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# Drivers and outcomes of international migration on infrastructural development of Edo State, Nigeria

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**Abstract:** The Bini people of Edo State, located in the Edo South senatorial district, have been the focus of a study investigating the impact of international migration on Nigerian infrastructure. The study employed a descriptive-qualitative approach, using a survey research methodology and structured questionnaires to gather data from 401 respondents. The study used regression and thematic analysis to examine the collected data, focusing on the connection between migration and the advancement of infrastructure. The findings suggest that low incomes, job insecurity, and the development of domestic infrastructure contribute to the momentum behind international migration movements. The study suggests that remittances from migrants and investments are needed to alleviate the situation, highlighting the need for a more inclusive and sustainable approach to addressing the challenges faced by the Bini people in Edo State.

**Keywords:** international migration; drivers; outcomes; infrastructure; development

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## 1. Introduction

Since the Palaeolithic age, when hunting and collecting food were common activities, human culture has been characterised by the urge to travel. Humans have been travelling for thousands of years in search of better living conditions by hunting, gathering food, and finding suitable shelter. But between the fifteenth and seventeenth centuries, during the Age of Discovery, also known as the Age of Exploration, migration changed from being a means of obtaining a fair living to being a journey of exploration (Akanle et al., 2019). With the introduction of technologies like motorcars, ships, aeroplanes, and trains, human mobility became more diverse, farther and wider in its destination, and the method of information gathering and sharing became more robust and faster thanks to telephones, the internet, social media, and television. As society advances, so do the patterns and characteristics of human mobility (Akanle et al., 2019; Idemudia and Boehnke, 2020).

Furthermore, migration keeps changing in reaction to happenings and events around the world. Global migration is being fueled by unequal social, political, and economic opportunities in many nations. Due to unequal opportunities, people are forced to seek out other places with better prospects (Idemudia and Boehnke, 2020). Human mobility, which includes people moving from one location to another for various reasons, is a necessary component of life (Akanle et al., 2019). According to Batista and McKenzie (2023) and Duru (2021), it is based on an evaluation of the anticipated results of such movements, which are driven by migrants' perception of a lack of opportunities in their native country, the growing socioeconomic gaps between nations, the enduring impacts of cross-cultural interaction, and the fully realised

context of globalisation. Global political and socioeconomic crises have increased since the 19th century, ranging from natural disasters and economic depressions to civil wars and political conflicts (Preko, 2022; Steiner, 2023).

And as a result of these crises, migration has become essential to human survival in order to avoid the terrible conditions in their home countries, particularly in order to improve and safeguard migrants' standard of living and overall well-being. People are migrating across international borders in greater numbers, taking extremely lengthy journeys, driven by their innate need for a higher standard of living. As all countries became the origin and destination for international migrants in the 20th century, particularly the Middle East and Western Hemisphere (western Europe and America), international migration had become a crucial topic in international affairs (Preko, 2022; Steiner, 2023).

Humans' natural desire for a higher standard of living has led to an increase in migrants crossing international borders on incredibly long journeys. Due to the fact that both the countries of origin and the countries to which they migrate are becoming increasingly multicultural, more countries are experiencing migratory flows at the same time. In developing nations, this condition affects the family, the neighbourhood, and even the national level (McAuliffe and Khadria, 2020; Sitompul, 2023). International migration has disrupted norms in migrants' countries of origin. These are cultural, social, and economic disruptions in areas such as food production and sustenance, water, shelter, clothing, medicine, security, social norms and values (migrants return with ideas and practices that challenge traditional beliefs, like adopting attitudes towards gender roles or religion), the spread of health hazards and diseases, and the loss of cultural heritage. In addition to income generation and the creation of a remittance economy, human capital formation and brain drain, community development, and the labour supply are also disrupted (Akanle et al., 2019).

Often, international migration results in the separation of families (for instance, when parents leave their children with other family members or when couples part ways in search of better opportunities). Increasingly, families use technology to stay in touch, such as phones, emails, and social networking sites like Facebook, WhatsApp, Telegram, and FaceTime. They can communicate in real time because of this technology. To mitigate any negative consequences of migration on kinfolk, they also stay in touch through remittances transferred across time and distance (Akanle et al., 2019). Since international migration is a worldwide phenomenon, Nigeria's participation as a destination and origin makes sense, given its size and location (Sasu, 2022). As a result, forced migration may be a means of survival and a lifeline both for migrant countries and for migrants and their families (Ambrosini and Hajer, 2023; Ikuteyijo, 2020). Migration from Nigeria is largely driven by the desire to seek out better opportunities elsewhere due to limited employment prospects, financial outlook, gainful employment, safety and security, and other factors.

