

Urbanisation and Economic Development: Nigeria Experience

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Abstract

The study examines the impact of urbanisation on economic development in Nigeria. The study used the augmented Dickey-Fuller unit root test and the ARDL Bounds Cointegration test as its pre-estimation tests, the Auto Regressive Distributed Lag for correlation and stability analysis alongside the post estimation tests of normality, heteroscedasticity, serial. The result of the unit root test showed that access to electricity was stationary at level while poverty rate, urban population, infrastructure availability, urban fertility rate were stationary at first difference. There is also evidence of a long-run relationship among the variables from the ARDL Bounds cointegration test. The results showed that urban population, infrastructure availability, urban fertility rate and access to electricity are positive and significant to economic development in Nigeria. The study concludes that urbanisation significantly contributes to economic development in Nigeria. The study recommends that the Federal Ministry of Works and Housing and the Nigerian Sovereign Investment Agency should prioritize infrastructure projects that target urban areas by investing in affordable housing, clean water, and sanitation infrastructure to directly address poverty rate while improving health outcomes.

Keywords: Urbanisation, Economic Development, Poverty Rate, Urban Population, Infrastructure Availability

Introduction

Economic development is a core objective of nations all over the world as public policies and programmes are geared in the direction to achieve economic development. Countries are categorized based on their attainment of economic development or otherwise – as Developed countries or as Developing countries. Nigeria, tagged the giant of Africa and the most populous country in Africa, is a developing country. Nigeria is said to have the largest economy in Africa with a Gross Domestic Product (GDP) of \$ 477.38 billion followed by Egypt and South Africa (IMF, 2023). On a global scale, Nigeria is ranked 33 of the world's major economies (UNDP, 2022). Despite having the largest economy and population in Africa, Nigeria is yet to achieve economic development and offers limited opportunities to most of its citizens. Chenery & Syrquin (1970) defines Economic development as a process of structural transformation that accompanies economic growth. This transformation involves changes in various structural characteristics of the economy such as investment, urbanisation, demographic transition and income distribution. Considering urbanisation proxies such as urban population, infrastructure availability, urban fertility rate, access to electricity and how they contribute to economic development or otherwise. Some empirical studies have established a nexus between urbanization and economic development. El-Nour (1989) examined the relationship between urbanisation and socioeconomic development in the Sudan with a focus on regional differences. The results indicate that higher levels of urbanisation are associated with increased levels of socioeconomic development. Fatima (2022) scrutinise the association between economic progression and urbanisation patterns by considering the data on urbanisation and economic growth from 1990–2020 for the South Asian nations. The variables used for the study include GDP per capita as the dependent variable, while population age (15–64), urban population (% of the total population), and population density were used as the dependent variables. The results showed a positive link between urbanisation measured by urban population share, population density, and the population share of ages 15–64 and economic development. Consequently, Abuo (2013) undertook research on the impact of urbanisation on Economic Development in Nigeria from 1980 – 2010 to analyze

the relationship between real GDP growth rate, urban population growth, public expenditure on education, public expenditure on health and urban unemployment on economic development in Nigeria. The findings showed that government expenditure on education has a low impact on economic development and was statistically insignificant, urban population growth rate had not positive impact on economic development, government expenditure on health had a significant impact on economic development and urban unemployment was positively related to economic development. These studies did not investigate the extent to which availability of infrastructure in urban areas, access to electricity and urban fertility rates contribute to economic development in Nigeria. This has instigated the question: does urbanisation contribute significantly to economic development in Nigeria? This study aims to investigate the impact of urbanisation on economic development in Nigeria.

Literature Review

Urban Bias Theory

This theory was formulated by Michael Lipton (1977) to account for the poverty and inequalities that are prevalent in many developing countries today. The theory proposes that development planning in less developed countries is biased against rural areas in that most of the economic resources are allocated to the urban areas than the rural ones making the poor to get poorer. Lipton maintains that urban bias involves an allocation to persons or organizations located in towns of shares of resources so large as to be inefficient and inequitable: a disposition among the powerful (urban classes) to allocate resources in this way.

