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A Systematic Review of the Nexus Between Transport and Socio Economic Development in Nigeria

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Abstract **Original Research Article**

Modern transport infrastructure supports social and economic growth and makes movement, productivity and integration easier. This study seeks to carry out a systematic review on transport and socioeconomic development in Nigeria with a view to highlighting the role that transport infrastructure plays in boosting Nigeria's socioeconomic advancement. The study followed PRISMA 2020 standards and used a search strategy focusing on extensive exploration of Scopus, Web of Science, Google Scholar and JSTOR to retrieve papers on transport-socioeconomic development nexus. The proposed Population, Intervention, Outcome (PIO) framework was used to conduct and guide the search. Only articles from 2015 onward that looked at Nigeria alone and studied the relationship between transport infrastructure and socioeconomic factors were included in the review. The Mixed Methods Appraisal Tool (MMAT, Version 2018) was used to assess the quality of each of the included study. Data extraction used a pre-conceived table, and thematic analysis through narrative synthesis provided an account of findings. The PRISMA flow diagram shows that out of a total of 293 papers, 14 met the criteria for inclusion following the exclusion of 87 duplicate papers, 55 not relevant articles, and 79 secondary papers including letter to editors, opinions, reviews and thesis. Findings from the study revealed that improved transport facilities in Nigeria positively impacted education access ($\chi^2 = 78.46$) and healthcare ($r = 0.461$, $p = 0.034$). Market access and trade had positive associations ($\chi^2 = 79.903$). Transport development also generated employment such as the NDDC feeder road construction project which generated approximately 11,000 jobs. The study found that transport-socioeconomic engenders increased economic activities, economic growth and reduction in travel time. Quality of life and well-being improved (mean score 3.79). Agricultural production exhibited strong correlation ($r = 0.615$). Identified challenges include policy implementation which include funding and corruption. Negative impacts discovered in the course of the review include small business displacement and road condition (55.7%). The study concluded by recommending improved rural roads, promotion of public-private partnerships, transport Master-plan preparation, impact-tracking implementation, resettlement policy preparation, and overall road maintenance program establishment.

Keywords: Transportation, Transport, Transport Infrastructure, Socioeconomic, Socioeconomic Development.

1.0 Introduction

Transport infrastructure is generally regarded as a strong pillar of socioeconomic progress, guaranteeing goods, service, and people's mobility bringing to bear enhanced productivity and economic integration (Oyesiku, Onakoya and Folawewo, 2013). Global empirical data have shown that investments in the transport system have engendered direct relationships with urbanization, employment generation, and poverty reduction, particularly when it is in synchronicity with integrated development policies (Cai et al., 2023; Chanieabate et al., 2023; Pfutze, Rodríguez-Castelán and Valderrama, 2023).

In the developed world, efficient and multimodal transport infrastructures facilitate industry growth and regional integration. A typical illustration of this subject of discourse is the European Union's Trans-European Transport Network which promotes regional equilibrium and economic dynamism

(Umoh and Effiong, 2023). Similarly, in North America and East Asia, where more advanced rail, highway, and seaborne networks persistently facilitate productivity gains and cross-border commerce, there can be seen clearly the necessity of well-structured transport systems to facilitate long-term economic growth (Mao et al., 2024; Netirith and Ji, 2022). Supporting this with illustration, a study by Netirith and Ji (2022) examined the performance of transport infrastructure connectivity in ten countries cutting across Japan, China, and South Korea and concluded that quality road linkages and rail connectivities significantly increase the amount of trade, depicting the role of well-connected transport systems in facilitating international trade and economic growth.

The storyline is however not the same in the developing world characterized with persistent transport issues which limit socioeconomic advancement. Olamigoke and Emmanuel (2012) contended that inadequate infrastructure, funding constraints, and institutional capacity impede the transport sector's contribution to economic advancement. Transport deficit in Sub-Saharan Africa has been estimated to reduce regional GDP growth by up to 2% largely due to escalated logistics costs and inadequate rural connectivity (Abalaka, Ajiteru and Sulaiman, 2021). In Nigeria, these structural conditions are particularly pronounced. A study by Umoh and Effiong (2023) found that although the transport sector contributes significantly to economic activity of around 3% to the nation’s 2023 GDP, the sector is under-exploited owing to issues of deteriorating infrastructure, poor multimodal integration, and dispersed regulation.