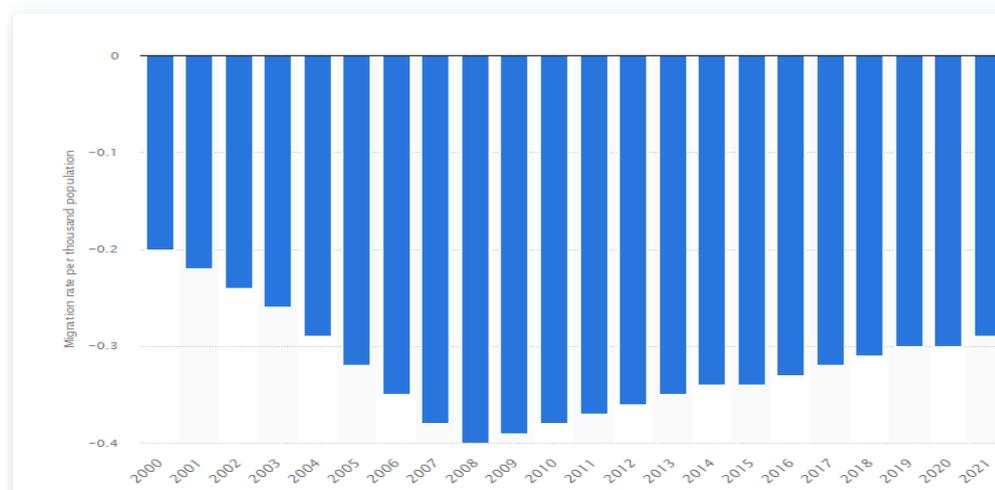
In summary, Nigerians view international migration primarily through economic lenses, emphasising variables like bettering family welfare, improving living conditions, and other aspects that might guarantee the significance and relevance of the individual and their household (Ikuteyijo, 2021; Oludotun, 2023). Since 2019, the country's migration pattern has become increasingly apparent, successfully driving

out a large number of youthful, lively, active, and productive individuals to the point where it has become known as the “Japa syndrome” or “Japa wave” (Duru, 2021). One of the main languages spoken in Nigeria is called Yoruba, and one of its words is “Japa.” It became a colloquial word in Nigerian used to indicate quick and evasive behaviour, and it roughly means to “escape” or “run away.” When more Nigerians left the country in quest of better chances abroad (Akinwotu, 2023; Adetayo, 2023; Odinkalu, 2023), it became widely accepted and popular in Nigerian culture (Abasilim et al., 2019).

The Japa (Japa is a Yoruba-Nigerian word that means to “run,” “flee,” or “escape”) wave is a phenomenon in which Nigerians, regardless of age or gender, risk everything to cross international borders in pursuit of better opportunities, even if doing so puts them in danger. As a result, seven out of ten Nigerians are willing to relocate abroad, and many of them are successful. Particularly encouraging the citizens to embark on migrations have been the industrialization of Europe and the United States of America, as well as Nigeria’s underdevelopment of its human and material resources and life insecurity (Duru, 2021; Egbuta, 2018; Ikuteyijo, 2021; National Bureau of Statistics (NBS), 2020; Oludotun, 2023). Accurate data on the overall number of migrants from Nigeria has become increasingly challenging due to the spike in the number of migrants leaving the country and the irregular migratory patterns of certain migrants (travelling without a visa or using fraudulent documents). It is predicted that a sizable portion of migrants will remain undocumented after leaving their countries of origin and destination without formal paperwork (Duru, 2021).

However, Sasu (2022) reported that there were 1.3 million Nigerian emigrants as of 2020 and estimated that the net migration rate in 2021 was  $-0.29$  per 1000 population, while the United Nations Department of Economic and Social Affairs (UNDESA, 2020) put the number at 1,670,000. Nigeria’s migration rate from 2000 to 2021 is displayed in **Figure 1**.

**Net migration rate in Nigeria from 2000 to 2021**  
(per 1,000 population)



**Figure 1.** Net migration rate in Nigeria, 2000–2021.

(Source: Sasu, 2023).

According to Idoko (2023), the Nigeria Immigration Service issued 1.9 million new travel passports in 2022—an increase of 80% over 2021—indicating a persistent increase in the number of individuals leaving Nigeria. This indicates the continuous intent to migrate as well as actual migration out of Nigeria. Nearly thirty-three percent of Nigerian migrants travel to nations in the European Union, with many of them pursuing asylum and refugee status (Obi, 2019; Oyebamiji and Adekoye, 2019; UN DESA, 2020). All of these migrants are from Nigeria. Benin City serves as the epicentre of one of Nigeria’s greatest rates of international migration, which is found in Edo State, according to the National Bureau of Statistics (NBS, 2020). According to the International Organisation for Migration, a global organisation that oversees international migration, Edo State is well-known as a place of origin for individuals leaving Nigeria, particularly young people, and Benin City, Edo State, accounts for 37% of all returned migrants under joint EU-IOM initiatives (International Organisation for Migration (IOM), 2021).

Furthermore, Edo State is cited as the site of origin by the majority of irregular migrants from Nigeria (about 70%), according to Amah Assiama-Hillgartner, the UNHCR’s high commissioner in Nigeria (Emenyonu, 2019). According to Vermeulen’s (2019) research, over 50% of Nigerian migrants residing in the European Union indicated Benin City as their place of origin. The IOM, several international organisations, governments, and the concentration of migrant programmes and resource hubs in Benin City have all validated this position (Houttuin and Haaij, 2018; IOM, 2018; Beber, 2020; Shaidrova, 2023). Migration has been a persistent issue in Edo State for many years, according to a SEEFAR (2021) study, which also indicated that 62% of Nigerians surveyed on their journey to Europe were from Edo State (seefar.org). This study investigated the consequences of international migration on the infrastructural development of Edo State, Nigeria.

Despite a relatively large body of work on international migration and Edo State, gaps remain. Uddin et al. (2023) examined the pattern of international migration among rural households in Edo State. Akhigbe and Effevottu (2023) examined the economic and social impacts of irregular migration on Benin City families. In another study, Alenkhe and Longe (2019), illegal migrants of Benin descent were assessed. Other areas were studied, but infrastructure was not included in these studies.

