, 2023).

Akanbi (2017) examines the impact of migration on economic growth and human development in sub-Saharan African countries from 1999 to 2013. The study used two stage least square estimation technique for the analysis. The result shows significant negative relationship between migration and economic growth. Furthermore, Obomeghie, Abubakar and Abdurrahman (2018) investigate the impact of net migration on total fertility rate in sub- Saharan African countries, with empirical evidence from Nigeria for the period of 2000 to 2016, using descriptive statistics method. It was found that net migration impact positively in Nigeria.

Afaha (2013) investigates the relationship between migration, remittances and development in Nigeria from 1977 to 2008. Household survey- based method was used to in the study. The result shows that, migrants‟ remittances in Nigeria have significant positive relationship with economic growth. Darkwah (2014) examine the determinants of international migration in Nigeria spanning the period from 1991 to 2011. Ordinary least square estimation method was used. The result indicated that the level of unemployment, migrants‟ remittances and population growth are the key determinants of emigration from Nigeria to other countries. The finding also shows a strong positive relationship between the numbers of Nigeria‟s abroad and unemployment rate, migrants‟ remittances and population growth in Nigeria.

Abiola (2019) conducts a research on the effect of migration on Nigeria‟s human capital and economic growth from 1980 to 2011. Ordinary least square technique (OLS) was employed. The outcome of the study revealed a significant positive long run relationship between migration, human capital development and economic growth during the study period. Moreover, Abiola (2019) investigates the impact of labour migration, remittances and economic growth in Nigeria from 1980 to 2016. The study used indirect least square approach for the analysis. The finding indicated a positive relationship between emigration and economic growth in Nigeria.

In another study Umar and Abdullahi (2019) empirically examine the impact of net population growth and economic growth in Nigeria using a time series data from 1970 to 2017, through the application of ARDL model approach. The study realized a negative and

significant long run co integrating relationship between economic growth and net population growth within the sample period. Also, a unidirectional causality exists running from net population growth to economic growth. The study however failed to address the issue of net migration (difference between emigrant and immigrants) and its relationship to economic growth.

From the reviewed studies, there are some certain observed weaknesses in the use of methodology and application of control variables to examine the effect and the relationship between net-migration and economic growth. Studies conducted by Kotani (2012), Darkwah and Verter (2014) and Abiola (2019) applied Ordinary Least Square Method, which may not be suitable for series that are not integrated in the same order, that is a combination of I(1) and I (0), hence the obtained results may not be reliable in such cases. Despite extensive empirical literature on migration and economic growth, gaps remain in understanding the interaction between migration, remittance utilization, and institutional quality in developing countries (Khan, 2025). Most Nigerian studies focus primarily on remittances while paying limited attention to the composition of migration flows and skill levels of migrants (Ihezie et al., 2025). There is limited empirical evidence on how migration policies and diaspora investment mechanisms influence economic growth in Nigeria (Ogbu et al., 2025).

Some empirical studies on Nigeria identify a long-run relationship between migration and economic growth, though the direction and magnitude vary. Several time-series and panel studies find that net migration has either an insignificant or negative direct effect on GDP growth, largely due to the loss of skilled labor and limited absorptive capacity of the domestic economy (Ajaero and Onokala, 2019; Adeniyi et al., 2020).Conversely, studies incorporating remittances as a transmission channel report **a** positive indirect effect of migration on economic growth**,** suggesting that migration contributes to growth primarily through income transfers rather than domestic labor supply (Ogunniyi et al., 2021).

To fill this gap, the present study employed Autoregressive Distributive Lag to examine the relationship between net migration and economic growth in Nigeria. In addition, none of the studies identified have considered the relationship between net migration and economic growth in-depth with particular reference to Nigeria. The study further incorporates other control variables such as human capital (proxy by educational expenditure), investment (proxy by gross fixed capital) and Foreign Direct Investment, as included in the previous studies. Furthermore, this study integrates both short-run and long-run dynamics of migration and growth..

3. Materials and methods

3.1 Model Specification

The main aim of this study is to examine the impact of migration on Economic growth in Nigeria. The model to be adopted in this study was adapted from (Romano and Traverso, 2020) with some modifications and is specified of the functional form:

GDP = f (FDI, MIG, TRO and GOV)..... (1)

The econometrics form of the model displayed in equation 1 is written in equation 2

$GDP = \beta_0 + \beta_1 FDI + \beta_2 MIG + \beta_3 TRO + \beta_4 GOV + \mu_t$ ..... (2)

$\beta_1 - \beta_4$ = Elasticity of the independent variables

Where:

GDP= Gross Domestic Product (Proxy for economic growth)

FDI= Foreign Direct Investment

MIG = Migration

TRO = Trade Openness

GOV= Government Expenditure

Where, FDI, TRO and GOV capture macroeconomic policies in the model.

3.2 Source of Data

In order to fulfill the objectives of this study, this study utilized annual time series data for the period 1985-2021 obtained from Central Bank of Nigeria (CBN) statistical bulletin.