Studies have shown that road transport is the dominant means of transport in Nigeria, accounting for over 90% of passenger and cargo traffic (Akujor et al., 2022; Badmus et al., 2012; Daramola, 2022). Nevertheless, Paul and McSharry (2021) pointed out that the majority of the road infrastructure is in poor condition, which causes higher travel time, increased vehicle operating expenses, and higher rates of accidents. It is even concerning to note that the rail transportation network, previously the linchpin of regional commerce and movement, has endured decades of neglect and operational inefficiencies in Nigeria. As argued by Nwokedi et al. (2020), recent attempts to restore major corridors such as the Lagos–Kano and Warri–Itakpe lines are welcome steps but are still short of the mark without a sound national multimodal strategy. Besides the rail transport mode, Baba and Abdulrahman (2024) maintained that the inland waterways, which are cheap modes of transport, are underused due to limited navigational assistance and seasonality. To further complicate this subject of discourse, Oyesiku, Onakoya and Folawewo (2013) pointed out that port congestions and the hinterland connectivity continue to hamper the nation's maritime transportation efficiency.

The socioeconomic consequences of Nigeria's inefficiencies in transport are extensive. Limited transportation accessibility restricts rural populations' access to healthcare, education, and market access, exacerbating regional disparities and undermining national development plans (Ezeudu and Obimbua, 2014; Olapoju, 2025; Onyeme, Price and Edum-Fotwe, 2019). For example, a research by Baba and Abdulrahman (2024) on the Baro Inland Port in Niger State established that transport infrastructure developments significantly enhanced local income levels, access to markets, and access to public services. Conversely, inadequate transport connectivity tends to be located in regions that have higher rates of poverty and lower rates of education, and which in turn aggravate the "spatial mismatch" generated by the distance between economic opportunity and people (Aderibigbe and Gumbo, 2022; Anjorin, 2024; Esin, Okon and Mercy, 2025).

Looking at the point that transport constitutes the metaphorical circulatory system of economic geography and social development, it becomes quintessential to carry out a systematic review with a view to examining the nexus between transport and Nigerian socioeconomic development. The review will seek to explore how different transport modes and policies have contributed to socioeconomic development in the different regions

of Nigeria. It will also pinpoint knowledge gaps, inform policy-making, and recommend strategic investments that align transport planning with wider development agendas.

2.0 Materials and Method

2.1 Research Design

The study adopted a systematic review method following the Preferred Reporting Items for Systematic Reviews and Mettta-Analysis (PRISMA) 2020 guidelines to enhance transparency and replicability in the syntheses of empirical papers addressing the transport-socioeconomic development nexus in Nigeria (Page et al., 2021). The strength of systematic reviews over other reviews lay in the fact that they are suited to aggregate disparate evidence and pinpoint knowledge gaps in a given area. The design was used because it can critically analyze the varied impact of transport infrastructure on socioeconomic development in Nigeria (Oladipo, 2010; Faiyetole and Adewumi, 2024).

2.2 Database Selection, Search Terminology, and Search Strategy

To access and retrieve recent and relevant peer-reviewed papers, comprehensive searches were conducted using Scopus, Web of Science, Google Scholar, and JSTOR between April and May 2025. Aligning with Unegbu et al. (2024), these were selected since they are overarching databases that capture interdisciplinary research in economics, transport studies, and development planning. As indicated in Table 1, Population, Intervention, and Outcome (PIO) framework was used to structure the search terms. Search strings encompassed the blend of keywords and Boolean operators. Aligning with the argument of Mezaofi, Gontcharov and Gunasekara (2019) on the choice of PIO framework in this study, the scholars pointed out that it is preferable for qualitative or empirical studies over PICO due to the absence of the 'Comparison' element, allowing greater inclusion of relevant studies.