A further study of the effects of international migration on Edo State’s infrastructure is therefore needed. The purpose of this study is to assess the effects of international migration on infrastructure development in Edo State, Nigeria. The study aimed to determine whether Edo State’s infrastructure had improved. The study is divided as follows: the introduction, literature review, the effects of international migration on infrastructure, international migration and the infrastructural development of Edo State, research methods, hypothesis, result, findings and conclusion.

## **2. Literature review**

Migration is not explicable by a single cause or rationale. Some factors, however, have a greater impact on the size, direction, and flow patterns of international migration than others, such as war, civil war, and conflict; values and aspirations;

economic globalisation; shifting demographics; changing technologies and means of communication; increased longevity; increased education levels; urbanisation; and climate change.

**War, Civil War, and Conflict:** Violent events like war, civil war, or other internal conflicts cause rapid and large-scale migration of migrants, including refugees and asylum seekers, as well as irregular migration. Although international armed conflicts have steadily decreased since the late 1980s, domestic disputes continue. In 2017, 48 of the world's 49 armed conflicts were internal. The worst confrontations that year happened in Syria, the Central African Republic, Afghanistan, Iraq, Yemen, South Sudan, and Somalia. The rows caused the most substantial displacements, inevitably forcing individuals to leave the border for protection Peace Research Institute Oslo (PRIO, 2018). In 2018, around 57% of global refugees came from Syria, Afghanistan, or South Sudan, contributing significantly to the international migratory community. According to the Global Peace Index (GPI, 2019), which uses ongoing domestic and international conflict, societal safety and security, and militarisation to measure peacefulness, "the state of peace" is either "low" or "very low" in approximately 42 countries, excluding refugees from the new Russia-Ukraine war. This absence of peace continues to account for a significant, if not increasing, proportion of worldwide migrant movements.

**Demography and Migration:** The global population has been steadily increasing, reaching 7.4 billion in 2015 and expected to reach 1.9 billion by 2050 (UNDESA, 2018). As a result, all countries around the world will experience huge population changes that differ greatly by area. The Global South already accounts for 95 percent of global population growth, and this tendency will continue in the foreseeable future. In contrast, over 45 countries, many of which are in Europe, are expected to experience population declines between 2009 and 2050. This tendency has already begun to cause demographic ageing and decline in many Global North countries (Hofmann et al., 2020). According to UNDESA (2017), the Global South's population will age, with the proportion of individuals aged 60 and up rising from 8% to 20% by 2050.

These estimates are significant in migration because they emphasise the need for financially supporting parents and other family members back home as a main motive for migrants. High-income countries' much higher revenues are usually the only way to ensure the welfare of senior family members. As a result, population ageing drives up migration demand in both low- and high-income countries. As a result, population ageing increases the need for migration in both low- and high-income countries. Thus, population ageing in both low- and high-income nations increases migration demand (Wilmoth et al., 2023).

**Urbanisation:** Populations change in size and location within a given country. International migration is an urban phenomenon that connects cities beyond national boundaries. Internal movement from rural to urban areas and the creation of a new life, along with transferable global abilities for living in a city environment, make it much easier to adapt individuals to a new urban centre in another country (Hofmann et al., 2020; Osimen et al, 2024). As a result, expanding urbanisation will increase the number of international migrants in the future. Simply put, the proportion of the world's population living in cities will have an impact on the scale of future

international migration. In essence, urbanisation increases the risk of becoming an international migrant (Massey, 2023).

**Socioeconomic Development:** Economic and social development drives international migration more than poverty, resulting in fundamental societal progress. Machines that replaced manual labour reduced child mortality rates. They boosted population, education, and personal goals (De Haas, 2021). At some point in history, society and economies struggled to provide positive opportunities for the growing army of young people. Many of these young individuals relocate abroad to better their lives. Instead of relying solely on economic indices, the perception of better future economic chances pushes people to leave or stay. Africa is the world's second-fastest-growing economy, and African countries account for seven of the top 10 fastest-growing economies. A migration perspective naturally anticipates more migration from Africa, where most migrations occur. However, emigration to other parts of the world is also anticipated to grow (Hofmann et al., 2020; Braimah, Gberevbie & Chidozie, 2024). Recent research challenges the notion that migration and development are intrinsically linked. It asserts that economic progress over five to 10 years appears to reduce emigration from a country (Clemens, 2020).

**Income Disparities:** Many African and Asian countries have had exceptional economic growth over the last few decades, resulting in a large increase in average per capita income. Between 1990 and 2018, Africans' per capita income increased by 26% and Asians' by 108%, respectively. Despite this, Africa's average GNP per capita remains around 41% of the global average and 83% of the Asian average, whereas Europe's is over double the global average, more than twice the Asian average, and nearly five times that of Africa (WID, 2019). According to these tendencies, travelling from Africa and Asia to Europe is always a desirable option in terms of relative earning potential. Wage disparities are primarily responsible for labour migration. The necessity to support relatives who are no longer working or can financially sustain themselves exacerbates the urge to earn more. It raises the possibility of shifting to locations with higher earning potential (Arif, 2020).