There are five main claims of this theory – the first claim has it that rural areas of developing countries suffer from too little spending on education and healthcare. The second claim says that inequalities combined with excessively urban form of teaching and curriculum development pull many of the best and brightest in rural areas to the cities. The third claim states that people in rural areas are forced to pay a higher share of national taxes than is fair while the fourth claim stipulates that urban bias is further and most damagingly evident in a series of government imposed price twists and the last claim says the contribution of distributional urban bias and price twisting is unfair and inefficient at the margin.

Four Critiques of the urban bias theory have emerged -The urban bias theory neglects political institutions, the urban bias theory did not anticipate how technical change over time could begin to make the rural sector powerful, the conception of how rural interests are expressed in politics is limited in urban bias theory to the strictly economic issues and the urban-rural boundaries may at times be hard to detect. An additional critique leveled was that urban bias theory lacked empirical validity and was overly generalized. The Urban Bias Theory failed to prove that the inter-sectoral terms of trade moved everywhere against rural areas.

Urban bias refers to an argument in which economic development is hampered by groups who, by their central location in urban areas, are able to pressure governments to protect their interests. It is a structural condition of overurbanisation and its growth leads to saturated urban labour market, truncated opportunity structures in rural areas, overburdened public services, distorted sectoral development in world economies, the isolation of large segments of the urban and rural population from the fruits of economic development, and economic growth due to the high costs of urban development.

Fei-Ranis Model on Rural-Urban Migration

John Fei and Gustav Ranis (1961) presented in an article entitled, -A Theory of Economic Development, the process of rural-urban migration in underdeveloped countries. The model is related to an underdeveloped economy having surplus labour but scarcity of capital. The major part of the population is engaged in agriculture which is stagnant. Non-agricultural occupations

use small capital. There also exists an industrial sector. The process of development involves transfer of surplus labour from the agricultural sector to the industrial sector, so as to increase its productivity from zero to a wage level equal to the institutional wage in agriculture.

Urban and Urbanisation

Urbanisation according to United Nations (2014) is the increase in the proportion of the population living in urban areas, resulting from net migration and natural increase. World Bank (2017) defines urbanisation as the process of economic and social transformation that occurs when people move from rural areas to cities. It is coined from the word 'Urban'. The term 'Urban' lacks a very specific definition as it is described in terms of political status, demographic attributes, economic variables and socio-cultural behaviours (Gibbs, 1966). According to Macura (1961), about thirty definitions of urban are in use but none of them is very succinct and this makes it difficult for international comparisons. Despite the problems, various researchers define the term urban from various perspectives, mostly based on the discipline. Geographers are space – oriented and hence tend to link urban with the space and the people that occupy the space. To geographers, an area is defined as urban based upon a certain concentration of population. Urban, to them, is a settlement agglomeration with a certain density of population and/or a minimum required population threshold. This concentration is usually within a specified area hence density is also used sometimes by geographers to define urban. Since there is no standard minimum threshold for determining an area as urban, every country has its own definition for urban when using demography as a means of definition. In Ghana, a settlement becomes urban on attaining a population size of 5,000. In Sierra Leone, the minimum population threshold for designating an area as urban is 10,000. While in Cameroon, settlements with a population of 2,000 and above are considered urban. In Nigeria, a settlement is classified as urban if it contains 20,000 people or more (Williams, 2003).

Economic Development

The precise definition of economic development has been contested: while economists in the 20th century viewed development primarily in terms of economic growth, sociologists instead emphasized broader processes of change and modernization. Sen (1999) defines economic development as the enhancement of human capabilities and freedoms. Todaro (2014) defines economic development as a multidimensional process involving the mobilization and allocation of resources to satisfy the changing needs and wants of individuals and societies. United Nations (2015) describes economic development as the process of improving the quality of life for all people in a society including the poorest and most vulnerable. Economic development implies economic growth plus progressive changes in certain important variables which determine the well-being of the people, for example, health, education. Development is more than just talking about increasing income or increasing the economy's number of goods and services. It is not only about growing the economy but also how that growth benefits citizens. Development takes into account inclusive welfare, better standards of living for all citizens. It's also about building capacity and resilience in a fast-changing and unpredictable world. Some of the goals of economic development are increase in the availability of goods and services, increase in per capita income, development must also place more significant attention on cultural and human values. So, prosperity here does not only take the material dimension but also immaterial; promote the freedom to make responsible economic and social choices - Individuals and nations must be free from slavery, ignorance, and misery; an increase in average life expectancy is an example of an outcome of economic development. Other outcomes are increased productivity, higher literacy rates, and better public education.