Table 1: Search terms and synonyms

Population	Intervention	Outcome
Nigeria	Transportation, transport, transport infrastructure, transport systems, road, rail, water, multimodal networks	Socioeconomic development, poverty alleviation, employment, GDP growth
("transport infrastructure" OR "road" OR "rail" OR "transport system") AND ("socioeconomic development" OR "economic growth" OR "poverty reduction") AND ("Nigeria")		

Source: Author's compilation (2025).

2.3 Inclusion and Exclusion Criteria

Articles were selected based on predetermined inclusion and exclusion criteria to ensure methodological robustness and relevance. The inclusion and exclusion criteria for this study are illustrated in Table 2. The selection guaranteed that only high-quality, context-specific studies were included (Adepoju, 2021).

Table 2: Inclusion and exclusion criteria

Inclusion	Exclusion
Primary peer-reviewed articles published between 2015 and 2025	Primary peer-reviewed articles published before 2015
Studies focused exclusively on Nigeria	Studies in non-Nigerian contexts
Papers examining the influence of transport infrastructure on socioeconomic measures	Papers without a clear linkage between transport and socioeconomic indicators

Articles written in the English language	Articles written in foreign languages
Qualitative, quantitative, or mixed-method empirical studies	Non-empirical or opinion articles and duplicates and not available full texts

Source: Author's compilation (2025).

2.4 Critical Appraisal Tool

All included studies were critically appraised using Mixed Methods Appraisal Tool (MMAT), Version 2018, which was designed to examine methodological quality in studies from five study types including qualitative, randomized controlled trials (RCTs), non-randomized, quantitative descriptive, and mixed methods (Hong et al., 2018a). The MMAT assesses five essential dimensions: clarity of research questions, adequacy of data collection, appropriateness of analysis, relevance of results, and coherence of conclusions. In line with Oraegbune and Ugwu (2020), each study was reviewed independently by two reviewers, and discrepancies were resolved by consensus or resort to a third reviewer. The tool ensured that the evidence base of the review was both methodologically strong and reliable.

2.5 Data Extraction

Data extraction was conducted in an orderly manner using a pre-formatted table that recorded important characteristics of the study cutting across authors and date, purpose(s), sampling strategy, sample, setting, ethics, statistical methods and major findings. As revealed in Table 3.

Table 3: Data extraction

Authors and Date	Aim(s)	Sampling method	Sample	Setting	Methodology	Ethics	Statistical techniques	Main findings

Source: Authors Compilation (2024).

2.6 Data Analysis

The analyzed data were extracted thematically using a narrative synthesis approach suitable for synthesizing diverse types of evidence (Mwendwa et al., 2022). Themes were educed using open coding of data, and results were categorized into repeated socioeconomic indicators and transport nexus. Patterns of convergence and divergence between methodologies (qualitative and quantitative) were also highlighted to enhance interpretive depth.

2.7 Ethical Considerations

Although secondary data from previously published literature were utilized in this research, academic integrity and correct referencing were strictly observed throughout the review (Page et al., 2021). Studies from peer-reviewed, reputable journals only were included to ensure research credibility and ethical standards. In the course of this study, authorial sign-off questions, data manipulation, or plagiarism were avoided by staying in line with the PRISMA protocol and double-verifying for any incorrect extraction or misappropriation of information (Moher et al., 2009).

3.0 Results

This section presented results from the synthesis of evidence from included articles regarding the link between transport and socioeconomic development. It highlights graphical overview of the PRISMA Flowchart, which provides the numbers of papers identified, excluded, and included in the research as well as quality appraisal of the included articles, preliminary

analysis of the included articles, and synthesis of data regarding the topical investigation.

3.1 Flow Chart

The PRISMA flow diagram in Figure 1 illustrates a protocol for a systematic review examining the relationship between transport and socioeconomic wellbeing in Nigeria, giving an explicit and replicable approach to evidence synthesis in the field.