**Revolutions in Technology, Communications, and Transportation:** Over the last twenty years, the world has seen constant technological advancements and societal ramifications. Smartphones provide practically infinite access to information, allowing for long-distance contact as well as the exchange and analysis of data by a large number of people at any given time. In 2003, only approximately 10% of the world's population accessed the internet; today, 57% do. In 2003, 22% of the global population owned a mobile phone, with only 5% in Africa and 13% in North Africa and the Middle East. Today, 67 percent of the world's population owns a mobile phone, with 100 percent or more in numerous African, European, and Middle Eastern countries (Datareportal, 2019).

According to McAuliffe (2021), migration has created a worldwide population that is ready and prepared to go and live wherever opportunities arise. The use of applications to communicate information in real time, especially at border crossings, and the consolidation of social media platforms to unite geographically dispersed groups with the same interests have also had a big impact on international migration (Osimen et al., 2023). Those who master new technology and seize possibilities establish a new and distinct group within humanity (McAuliffe, 2021). This group is

known as digital natives, a new global elite who share more in common with their peers in other countries than with their compatriots who do not use technology. As a result, they participate in a virtual but globally accessible environment, regardless of their location.

Digitalization has far-reaching implications for migration. Learning, employment, engagement, and communication are becoming increasingly complex due to their geographical foundations. The current revolution increases transit flexibility (McAuliffe, 2021). According to the International Air Traffic Association (IATA, 2018), 9.2 million international flights took place in 1975. However, by 2017, it had climbed to over 35.8 million, with international flights transporting approximately 4.1 billion passengers, a figure anticipated to rise to 8.2 billion by 2037. This information suggests that the new generation of elites is considerably more mobile than prior generations. It is also obvious that modern technological advancements promote international mobility and migration (Daudu et al., 2023).

**Climate Change and Environmental Migration:** Environmental degradation, climate change, and natural disasters have recently emerged as major sources of migratory flows. Environmental migration has grown in size and urgency over the last thirty years, and it will continue to have an impact. However, environmental reasons and climate change are not the sole causes of migration. Poverty, marginalisation, demographic developments, land difficulties, inequalities, inter-group conflicts, and conflict all contribute to their influence (Safra de Campos et al., 2020). Although environmental degradation and disasters cause more internal displacement and movement than external migration, increased internal migration may raise the possibility of cross-border mobility (Olu-Owolabi et al., 2021).

**Migrant Decisions and Global Opportunity Frameworks:** Migration is a human phenomenon caused by individual or group decision-making within a social context that can be influenced by political intervention. The decision to migrate stems from an array of factors. Individual migratory drivers are cumulative, complicated, interrelated, and embedded in global opportunity architectures that interact with other drivers such as economic, political, security, cultural, social, and network variables, or a mix of two or more (Hossain and Sunmoni, 2022). Decisions are sometimes based on sound reasoning and the best available estimates of cost, benefits, personal needs, stress, and urgency (Czaika et al., 2021). Emotional conviction, intimate partners and extended family members, possibilities for a brighter future, cultural and linguistic closeness, and a migrant-friendly climate in the destination country all have an impact on migration decisions (Malmberg, 2021).

### **The effects of international migration on infrastructure**

**Infrastructure Financing:** Remittances from international migrants to their home countries have been identified as a significant source of money for infrastructure development. The World Bank predicts a record high of \$540 billion in remittances to low- and middle-income countries in 2020, emphasising the critical role these funds may play in supporting infrastructure programmes. According to the World Bank (2021), governments can use remittances to invest in infrastructure such as transportation networks, electrical systems, and water supply facilities. **Transportation Networks:** Remittances can be used to build infrastructure, including roads, highways,

bridges, and public transportation systems. Transport network renovations can improve connections inside and between communities, boost trade, and support economic development (World Bank, 2021). These measures may improve access to markets, healthcare facilities, schools, and other key services (World Bank, 2021).

**Energy systems:** Remittances can help fund infrastructure projects such as electricity generation, transmission and distribution networks, and renewable energy initiatives. Energy system improvements can give access to reliable and economical electricity, boost economic activity, support industrial growth, and improve communities' general quality of life (World Bank, 2021).

**Water Supply Facilities:** Remittances can be used to construct and maintain water supply infrastructure, such as treatment plants, reservoirs, distribution networks, and sanitation systems. Improving water distribution infrastructure can increase access to safe drinking water, encourage agricultural activities, and enhance sanitation and hygiene practices, all of which lead to better community health outcomes (World Bank, 2021). It is critical to note that various factors, including receiving countries' aims, government regulations, and banking rules, influence the utilisation of remittances for infrastructure development. Governments can aid in the successful use of remittance payments by creating an enabling climate, implementing proper governance structures, and encouraging transparent and responsible behaviour.

While remittances can be an essential source of infrastructure finance, keep in mind that they are primarily private funds intended for home consumption, education, healthcare, and other personal or family requirements. As a result, governments must strike a balance between leveraging the potential benefits of remittances for infrastructure development and preserving migrant households' autonomy and choices in how to spend their money. Overall, remittances have the potential to significantly contribute to infrastructure development, economic growth, improved living conditions, and the general well-being of individuals in low- and middle-income countries.

**Labour Force Contribution:** International migrants' contributions to the work force in host countries can help to construct infrastructure. When migrants fill skill shortages, governments may allocate funds to build and expand infrastructure to support the growing workforce. This allegation is especially true in the construction industry, where migrants typically replace skilled worker shortages, resulting in greater building activity and infrastructure projects. This is an extension of how foreign migrants' labour force contributions might influence infrastructure development.