Poverty Rate

Poverty is a state of being in which a person lacks the income (or other means of support) to reliably meet their basic personal needs, such as food, shelter, and clothing (United Nations, 2015). Poverty exists in every country in the world, though it is a more pressing issue in some countries than in others. The poverty rate is the number of people (usually expressed as a percentage) in a given demographic group whose income falls below the poverty line. In Nigeria, the poverty line is \$1.90 per day, living below this is extreme poverty. In Nigeria, 88.4 million Nigerians are extremely poor, this constitutes 40.5% of the population. This implies that 4 out of every 10 Nigerian are extremely poor (World Bank, 2017).

Empirical Literature

El-Nour (1989) examined the relationship between urbanisation and socioeconomic development in the Sudan, with a focus on regional differences. The data was taken from a variety of official sources. The results indicate that higher levels of urbanisation are associated with increased levels of socioeconomic development. Similarly, Abuo (2013) undertook research on the impact of urbanisation on Economic Development in Nigeria from 1980 – 2010 using the ordinary least square method and multiple regression to analyze the relationship between real GDP growth rate, urban population growth, public expenditure on education, public expenditure on health and urban unemployment on economic development in Nigeria. The findings showed that government expenditure on education has a low impact on economic development and was statistically insignificant, urban population growth rate had not positive impact on economic development, government expenditure on health had a significant impact on economic development and urban unemployment was positively related to economic development.

Fatima (2022) scrutinized the association between economic progression and urbanisation patterns by considering the data on urbanisation and economic growth from 1990–2020 for the South Asian nations. The variables used for the study include GDP per capita as the dependent variable, while population age (15–64), urban population (% of the total population), and population density were used as the dependent variables. The outcomes of the panel regression support the general notion of a positive link between urbanisation measured by urban population share, population density, and the population share of ages 15–64 and economic development measured through GDP (per capita). The square of the urban population has a negative effect on economic growth, suggesting a positive relationship but at a decreasing rate. Based on the findings, the study recommended that government and development organizations should focus on challenges due to urbanisation and prepare plans so that unplanned urbanisation is minimized.

Turok and Mcgranahan (2013) explored the arguments and evidence for whether rapid urban population growth can help raise living standards. The main finding of the study was that the development effects of urbanisation and the magnitude of agglomeration economies are very variable. There is no simple linear relationship between urbanisation and economic growth or between city size and productivity. Based on the findings, the study concludes that the potential of urbanisation to promote growth is likely to depend on how conducive the infrastructure and institutional settings are.

Aliyu and Amadu (2017) in their study: Urbanisation, cities and Health: The challenges to Nigeria; did a review of published journal literature between 1960 and 2015. The review showed that the pace of urbanisation is unprecedented with cities like Lagos having annual urban growth rate of 5.8%. The review highlighted that urbanisation in Nigeria is mainly demographically driven without commensurate socio-economic dividends and benefits to the urban environment. The review concluded that when managed carefully, urbanisation could reduce hardship and human suffering; on the other hand, it could also increase poverty and squalor.

Njoh (2003) appraised urbanisation and development in sub-Saharan Africa. The study mainly employed data culled from the following two sources: (1) The Human Development Report, 2000 (UNDP, 2000) and the World Development Indicators 2000, World Bank. The sample consisted exclusively of SSA countries. Two variables were examined in the study. One of these is the HDI, which served as the dependent variable. The other is the level of urbanisation (URB). The results of the procedure show that the correlation coefficient between HDI and URB, as well as the Pearson product, moment correlations, are summarized between HDI and URB at 0.542. The positive sign associated with this value suggests that the relationship between the two variables is, as hypothesized, positive. More importantly, the value is statistically significant at the 0.01 level (two-tailed), suggesting that this finding is unlikely to be the result of a chance occurrence. Based on the findings, the study concludes that there is a positive association exists between the two variables.