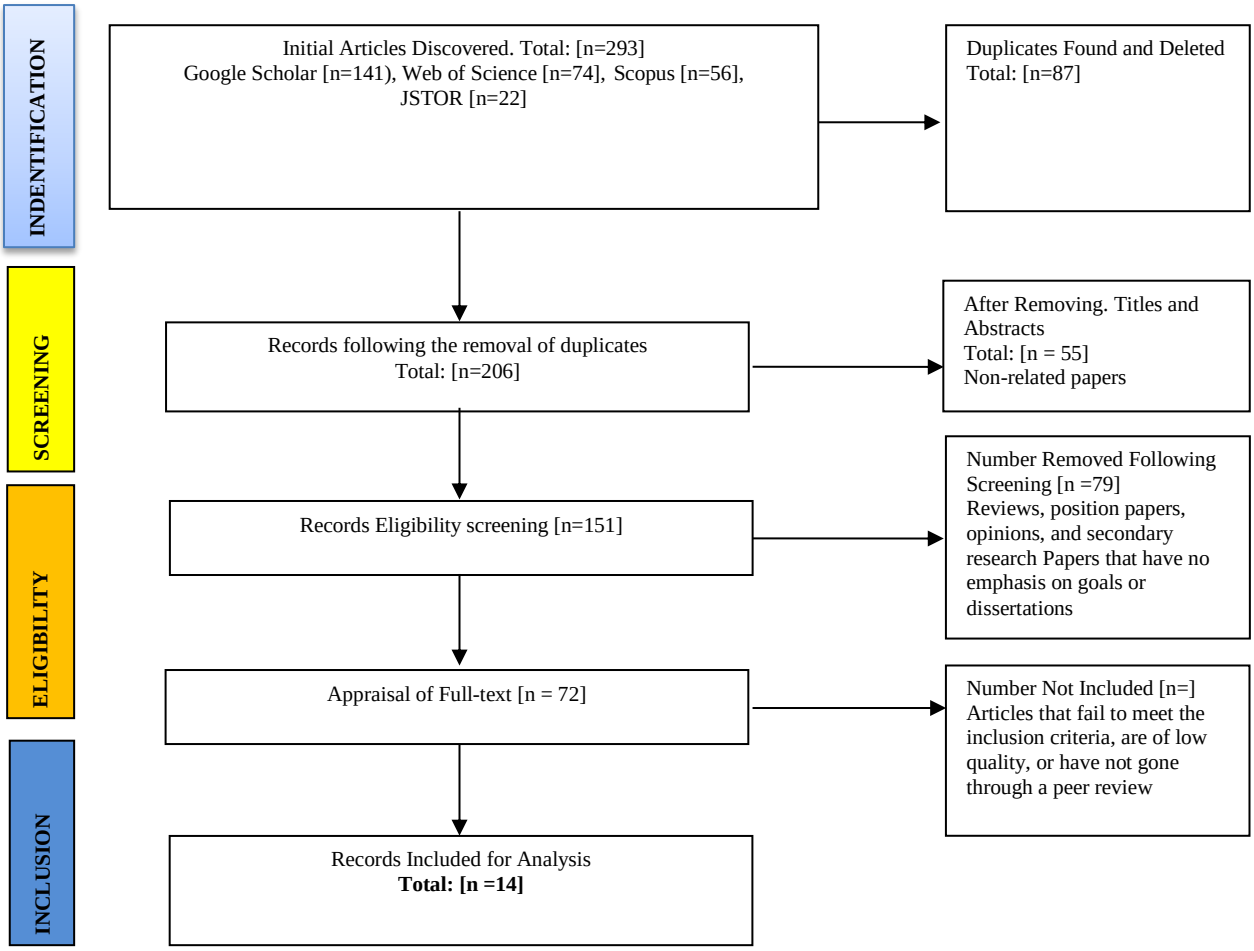

Figure 1: PRISMA Flow Chart

Source: Authors' compilation (2025)