**Skilled labour supply:** International migrants frequently provide their host countries with a diverse set of talents and knowledge. They may have specific knowledge in engineering, construction, architecture, or another technical field. Migrants help to cover skill shortages in infrastructure development projects. This includes planning, designing, constructing, and maintaining multiple infrastructure systems (GMI, 2021).

**Increased Construction Activity:** The presence of foreign migrants with construction skills may lead to an increase in building activity. They can actively participate in infrastructure projects like road, bridge, and building construction, as well as the development of energy and water supply systems (GMI, 2021). A qualified

workforce can help to decrease project timelines, increase efficiency, and meet infrastructure demands on time.

**Technology and Innovation Transfer:** International migrants frequently bring new technology, innovative techniques, and industry knowledge from their native countries. This transfer of technology and innovation can assist host countries in developing their infrastructure.

**Economic Growth and Investment:** International migrants' labour force participation can boost host countries' GDP. Increased economic activity and productivity as a result of migrant labour participating in infrastructure projects can entice both domestic and foreign investors. These expenditures can concentrate on infrastructure development, resulting in ongoing improvement and expansion (GMI, 2021).

**Knowledge and Cultural Exchange:** The presence of international migrants in the employment market promotes the exchange of knowledge and cultures. Collaboration between migrants and local workers can promote skill transfer, spark creativity, and diversify infrastructure-building activities. This interchange of ideas and practices has the potential to produce more inclusive and context-relevant infrastructure solutions (GMI, 2021). International migrants' labour force contributions can help to improve infrastructure development; governments must offer fair working conditions, access to legal protections, and opportunities for skill development and integration. Furthermore, suitable laws and regulations must be implemented to maximise the benefits of migrant labour while resolving any potential issues or socioeconomic disparities.

**Innovation and Technological Transfer:** The influx of international migrants with valuable skills, knowledge, and technological experience has the potential to spur innovation and growth in a wide range of disciplines, including infrastructure development. Migrants with engineering, architectural, or technical skills can help implement novel infrastructure designs and building procedures, leading to more efficient and sustainable projects (Miguelez and Morrison, 2023). Migration-related innovation and technology transfer may have an impact on infrastructure development.

- **Technological Expertise:** International migrants frequently contribute specialist technical expertise to their host countries. They may be familiar with the most modern engineering software, construction techniques, and unique infrastructure development technologies. Their knowledge and skills can help create more efficient and cost-effective infrastructure solutions by introducing new approaches and best practices (Miguelez and Morrison, 2023).
- **Advanced Design and Planning:** Migrants with technical and architectural expertise can contribute to sophisticated infrastructure design and planning. They may be exposed to cutting-edge design principles, urban planning initiatives, and concepts of sustainable development (Pryor, 2023). Their contributions can result in environmentally friendly, energy-efficient infrastructure designs that adhere to the principles of sustainable development.
- **Construction Techniques and Materials:** Migrants with technical expertise might contribute to host countries' knowledge of modern construction processes and materials. This includes prefabrication, modular construction, and environmentally friendly building materials (Pryor, 2023). These creative ideas

can help accelerate construction processes, save costs, and improve infrastructure projects' quality and durability.

- **Sustainability and Resilience:** Migrants may have worked on infrastructure projects emphasising sustainability and resilience. They can contribute knowledge to renewable energy systems, water management practices, and climate change adaptation strategies. Host countries may establish a resilient and environmentally sustainable infrastructure that solves long-term concerns by including these principles in infrastructure development (Pryor, 2023).
- **Cross-Cultural Collaboration:** International migrants' participation in the infrastructure sector promotes cross-cultural collaboration and knowledge exchange. Collaboration between migrants and local professionals has the potential to integrate varied viewpoints, experiences, and ideas (Manning and Trimmer, 2020). As a result, infrastructure projects that are inclusive, culturally appropriate, and sensitive to the needs of diverse populations can be developed.
- **Knowledge Spillover Effects:** International migrants' involvement in infrastructure building can have far-reaching consequences beyond their immediate projects. Local professionals working alongside migrants can share their knowledge and skills throughout the industry, increasing total capacity and expertise in infrastructure development (Mohnen, 2022).

International migration contributes to economic growth, and tax revenue for infrastructure development includes:

- **Entrepreneurship and Innovation:** Migrants frequently bring entrepreneurial talents and a desire to establish firms in their host nations. They start new businesses, create jobs, and help to diversify the economy. These entrepreneurial activities stimulate economic growth, encourage innovation, and attract investment, all of which can lead to higher tax income that can be used to fund infrastructure development (Engler et al., 2020).
- **Employment and Labour Market Dynamics:** Migrants contribute to the labour market by filling labour gaps, particularly in areas with labour shortages. Their labour-force engagement raises productivity, enhances manufacturing capacity, and promotes economic output (Engler et al., 2020). This results in greater tax revenue from income taxes, business taxes, and social security contributions, which can be used to fund infrastructure investment.
- **Consumption and Demand:** Migrants' consumption habits contribute to rising consumer demand. They spend their earnings on goods and services, boosting economic activity in various industries such as retail, hotels, and construction. Increased tax revenue from value-added and sales taxes provides governments with more resources for infrastructure finance (Engler et al., 2020).
- **Real Estate and Property Taxes:** International migrants frequently invest in residential or commercial real estate. This investment increases property values and generates more property tax money for local governments. These tax proceeds can be used for local infrastructure development projects such as transportation networks, utilities, and public amenity enhancements (Engler et al., 2020).
- **Remittances and Financial Transactions:** Remittances sent by migrants to their home countries, in addition to economic activity, contribute to economic growth

and tax revenue in host countries. Migrants frequently send remittances through conventional financial channels, which can generate revenue through transaction fees and currency conversions. Taxes on these financial transactions can be collected by governments, providing an additional source of cash for infrastructure investments (Engler et al., 2020).