Methodology

The data collection method is purely from secondary source. The study utilized annual time series data. Specifically, the data focused on the urbanisation indicators (Urban population, Infrastructure availability, Urban fertility rate and access to electricity) and the Poverty rate as proxy for Economic Development. The datasets were obtained from the United Nations Statistics Division, the World Bank and the National Bureau of Statistics (NBS).

$$POR = f(URBP, IFAV, UFER, AEC) \quad (3.1)$$

Where: POR = Poverty rate

URBP= Urban population

IFAV = Infrastructure Availability

UFER = Urban fertility rate

AEC= Access to electricity

$$POR = \pi_0 + \pi_1 URBP + \pi_2 IFAV + \pi_3 UFER + \pi_4 AEC + U_t \quad (3.2)$$

A priori expectation is that URBP, IFAV, UFER, AEC >0. For the data analysis, the Auto Regressive Distributed Lag (ARDL) was used. The benefit of this estimation method is that it offers flexibility in modeling complex relationships and it is able to provide robust estimates of the long run relationship between variables. The equation for the ARDL is:

$$\Delta POR = \beta_{10} + \sum \beta_{11i} POR-i + \sum \beta_{12i} URBP-i + \sum \beta_{13i} IFAV-i + \sum \beta_{14i} UFER-i + \sum \beta_{15i} AEC-i + \varepsilon_{1t} \quad (3.3)$$

Data Analysis and Results

The time series data were first analysed for stationarity using the Augmented Dickey Fuller (ADF) test and the results are presented below:

Table 1 Augmented Dickey Fuller (ADF) Unit Root Test

Variables	Levels		First Difference		Order of	P-value
	ADF Statistics	5% Critical Value	ADF Statistics	5% Critical Value	Integration	
LPOR	-2.288498	-2.957110	-6.232760	-2.960411	I(1)	0.0000
LURBP	0.247381	-2.957100	-10.50984	-2.960411	I(1)	0.0000
LIFAV	-2.304537	-2.957110	-6.013986	-2.960411	I(1)	0.0000
LUFER	-0.086474	-2.957110	-6.906472	-2.960411	I(1)	0.0000
LAEC	-3.231057	-2.971853			I(0)	0.0286

Source: Author Computation 2024* Level of significance at 5%

This study employs the Augmented Dickey-Fuller (ADF) unit root tests to check the order of integration of the variables and the results are presented in Table 1. The results of Augmented Dickey-Fuller (ADF) showed that the variables are integrated in different order or a combination

of I(0) and I(1) series. The ADF result revealed that LAEC was stationary at levels 1(0) while, LPOR, LURBP, LIFAV, and LUFER, are stationary after first differencing 1(1). This condition makes the Autoregressive Distributive Lag (ARDL) Bounds test approach to co-integration appropriate for investigating the long-run relationship among these variables. The linear combinations long run relationship diagnosis amongst the variables was conducted using the ARDL Bounds Cointegration test. Table 2 below reports details of the result:

Table 2 ARDL Bound Test

Test Statistics	Value	K
F-statistics	5.901098	4
Significance	I (0)	1(1)
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

Source: Authors computation 2024

From Table 2 the bound test result indicates that there exist long run relationships amongst the variables as the F-statistic value of 5.901098 exceeds both the lower and upper bound critical values. Thus, we therefore reject the null hypotheses of no long run relationship and accept its alternative. This means that there is a long-run relationship between urbanisation and poverty rate in Nigeria.