Of the 293 articles originally retrieved from major scholarly databases such as Google Scholar, Web of Science, Scopus, and JSTOR, 87 duplicates were removed, a standard practice to reduce bias and redundancy in systematic reviews. Through screening, 55 unrelated articles were excluded by titles and abstracts so that studies of relevance to transport and socioeconomic development were retained, following best practice guidelines for systematic reviews. A further 79 papers, including reviews, opinion pieces, and secondary sources lacking a direct focus on socioeconomic

development effects, were excluded, leaving 72 papers for full-text screening in line with rigorous quality control processes to maximize the validity of review outcomes. Ultimately, only 14 papers met the inclusion criteria, reflecting a limited quantity of high-quality, peer-reviewed empirical research with an explicit investigation on the link between socioeconomic development and transport infrastructure. The data extraction containing in-depth information on the articles included in this review is presented in Table 4. This reveals an enormous literature gap and the necessity for more focused, primary research to inform evidence-based transport policies that drive sustainable socioeconomic development in Nigeria (Aderibigbe and Gumbo, 2022).

Table 4: Data extraction of included articles

Authors and Date	Aim(s)	Sampling method	Sample	Setting	Methodology	Ethics	Statistical techniques	Main findings
Ojile (2021)	To analyze the importance, development, and socio-economic impacts (positive and negative) of the proposed East-West Coastal Road in Nigeria.	Purposive	390 involving Cross River to Akwa Ibom axis sampled with nearly 250 questionnaires. Ondo (Ilaje) to Lagos (Lekki) axis sampled with 140 questionnaires administered and 76 (54.3%) retrieved for analysis.	. Nigerian Coastal Zone spanning nine coastal states (Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Lagos, Ogun, Ondo, and Rivers), consisting of a 704 km main road and 106 km of spurs connecting coastal and hinterland towns.	Mixed method	Compliance with Nigerian national environmental and social regulatory. Consent and community involvement through consultations enabled participation; compensation and mitigation consideration to affected communities	Descriptive involving simple frequency and percentages, thematic synthesis	The study found the project generated job opportunities with employment estimated during construction surging to over 11,000 jobs. It indicated increased economic activities: fishing increased by 27.5%, trading by 24.4% following road construction. Travel time reduced from 10-12 hours to approximately half between Lagos and Calabar. Social beneficial impacts include improved accessibility, economic stimulation, national integration, and tourism development.

Abdulkarim et al. (2022).	To examine the roles of road transport policy on economic development in Federal Capital Territory Abuja, Nigeria, from the perception of stakeholders.	Purposive	160 valid questionnaire respondents; 5 interview participants (Directors of FCT Transport Secretariat).	Federal Capital Territory Abuja, Nigeria.	Mixed-method	Not explicitly stated	Descriptive statistics (percentages, means), thematic qualitative analysis, Mercado's analytical framework for policy analysis.	Findings from the study indicated that road infrastructures and safety have a positive and significant relationship with economic development. The study confirmed that the city's road networks improve wellbeing (mean = 3.79), quality of living (mean = 3.31), easy access to the workplace (mean = 3.69), and improve access to education (mean = 3.38). Conversely, it also revealed that barriers to policy implementation include funding constraints, corruption, lack of institutional frameworks, and selective policy implementations. Sampled interviewees in the study reported that that road transport policies boost economic development by improving access to employment, schools, and markets; and provide employment opportunities. Findings from the interviewees in the study further demonstrated that the Abuja Light Rail System and Urban Mass Transit as positives while lack of coverage of rural areas and policy funding as negatives of the nexus between transport and socioeconomic development.
Baba and Abdulrahman (2024).	To examine the impact of transport infrastructure development on the socioeconomic wellbeing of the people of Baro.	Random	394 residents of Baro were given questionnaires, and 350 completed questionnaires were retrieved.	Baro, Niger State, Nigeria	Quantitative	Not explicitly stated	Descriptive statistics (simple percentage) and chi-squared analysis.	The study found that the development of transport infrastructure has strong beneficial effects on socioeconomic well-being, which ultimately results in better access to education, health, and job opportunities. Chi-square value of 791.5 is higher than the critical value of 3.18 at 0.05 level of significance with 3 degrees of freedom.