It is important to note that the economic impact of migration on infrastructure financing can vary depending on factors such as the size and composition of the migrant population, the industries in which migrants are primarily employed, and the policies and regulations governing taxation and economic activities. To effectively leverage the economic benefits of migration for infrastructure development, governments should establish policies that encourage entrepreneurship, allow labour market integration, and create a fair and transparent tax system that promotes economic growth and investment.

### **3. Research methods**

The study adopts a case-study research design. The cross-sectional survey design enables the researcher to capture information based on data gathered at a specific point in time from a sample of people with varied characteristics and demographics, known as variables. These variables include age, gender, income, education, and geographical location.

This study utilised a mixed method of data collection, combining both qualitative and quantitative methods. Primary data was collected through focus group discussions and questionnaires, while secondary data was sourced from various sources such as books, journal articles, internet sources, policy documents, newspaper articles, and unpublished Ph.D. theses. This mixed method allowed for easy comprehension of research problems and ensured participants' voices were heard. The quantitative method involved administering a 5-point Likert questionnaire, which aimed to understand the context investigated through numbers and statistical analysis. Focus group discussions were also employed to collect qualitative data. This approach ensured that the study's findings were based on participants' experiences and provided a comprehensive understanding of the research.

The population of the study comprises all the local government areas in the Edo South Senatorial District, where the Bini people are located, and it is also the place of origin of the Bini people. Edo South senatorial district comprises seven (7) local government areas with a cumulative population of 1,686,041, where the Bini people are more than 90% natives or indigenes. These seven local government areas were chosen because they are the places of origin of the Bini people. The local government areas are as follows: Egor (340,287), Ovia North East (155,344), Ovia South West (138,072), Uhumwonde (121,749), Orhionmwon (183,994), Oredo (374,515), and Ikpoba-Okha (372,080) (Edo State Government, 2022; Nigeria Population Commission, 2022).

The sampling size for this study is the households of migrants and returnee migrants amongst the Bini in the seven (7) local government areas of the Edo South senatorial district of Edo State. The Slovin (1960) sample size calculation formula is employed to determine the sample size of this study. This formula is used in research

when it is impossible to sample an entire population, even though it is finite. It allows the researcher to sample the population with the desired degree of accuracy. A smaller sample size out of 1,686,041 is required for workability, and Slovin provides the formula represented as follows:

$$n = N/(1 + Ne^2)$$

where:

$n$  = sample size (at a 95% confidence level)

$N$  = total population

$e$  = error margin/margin of error

The sample size will be calculated as follows: a confidence level of 95% and a 5% error margin, and the total population in the seven local government areas of Edo South senatorial district where the Bini people are located (1,686,041).

$n = 1,686,041/(1 + 1,686,041 \times 0.05^2)$ ;  $n = 1,686,041/(1 + 1,686,041 \times 0.0025)$ ;  
 $n = 1,686,041/(1 + 4215.1)$ ;  $n = 1,686,041/4216.1$ ;  $n = 399.90$ ; or approximately 400.

From this formula, the sampling size will be 400.

This study adopted the following sampling technique:

Convenience sampling is a non-probability sampling method where the sample is taken from a conveniently available pool of respondents or a group of people easy to contact or reach. This non-probability sampling technique distributed the structured questionnaire to population members.

The qualitative and quantitative data were analysed and computed based on the research objective. A primary data check was conducted on all copies of the returned questionnaire by sorting them out to check for errors and deal with data obtained for coding and evaluation. Data collected from the questionnaire were collated, coded, and imputed to IBM Statistical Package for Social Sciences (IBM SPSS Statistics V21.0) for data analysis. Percentage and frequency were used to present the respondents' demographic data content, including gender, age, marital status, education, position held, and years of service in the organisation. The study's hypotheses were tested using simple linear regression analyses. The impact of the independent variable on the dependent variable was assessed using inferential statistical and correlational analysis.

Linear regression was adopted to evaluate the relationship between the variables, whether positive (+) or negative (-). The correlation coefficient estimated by the linear regression was used to determine the depth of the relationship between the two variables that comprise the study's hypotheses; this will aid in determining the strength of the relationship, whether it is negligible (0.50–0.69), weak (0.10–0.29), moderate (0.30–0.49), substantial (0.50–0.69), or strong (0.70–1.00). Thematic analysis was used to analyse and transcribe the focus group discussion. Both quantitative and qualitative data analysed were triangulated accordingly.

#### 4. Hypothesis

This study addresses the following hypotheses:

International migration has not enhanced the developmental infrastructure of Bini communities in Edo State.

## 5. Results

The Bini people of Edo State are the targeted respondents in this study. More questionnaires were administered beyond the calculated sample size (400) to avoid less representation from any LGAs. **Table 1** shows the breakdown of the response rate.