Table 3: ARDL Long-run Result (Dependent Variable = LPOR)

Variable	Coefficient	Std. Error	t-statistics	Prob
LURBP	-0.110777	1.048686	-0.105634	0.9176
LIFAV	-0.136485	0.044757	-3.049472	0.0026
LUFER	-0.239884	0.082305	-2.914572	0.0084
LAEC	0.484874	1.557521	0.311312	0.7609
EC = LPOR - (-0.1108*LURBP + 0.1365*LIFAV -0.2399*LUFER + 0.4849*LAEC)				

Source: Authors' computation 2024

Table 3 of the Autoregressive Distributive Lag (ARDL) long-run result suggest a negative -0.110777 relationship between the logarithm of urban population (URBP) and the log value of poverty rate (POR) as a proxy for economic development. This means that a unit increase in LURBP is associated with a decrease in annual LPOR of 0.11% yearly. However, the p-value of 0.9176 indicate that there is no statistical significant relationship between LURBP and LPOR. Investigation of the log value of infrastructural availability (LIFAV) advocates a negative -0.136485 relationship with the log value of poverty rate (LPOR) as a proxy for economic development. The result denotes that a unit rise in LURBP is related to a decline in annual LPOR of about 0.14 percent increase per year. Astoundingly, the p-value of 0.0026 shows that there is a statistical significant relationship between LIFAV and LPOR. Furthermore, the log value of urban fertility rate (LUFER) suggest a negative -0.239884 relationship with the log value of poverty rate (LPOR) as a proxy for economic development. This implies that a unit increase in the log value of urban fertility rate (LUFER) will result to about 0.23 percent in annual LPOR per yearly. Conversely, the p-value of 0.0084 signpost that there is a statistical significant relationship between LUFER and LPOR. Finally, the log value of access to electricity (LAEC) suggest a positive +0.484874 relationship with log value of poverty rate (LPOR) as a proxy for economic development. This suggests that a unit increase in the log value of access to electricity (LAEC) will result to about 0.48% in LPOR per yearly. Conversely, the p-value of 0.7609 indicates that there is a statistical significant relationship between LNOR and LPOR.

Table 4: ARDL Long-run Result (Dependent Variable = LPOR)

Variable	Coefficient	Std. Error	t-statistics	Prob
LURBP	-0.110777	1.048686	-0.105634	0.9176
LIFAV	-0.136485	0.044757	-3.049472	0.0026
LUFER	-0.239884	0.082305	-2.914572	0.0084
LAEC	0.484874	1.557521	0.311312	0.7609
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Source: Authors' computation 2024

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Table 5: Ramsey Reset Test

	F-Statistic	Prob-Value
Ramsey Reset Test	5.088833	0.0754
Breusch-Godfrey Serial Correlation LM Test	0.482323	0.6310
Breusch-Pagan-Godfrey Heteroskedasticity Test	6.192524	0.0913

Source: Authors' computation 2024

From Table 5, the results of the diagnostic test shows that the linearity test using Ramsey Reset test indicates that the f-statistic (5.088833) with computed p-value of 0.0754 which is greater than 5 percent (0.05) critical value, hence the study reject the null hypothesis and conclude that the model is correctly specified. The result of the Serial or Autocorrelation Test using Breusch- Godfrey Serial Correlation LM Test shows that the f-statistic is 0.482323, with a Chi-Square probability value is 0.6310. This indicates that the probability value of about 63 percent (0.6310) is greater than 5 percent (0.05) critical value; hence the study confirms no serial correlation in the model. The result of the heteroscedasticity test using Breusch-Pegan-Godfrey test shows that the f-statistic is 6.192524 with a Chi-Square probability value of 0.0913. The result suggests that there is no evidence of heteroskedasticity in the model since the probability Chi-square value is more than 5 percent ($P > 0.05$). So, residuals do have constant variance which is desirable in regression meaning that residuals are Homoscedastic.