Nwodo et al. (2022).	To ascertain the influence of road transport system on economic growth in Nigeria	systematic random	A sample size of 284 was drawn from a population of 980.	Management and administrative staff of Peace Mass Transit Ltd (Enugu State), Nigerian Maritime Administration and Safety Agency (NIMASA) (Delta State), Royal Mass Transit Ltd (Anambra State), and Eastern Gateway Mass Transit Ltd (Ebonyi State).	Quantitative	Not explicitly stated	Percentage and frequency distribution, Regression Analysis, Pearson product moment correlation coefficient	Findings from the study showed that road transport system played crucial roles in the economic growth of Nigeria (regression value of 0.648, coefficient of determination value of 0.419). It indicated that rail transport system has a vital role to play in the economic growth of Nigeria (regression value of 0.741, coefficient of determination value of 0.548).
Omono, Uyang and Okpa (2024).	To examine the impact of Niger Delta Development Commission (NDDC) feeder road construction on the socioeconomic well-being of people in the Southern Senatorial District of Cross River	Purposive	1199 inhabitants of the Southern Senatorial District of Cross River State, Nigeria. Southern Senatorial District of Cross River State, Nigeria.	Southern Senatorial District of Cross River State, Nigeria.	Mixed method	Not explicitly stated	Simple Linear Regression Analysis, Thematic Analysis	Findings from the study revealed a \strong positive correlation between NDDC feeder road construction and socioeconomic well-being ($R = 0.729$). Adjusted $R^2 = 0.531$ indicating feeder road construction explains 53.1% of variance in socioeconomic wellbeing. $F = (1, 1198) = 452.618$, $p < 0.05$ indicating statistically significant model. Regression coefficient $B = 0.730$, $t = 21.275$, $p < 0.05$ indicating a unit increase in feeder road construction is associated with a 0.730 increase in socioeconomic wellbeing. Findings from the interview session further corroborated that roads enhance access, transportation, business, and livelihoods.

	State, Nigeria.							
Olufunke, Nwokobia and Onuh (2023).	To analyze the influence of rural roads on the socioeconomic development of the Otukpo and Agatu Local Government Areas (LGAs) of Benue State.	Random	400 respondents (Traders, farmers, youth, and elders who have resided in these communities for at least four years)	Otukpo and Agatu Local Government Areas of Benue State, Nigeria.	Mixed method	Not specifically mentioned	Simple frequency and percentages, thematic analysis	Findings from the study revealed that 55.7% of the respondents strongly disagree that they have access to good roads. 52.7% strongly agree that the rural roads in Otukpo and Agatu LGAs are single lanes. 54.1% strongly agree that inaccessible rural roads undermine their socio-economic development.
Onuchukwu (2023)	To analyze the effects of rail transport services on economic development (market development, education, and employment) in Lagos, Nigeria.	Convenience	208 respondents including staff, tourists, passengers, and excursionists	Lagos Mainland and Agege LGAs, Lagos State, Nigeria	Quantitative	Not specifically mentioned	Chi-square	The study discovered that train freight services significantly improve market development ($\chi^2 = 79.903 > 21.0261$; $df = 12$; $p < 0.05$). Excursion train services significantly improve education ($\chi^2 = 78.46 > 21.0261$; $df = 12$; $p < 0.05$). Rail services significantly contribute to the generation of employment ($\chi^2 = 44.496 > 21.0261$; $df = 12$; $p < 0.05$).
Etim and Umoren (2015).	To investigate the relationship between road transport infrastructure and the level of economic activities in Ikot Abasi Urban.	Multi-stage	400 households in 4 sectors (100 each)	Ikot Abasi Urban, Akwa Ibom State, Nigeria	Quantitative	Not specifically mentioned	Descriptive (tables, histograms, percentages) and inferential (Pearson Product Moment Correlation).	Findings from the study indicated that petty trading was the most common economic activity (45%). Strong positive correlation ($r = 0.99$) between length of roads constructed and economic activity distribution. Economic activities rose from 35 (1988–1990) to 156 (2006–2008) as roads rose from 7.5 km to 50.8 km. Petty trading accounted for 30% of total employment; vulcanizing the least at 2%
Ibanga and Akpan. (2024).	To ascertain the relationshi	Stratified	400 questionnaires administ	Akwa Ibom State, Nigeria.	Quantitative	Not specifically mention	Descriptive statistics (means,	The study found positive significant relationship between road infrastructure and agricultural production