**Table 1.** Breakdown of response rate.

| S/N | LGA             | Copies administered | Copies used | % Retrieved |
|-----|-----------------|---------------------|-------------|-------------|
| 1   | Egor            | 80                  | 73          | 91%         |
| 2   | Ikpoba Okha     | 89                  | 79          | 89%         |
| 3   | Oredo           | 89                  | 81          | 91%         |
| 4   | Orhionmwon      | 44                  | 42          | 95%         |
| 5   | Ovia North East | 37                  | 35          | 95%         |
| 6   | Ovia South East | 33                  | 31          | 94%         |
| 7   | Uhunmwode       | 29                  | 27          | 93%         |
|     | <b>Total</b>    | <b>401</b>          | <b>368</b>  | <b>92%</b>  |

**Table 1** reveals the breakdown of the response rate of the questionnaires administered in the seven local government areas. As shown above, most of the distributed questionnaires were retrieved successfully and used. The high number of questionnaires was retained due to the strategically consistent follow-up methods to ensure no questionnaire was left with any respondents.

- Biodata of respondents

This section shows the demographic characteristics of the survey respondents in this study. The responses were analysed and presented using frequency and simple percentages, as shown in **Table 2**. The respondents' biodata requested are sex, age, marital status, employment status and academic qualifications.

**Table 2.** Background information of respondents.

| Variables      | Item         | Frequency  | Percentage (%) |
|----------------|--------------|------------|----------------|
| Sex            | Male         | 213        | 57.9           |
|                | Female       | 155        | 42.1           |
|                | <b>Total</b> | <b>368</b> | <b>100.0</b>   |
| Age            | 30–39        | 171        | 46.5           |
|                | 40–49        | 141        | 38.3           |
|                | 50–59        | 51         | 13.9           |
|                | 60 & above   | 5          | 1.4            |
|                | <b>Total</b> | <b>368</b> | <b>100.0</b>   |
| Marital Status | Single       | 155        | 42.1           |
|                | Married      | 188        | 51.1           |
|                | Divorced     | 19         | 5.2            |
|                | Separated    | 5          | 1.4            |
|                | Widowed      | 1          | 0.3            |
|                | <b>Total</b> | <b>368</b> | <b>100.0</b>   |

**Table 2.** (Continued).

| Variables              | Item                     | Frequency  | Percentage (%) |
|------------------------|--------------------------|------------|----------------|
| Employment Status      | Unemployed               | 63         | 17.1           |
|                        | Self-employed            | 256        | 69.6           |
|                        | Employed                 | 47         | 12.8           |
|                        | Retired                  | 2          | 0.5            |
|                        | <b>Total</b>             | <b>368</b> | <b>100.0</b>   |
| Academic Qualification | No education             | 1          | 0.3            |
|                        | Primary education        | 7          | 1.9            |
|                        | Junior secondary school  | 28         | 7.6            |
|                        | Senior secondary school  | 232        | 63.0           |
|                        | Tertiary education       | 100        | 27.2           |
|                        | <b>Total</b>             | <b>368</b> | <b>100.0</b>   |
| Relatives Abroad       | Yes                      | 368        | 100.0          |
|                        | No                       | 0          | 0              |
|                        | <b>Total</b>             | <b>368</b> | <b>100.0</b>   |
| Relatives' countries   | Italy                    | 64         | 17%            |
|                        | USA                      | 62         | 17%            |
|                        | Other European Countries | 76         | 21%            |
|                        | France                   | 19         | 5%             |
|                        | Spain                    | 27         | 7%             |
|                        | Canada                   | 28         | 8%             |
|                        | Others                   | 92         | 25%            |
|                        | <b>Total</b>             | <b>368</b> | <b>100.0</b>   |

**Table 2** shows that 42.1% of the respondents are female. In comparison, 57.9% of the respondents are male, indicating that male participants are more than female respondents. The age distribution of the respondents reflects that most respondents (46.5%) are between 30 and 39 years old. The table also shows that 38.3% of the respondents are between 40 and 49, 13.9% are between 50 and 59, and the remaining 1.4% are above 60. Having the minimum age considered as 30 years of age is essential for the study to harvest facts/data from more mature and experienced Bini people.

Furthermore, the table shows that most of the survey respondents in the study 51.1%, are married, while 42.1% of the respondents are single, 5.2% are divorced, 1.4% are separated, and the remaining 0.3% are widowed. The table also shows that 69.6% of the respondents are self-employed. In comparison, 17.1% of the respondents are unemployed, 12.8% are employed, and the remaining 0.5% are retired, implying that most are self-employed. The predominant self-employment rate amongst the Bini people also speaks to their well-being status.

In addition, the table above also reveals the frequency distribution of the respondents' educational qualifications. Accordingly, it shows that most respondents, representing 63%, have at least a secondary school leaving certificate. In comparison, 0.3% of the respondents had no education, 1.9% had primary education, 7.6% had junior secondary school education, and 27.2% had tertiary education, showing that most respondents had senior secondary school education. The demographical

distribution in responses is due to the willingness and availability of respondents to partake in the survey.

Finally, 100% of the respondents have relatives abroad, with most of their relatives (17.0%) in Italy, 17% in the United States of America, more than 21% in European countries, 8.0% in Canada, 7% in Spain, 5% in France, 5% in Germany. Their other relatives are also in more than 25 countries in different parts of the world, many of whom have relatives in more than one or two countries at the time.

Test of Hypothesis:

H0: International migration has not enhanced the developmental infrastructures of Bini Communities in Edo State.

From **Table 3**, the R reveals a very strong and positive relationship between the two main variables, given an R of 0.759. The R-Square reveals that the overall performance of the model in the table is satisfactory, given the R-Square ( $R^2$ ) of 0.576. It can therefore be inferred that 57.6% of the dependent variable (infrastructural development of Bini communities) is explained by the independent variable (international migration of the people).