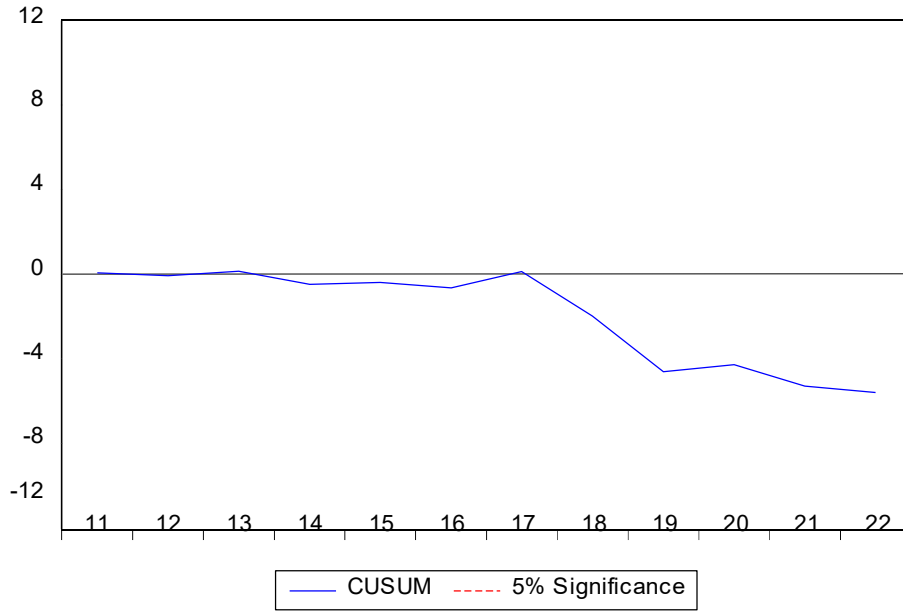


Figure 1: Stability Test

Figure 1 shows summary of the stability of the model. The graph showed that the model is stable, this is evident to the fact that the blue line inside the graph is in between the two red lines. This also indicates that it is less than 0.05 level of significance.

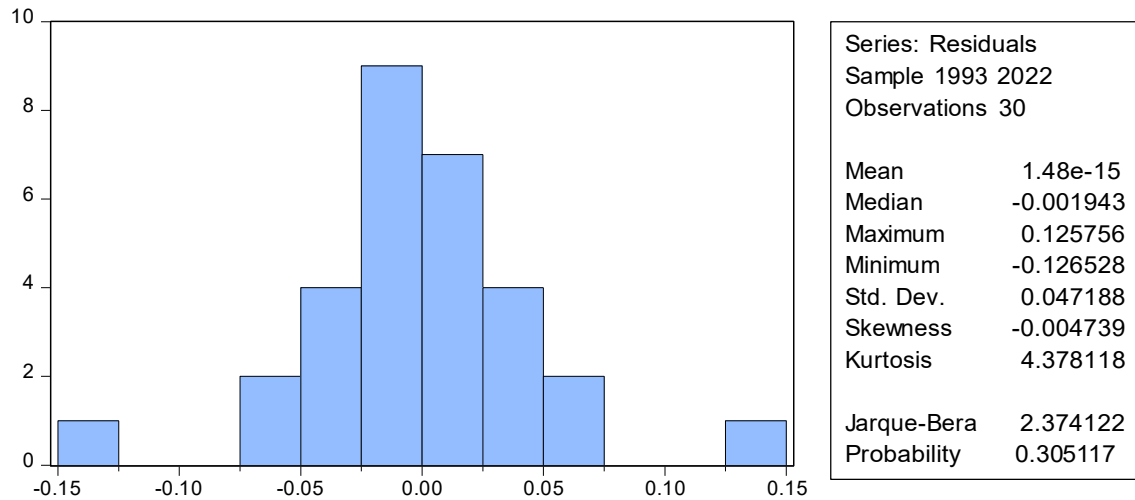


Figure 2: Normality Test

The Figure 2 shows summary of the normality test with Jarque-Bara value of 2.374122 and a corresponding probability value of 0.305117 more than 0.05 level of significance, indicating that the residuals are normally distributed.

Discussion of Findings

The study focuses on the relationship between urbanization and economic development in Nigeria. The analysis conducted using the Auto-Regressive Distributive Lag (ARDL) Model reveals a compelling insight: urban population (URBP) exerts a significant positive impact on

poverty (POR) in the short run. This finding indicates that as the urban population grows, poverty is notably increased. The likely explanation lies in the increased economic opportunities available in urban areas, such as higher-paying jobs and a broader array of employment options, which create economies of scale that increase the costs of goods and services. This positive correlation between urban population and poverty do not align with economic theory, which predicts that urbanisation should lead to poverty reduction due to enhanced job opportunities. The statistical significance of the results, indicated by the p-value, confirms the robustness of this relationship, leading to the rejection of the null hypothesis that there is no significant relationship between urban population and poverty. These findings are not consistent with previous research by El- Noor (1998); Kasandra and Crenshaw (1998) further validating the conclusion that urbanisation plays a crucial role in alleviating poverty.