	p between road infrastructure and socio-economic development in Akwa Ibom State, Nigeria.		ered; 343 valid responses used for analysis			ed	standard deviations), Inferential (Pearson correlation).	(Pearson r = 0.615, p = 0.002). Significant positive relationship between road infrastructure and access to education (Pearson r = 0.548, p = 0.041). Significant positive relationship between road infrastructure and healthcare service delivery (Pearson r = 0.461, p = 0.034).
Jimoh and Olawuwo (2024)	To analyze the impact of the road transport system on socioeconomic development in Oyo town.	Stratified	100 made up of 40 minibus drivers, 40 motorcyclists, and 20 private car owners in Oyo town.	Oyo Town, Oyo State	Quantitative	Not specifically mentioned	Descriptive (Frequency and mean rating)	The study found that road transport affects access to health (57 total), education (43 total), markets (50 total), and employment opportunities (73 total).
Ogundare (2020)	To determine the perceived socio-economic benefits of Bus Rapid Transit (BRT) for public bus system users and mitigate transportation problems in order to build an operational, lively, and sustainable city in Nigeria, Lagos State.	Purposive	539 BRT users (respondents)	539 BRT users (respondents) Lagos State, Nigeria - specifically Lagos BRT communities around principal corridors like Ikorodu Road, Western Avenue, Eko Bridge (22 km between Mile 12 and Lagos Island).	Quantitative	Not specifically mentioned	Descriptive statistics (frequency, percentages, mean weight value), inferential statistics like F-test (analysis of variance), Scheffe post-hoc test for multiple comparisons.	Findings from the study indicated that most highly rated socio-economic benefits include affordability (MWV = 2.94), reduced commuting time/stress (MWV = 3.25), good quality roads (MWV = 2.98), clean buses with comfortable seats (MWV = 3.14), value for money (MWV = 3.10), increased patronage (MWV = 3.16), catalyst to development promoting smart growth (MWV = 3.37), urban design improvement (MWV = 3.10), reduced pollution (MWV = 2.81). Challenges like availability and security ranked lower and were mostly dismissed. Scheffe post-hoc affirmed benefits outweighing challenges significantly.

Alade, Olaseni and Ilechukwu (2019)	To analyze the relationship between transport systems and individuals' livelihood means.	Multi-stage	129 houses were chosen from the 3 purposively selected peri-urban settlements around the Lagos/Badagry axis of Lagos State, Nigeria	Lagos	Quantitative	Not specifically mentioned	Descriptive statistics (frequency distribution, mean, and relative significance analysis), Spearman Rank correlation analysis, and logistic regression	Findings from the study indicated that transport systems had significant and positive impact on sustainable livelihood (mean = 3.47), with opportunity to invest in economic opportunities having the highest impact (mean = 3.84). The study discovered that 70% of the respondents make a single trip (returned journey) in a day. 47.3% of the respondents marked accessibility condition of the public transport in the area as good. 24.8% marked as very good. 65.9% of the respondents marked quality of public transport in the area as in fair condition. Accessibility of public transport system was positively significantly correlated with Income generation at 0.05% level of significance. -Transport network is positively significant to sustainable livelihoods ($\chi 2$ (1) = 25.441, $p<0.01$).
Muhammed et al. (2023).	To unveil the correlation between the impact of road infrastructure on population and economic growth in Kaduna metropolis.	Purposive	46 respondents: 2 each from KASUPDA, KADGIS, KADIRS, KASTLEA, FRSC, NURTW, NARTO, KADIRS, Tricycle Union Association, traders, and estate	Kaduna city, Kaduna State,	Qualitative	Not specifically mentioned	Thematic approach	Two schools of thought emerge from the study's findings: one holds the belief that road infrastructure has a direct link with positive population and economic growth, while the other does not see this correlation due to displacement of small businesses and increased journey to purchase products. The greater the road infrastructure, the greater the economic growth and vice versa.