4. Results and Discussion

Table 1: Lag order selection on criteria

Lag	Log L	LR	FPE	AIC	SC	HQ
0	-2354.383	245.2689	8.57e+57	247.5839	148.4693	258.6458
1	-2167.767	484.6726	2.854e+64	346.4793	259.5474*	266.4268*
2	-2274.457	35.15805	3.507e+64	347.4695	254.7357	257.6124
3	-2453.725	64.61591*	4.52e+73*	458.3684*	268.4219	256.5218

Source: Authors' computation

In Table 1 the lag order selection criteria is shown. Base on the information realized, lag 3 is appropriate for selection because most of the criteria are accepted (LR, FPE and AIC).

Table 2: Unit root test result

	Augmented Dickey Fuller (ADF)			Philip-Peron (PP)		
Variables	**Test Statistics**	**5% Critical Value**	**Order of Integration**	**Test Statistics**	**5% Critical Value**	**Order of Integration**
GDP	-3.374829	-5.647475	I (1)	-5.374849	-3.478460	I (1)
FDI	-5.574374	-4.648175	I (1)	-6.376436	-3.462753	I (1)
MIG	-4.658469	-3.464649	I (1)	-3.653754	-3.574784	I (1)
TRO	-5.654854	-4.574582	I (1)	-4.356835	-3.752589	I (1)
GOV	-5.685695	-5.547557	I(1)	-7.436739	-3.364823	I(1)

Source: Authors' Computation

Table 2 was conducted to check the unit root tests, using the Augmented Dickey-Fuller and Phillip-Peron methods. It is observed that both tests produced the same results for all variables. This shows that autoregressive distributed lag bounds and Johansen co-integration techniques can be utilized for the analysis, but the Johansen co-integration technique was employed to ascertain the presence of co-integration among the variables in this study.

Table 3: Johansen co-integration test

	Trace				Maxi			
Hypothesized No of CE(s)	**Eigen Value**	**Trace Stat**	**0.05 C.V.**	**P-Value**	**Eigen Value**	**Max-Eigen Value**	**0.05 C.V.**	**P-Value**
None*	0.417365	87.35759	74.79546	0.0007	0.764547	46.57420	45.65954	0.1234
At Most 1*	0.763853	65.87632	56.67845	0.0065	0.789542	28.48636	43.67458	0.3640
At Most 2*	0.264358	35.65853	34.48646	0.5487	0.657320	34.64386	32.35726	0.5676
At Most 3*	0.256743	6.753496	21.65863	0.4376	0.658762	9.648345	23.87651	0.4685
At Most 4*	0.325764	3.685742	6.657582	0.4352	0.135710	3.543752	6.657582	0.4352

Source: Authors' Computation

Trace and Maxi tests indicated 2 co-integrating equation(s) at the 0.05 level the

Table 3 showed Johansen co-integrating test which indicated that both Trace and Maxi tests have 2 co-integration equations at 0.05 level of significance at none and at most 1 equation. Based on the information obtained, the co-integrating results showed that the

employed research variables are co-integrated. This implies that a long run positive relationship exists among the variables used in the study. The study therefore tests for short run relationships of the research variables using Wald test chi-square analysis as presented below:

Table 4: Wald test

Test Stat	Value	Df	P-value
F-Stat	6.468465	(14, 58)	0.0000
Chi-square	64.68465	14	0.0000

Source: Authors' Computation

Table 4 is the Wald test for determining the short-run relationship between the dependent variable and independent variables. Based on the information on the table, it is shown that independent variables (MIG, FDI, TRO and GOV) have short-run relationship with the dependent variable (GDP) as the p-value of the Chi-square of 0.0000 is significant, at 1% level of significance.

Vector Error Correction Mechanism

Table 5: Vector Error Correction Mechanism Result

Variables	Coefficient	Standard Error	t-statistic	Probability
LNFDI	0.034627	0.431477	0.434734	0.4634
LNMIG	0.624674	0.317876	0.313768	0.7646
LNTRO	-0.327643	0.434237	0.676847	0.4848
LNGOV	0.247316	0.462675	0.567346	0.6674

R^2 = 78%

Source: Authors' Computation

Table 5 shows a positive coefficient of 0.034627 and a significant probability of 0.4634. The implication is that Foreign Direct Investment (FDI) has non-significant affirmative effect on economic growth in Nigeria during the period of study. Migration (MIG)has a significant effect on the economic growth in Nigeria compared with Foreign Direct Investment (FDI). Trade Openness (TRO) has a negatively insignificant impact on economic growth whereas Government Expenditure (GOV) is positive, though insignificant too. The R^2 test from the Vector Error Correction Mechanism (VECM) shows that the three explanatory variables in the equation explain 78% of the regular variations in the determined variable.

5. Conclusion and Policy Implications

The paper concludes that migration positively impact economic growth particularly in the short run where the impact is significant statistically. In the long run, however, migrationis positively related to growth, but the relationship is not significant because it

may lead to decline in hard work in income generating activities. Thus, migration can be a valuable complement to broad-based development efforts. The policy implications of the findings of the study is thatimproving data collection on migration can facilitate better policies to enhance migration for development. In the same vein, facilitation of migration through safe and legal channels through better monitoring of recruitment processes and bilateral coordination which will help to protect the rights of the migrants and fight exploitation and trafficking.

Nevertheless, providing knowledge about the migration process and language of the destination country will also enhance integration and quicker adjustment of migrants to the new labour market.

Strengthening domestic labour markets to reduce push factors that drive emigration, such as unemployment and poor working conditions.

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