More so, the analysis using the Auto-Regressive Distributive Lag (ARDL) Model reveals a convincing insight: infrastructure availability (IFAV) has a significant negative impact on poverty (POR) in the previous year of the short run. This finding suggests that as the construction of roads, bridges, and other infrastructure projects increases, poverty levels tend to decline. The likely driver behind this relationship is the surge in job creation for both skilled and unskilled workers, which boosts economic activity and alleviates poverty. This inverse relationship between infrastructure availability and poverty aligns perfectly with economic theory, which anticipates that expanding infrastructure will lead to poverty reduction through widespread job creation. The statistical significance of the results, underscored by the p-value, confirms the strength of this connection, prompting the study to reject the null hypothesis that no significant relationship exists between infrastructure availability and poverty. These findings are consistent with previous research by El-Noor (1989); Kasandra and Crenshaw (1998) further validating the conclusion that urbanization via infrastructure availability plays a crucial role in alleviating poverty.

Furthermore, the analysis using the Auto-Regressive Distributive Lag (ARDL) Model reveals a noteworthy economic insight: urban fertility rate (UFER) exhibits a negative relationship with poverty (POR) in the second year in the long-run. This suggests that as urban fertility rate can leverage this upsurge in fertility rate, increase productive activities, and reduce idle time, ultimately lowering unemployment levels. This inverse relationship aligns with economic theory, where increased fertility rate is expected to lead to a reduction in poverty. Also, the p-value of the results indicates that urban fertility rate impact on poverty is statistically significant. As a result, the study rejects the null hypothesis, concluding that there is a significant relationship between urban fertility rate, and poverty rate. These findings are consistent with previous research by El- Noor (1998); Kasandra and Crenshaw (1998) further validating the conclusion that internet facilities play a crucial role in alleviating poverty.

The analysis using the Auto-Regressive Distributive Lag (ARDL) Model uncovers a critical economic insight: access to electricity (AEC) has a positive relationship with poverty (POR) in the short-run and long-term. This implies that as access to electricity improves, businesses, individuals, and particularly manufacturing industries will find it difficult to expand their productive activities, increase output, and boost profits as a result of increase tariff, which collectively contribute to increase poverty in the country. Also, despite this expected negative relationship between access to electricity and poverty contradicting with economic theory, the results indicate that this relationship is statistically insignificant. The p-value suggests that access to electricity does not have a significant impact on poverty levels in the short run and long-term. Consequently, the study accepts the null hypothesis, concluding that there is no significant relationship between access to electricity and poverty in this context. These findings are in

harmony with previous research by Liddle (2013), further validating the crucial role of urbanisation on poverty alleviation.

Conclusion

This study examines the effect of urbanisation on economic development in Nigeria. The findings of the study revealed that urban population, infrastructure availability, urban fertility rate, and access to electricity rate have significant effect on poverty rate in Nigeria. Premised on the findings of the study, it is concluded that urbanisation significantly contributes to the economic development in Nigeria.

Recommendations

Urban development authorities in the 36 states of Nigeria should come up with policies, programmes, empowerment initiatives, skill acquisition and employment opportunities in the urban areas to lure people to migrate from the rural communities in order to boost urban population which promotes economic development. In addition, the Federal Ministry of Works and Housing and the Nigerian Sovereign Investment Agency should prioritize infrastructure projects in urban areas by investing in road construction, affordable housing, clean water, and sanitation infrastructure to directly improve infrastructure availability in urban areas. Besides, the government should implement policies and programmes to provide monetary assistance to families with children, provide child care support and subsidies to encourage a boost in fertility and birth rates. Consequently, the National Electricity Regulation Commission should review electricity tariffs to ensure affordability and encourage competition among the electricity distribution companies.