**Table 3.** Test of hypothesis.

| Model summary             |                             |            |                           |                            |                    |
|---------------------------|-----------------------------|------------|---------------------------|----------------------------|--------------------|
| Model                     | R                           | R Square   | Adjusted R Square         | Std. Error of the Estimate |                    |
| 1                         | 0.605 <sup>a</sup>          | 0.366      | 0.364                     | 0.60728                    |                    |
| ANOVA <sup>a</sup>        |                             |            |                           |                            |                    |
| Model                     | Sum of Squares              | Df         | Mean Square               | F                          | Sig.               |
| 1 Regression              | 84.890                      | 1          | 84.890                    | 230.183                    | 0.000 <sup>b</sup> |
| 1 Residual                | 147.149                     | 367        | 0.369                     |                            |                    |
| Total                     | 232.039                     | 368        |                           |                            |                    |
| Coefficients <sup>a</sup> |                             |            |                           |                            |                    |
| Model                     | Unstandardized Coefficients |            | Standardized Coefficients | T                          | Sig.               |
|                           | B                           | Std. Error | Beta                      |                            |                    |
| 1 (Constant)              | 1.322                       | 0.104      |                           | 12.660                     | 0.000              |
| 1 Government_effort       | 0.500                       | 0.033      | 0.605                     | 15.172                     | 0.000              |

Note: a. Dependent Variable: Infrastructural\_development.

As shown in the ANOVA section above, the  $p$ -value is 0.000 and the associated with  $F$ -value is 541.741. This shows the significance of the test, considering the  $p$ -value which is lesser than the significance level (0.05). It can therefore be concluded that the result is statistically significant, as the independent variable (international migration of Bini people) reliably predict the dependent variable (infrastructural development of Bini community),  $f(1,399) = 541.741, p < 0.05$ .

The coefficient table also reveals that a unit increase in international migration of Bini people leads to an increase in the infrastructural development of the Bini community. The  $p$ -value of 0.000 is less than 0.05 significance level and therefore there is sufficient evidence to reject the null hypothesis and accept the alternative hypothesis. Therefore, from the result in **Table 3**, it can be concluded that international

migration has enhanced the developmental infrastructures of Bini Communities in Edo State.

## **6. Findings**

International Migration and infrastructural development of the Bini communities:

As regards the effect of international migration on infrastructural development of the Bini communities, the study found that international migration has enhanced the developmental infrastructures of Bini Communities in Edo State, ( $f(1.399) = 541.741$ ,  $p < 0.05$ ). Despite getting some feedback from the people that the money and vehicle sent from abroad have not helped the transportation system neither has it provided portable water, good road network, electricity power nor created healthcare facilities, there is still a wide acknowledgement amongst the people in the Bini communities that their relatives abroad assist/collaborate with the government financially to bring about some infrastructures within the communities. There are some projects initiated by government which the migrants abroad do provide some aids to complete once the government is delaying. Thus, according to this study, international immigration facilitates collaborations between the diasporans and the government of the State to promote infrastructural development in communities.

This is in tandem with findings from World bank (2021) position that migrants remittances can be used to build and maintain water supply infrastructure such as treatment facilities, reservoirs, distribution networks, and sanitation systems. improved water delivery facilities will ease the produce of availability of water as it provide access to safe drinking water, promote agricultural activities, and improve sanitation and hygiene practices, leading to improved community health outcomes. The world bank also maintained that remittances can help finance infrastructure projects like electricity generation, transmission and distribution networks, and renewable energy initiatives. Energy system investments can provide access to reliable and inexpensive electricity, encourage economic activity, assist industrial growth, and improve communities' overall quality of life (World Bank, 2022).

Pryor (2023) opined that there is transfer of valuable knowledge, skills and technological expertise with the potential to encourage innovation and progress in a variety of fields, including infrastructural development. Migrants with engineering, architecture, or technical expertise can help adopt innovative infrastructure designs and construction processes, resulting in more efficient and sustainable projects. Migration-related innovation and technology transfer can have an impact on infrastructure development. This is apparent in Benin city as new buildings have innovative designs and constructions with the application of modern building techniques acquired by migrants from their places of destination and transferred to the city.

Other researchers who also found that international migration enables philanthropic contributions and help build developmental infrastructures such as health centres and schools in their communities of origin through their hometown associations (Ratha, 2021). Similarly, Engler et al. (2020), argued that migration is an enhancer of investment capital transfer and speeds up the exposure or development of

communities to enlightened, logical and democratic concepts, contemporary insight, and education.

## 7. Conclusion

Given the recent current challenges in Nigeria, international migration seems a viable means of improving and sustaining communal life and development. In terms of infrastructural development, private citizens have been making provisions for themselves especially in the area of electricity, where the use of generating set is rampant and the surging use of solar inverter electrifying devices are also adopted by households and communities to light up their environment.

Private citizens also make contributions for the tarring and paving of roads within their neighbourhood and many of these financial contributions comes from migrant's remittances received by their family member back home. The economic situation in Edo state and Nigeria has encouraged many to see migration as the most potent mitigating factor to poverty and infrastructural deficiency in their community, and this has led to increase in migration from Benin through both regular and irregular means. Finally, to see the real effect of international migration on infrastructures in Edo State, remittances need to be channel more towards such projects than is currently being done.

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