Contribution to Knowledge

This study has highlighted the impact of urbanisation at enhancing economic development and has specifically shown that each of the independent variables promotes economic development. It has filled the gap that exists in academic literature by extending the scope of the study beyond the scope covered by the previous studies and by employing variables such as infrastructure availability, urban fertility rate and access to electricity not used in previous studies to examine their effects on economic development. The results established are new and has contributed to stock of knowledge and expanding literature on the effect of urbanisation on economic development in Nigeria.

References

- Abuo, M. A. (2013). The impact of urbanization on economic development in Nigeria. Unpublished.
- Adepoju, O. (2018). Urban fertility and HDI in Africa. *Journal of Biosocial Science*, 45, 15-23.
- Aliyu, A. & Amadu, L. (2017) Urbanisation, cities and health: The challenges to Nigeria, A Review. *Annals of African Medicine*, 16, 149-153
- Childe, V.G. (1936) *Man makes himself*. London. Watts and Co.
- Ekeocha, D. (2020). Urbanisation, inequality, economic development and ecological footprint: searching for turning points and regional homogeneity in Africa. *Journal of Cleaner Production*, 291(472).
- El Nour A.H. (1989). The relationship between urbanisation and socio-economic development in the Sudan. *Geo. Journal*, 18, 369–377.

- El-bouayady, R. & Radoine, H. (2023). Urbanisation and sustainable urban infrastructure development in Africa. *Environment and Ecology Research* 11(2), 385-391.
- Fatima, Z. (2022). An empirical analysis of urbanisation and economic growth in South
- Fei, J.C.H. & Ranis, G. (1961). A theory of economic development. *The American Economic Review*, 51, 533-565.
- Gibbs, J.P. (1966) *Conceptions of deviant behaviour: The old and the new*. Peacock Publications Limited
- Ha, N. M., & Nguyen, L. D. (2017). The relationship between urbanisation and economic growth: An empirical study on ASEAN countries. *International Journal of Social Economics* 45(5).
- International Monetary Fund (2023). IMF annual report 2023. Retrieved from www.elibrary.imf.org
- Kasarda, J.D.& Crenshaw, E.M. (1991) Third world urbanisation: Dimensions, theories and determinants. *Pubmed Journals* :17,467-501.
- Kwilinski, A., Oleksii, L., & Pimonenko, T. (2023). The effects of urbanisation on green growth within sustainable development goals. *Land* 12(2), 511.
- Liddle, B. (2013). The energy, economic growth, urbanisation nexus across development: Evidence from heterogeneous panel estimates robust to cross-sectional dependence. *The Energy Journal*, 34(2).
- Macura, M. (1961). The Influence of the definition of the urban place on the size of the urban place on the size of the Urban Population. InJ P. Gibbs.(Ed.) *Urban Research Methods*, 21-31.
- Mohamed, A., Youssef, A. B., Nguye, C. V., &Soucat, A. (2014). Effects of urbanization on economic growth and human capital formation in Africa. Retrieved from https://www.researchgate.net/publication/281185380_Effects_of_urbanisation_on_economic_growth_and_human_capital_formation_in_Africa.
- Turok, I., & McGranahan, G. (2013). Urbanisation and economic growth: The arguments and evidence for Africa and Asia. *Environment and Urbanisation* 25, 465–482.
- United Nations Development Programme (2022). Human Development Report 2021/2022. www.undp.org
- United Nations (2014) *World urbanization prospects*. DESA.
- Williams, D. R. (2003) The urbanisation of wildlife management: Social science, conflict, and decision making. *Urban Forestry & Urban Greening*, 1(3), 171-183.
- Todaro, M.P. (2006) *Economic development*. England : Peasant Education Ltd.
- Tripathi, S., & Mahey, K. (2017). Urbanisation and economic growth in Punjab (India):An empirical analysis. *Urban Research & Practice*, 10(4), 379-402.
- Zhang, X. & Zhang, Y. (2020). The impact of urbanization on human development in China. *Land* 11(10), 1725.