			developers; 22 commuters.					
Oluwakoya and Ogundipe (2019).	To examine the travel behavior characteristics in Nigeria's most commercialized local government area.	Random	200 questionnaires were distributed, and 120 properly completed questionnaires were analyzed.	Eti-Osa Local Government Area, Lagos, Nigeria.	Mixed method	Not specifically mentioned	Descriptive statistics, chi-square statistical analysis, and regression analytical techniques were used. Pearson's chi-square was used in hypothesis testing. Thematic analysis	The study found that the monthly trip purposes of the respondents were primarily for working, social visits, and work-related, with 22 trips or 18.3%, respectively, followed by personal business (18 trips, 15.0%). Recreation/vacation (15 journeys, 11.7%), education (11 journeys, 9.2%), and tourism (6 journeys, 5.0%), (3 journeys, 2.5%) and medical reasons (1 journey, 0.8%). The level of accessibility provided by the respondents is that the majority of them (65 respondents or 54.2%) had medium accessibility. This was trailed by 38 respondents (31.7%) who had high accessibility, with just 17 respondents (14.1%) having low accessibility.

Source: Authors' Compilation (2024).

3.2 Quality Appraisal

Given that research designs employed in the papers covered by this study span qualitative, quantitative and mixed methods, MMAT was used to appraise these articles critically. The first step in MMAT is the quality appraisal of qualitative articles. In assessing the quality of qualitative research using the MMAT (version 2018), there are five broad criteria to use. 1.1 examines whether the qualitative approach is appropriate to respond to the research question, allowing congruence between methodology and objectives. 1.2 identifies whether data collection instruments such as interviews or focus groups are appropriate and well adapted to gather relevant information. 1.3 examines if the study findings logically and understandably emanate from the data collected, such that conclusions are drawn from participant responses or observations. 1.4 examines if the data adequately supports the interpretation of results, with emphasis on transparency and evidence-based outcomes. 1.5 seals the loop by ensuring coherence in all the elements including data sources, data collection procedures, analytical methods, and interpretations demonstrating methodological consistency and credibility throughout the research.

The second element of this appraisal tool is for Quantitative Randomized Controlled Trials studies. In appraising RCTs using the MMAT (version 2018), five criteria decide the study's methodological quality. 2.1 questions whether randomization was properly done, with participants randomly allocated to groups to minimize selection bias. 2.2 determines whether the groups were comparable at baseline, i.e., there were no intervening differences that would affect results. 2.3 assesses completeness of outcome data, looking for minimal attrition and regular follow-up. 2.4

ascertains whether outcome assessors were blinded to the intervention, reducing the risk of measurement bias. Lastly, 2.5 discusses whether or not the participants adhered to the intervention allocated, which is also relevant to the study's results and conclusions validity.

The third section assesses Quantitative Non-Randomized Studies. 3.1 establishes whether the participants are representative of the target population, as required for generalizing the findings. 3.2 establishes whether measurements taken are appropriate to measure both the outcomes and the interventions or exposures, ascertaining the validity of data being recorded. 3.3 checks for completeness of the outcome data as missing data may lead to biased findings. 3.4 examine whether possible confounding variables are controlled and accounted for in the study design or analysis, which is necessary in order to attribute observed effects to the intervention. Finally, 3.5 assess whether the intervention was delivered as intended throughout the duration of the study so that any outcomes can be attributed with certainty to the intervention itself.

The fourth part of the tool was devoted to rating articles with Quantitative Descriptive Studies. 4.1 is concerned with whether the sample design is appropriate to provide an answer to the study question, ensuring that the sampling selection of the sample aligns with study objectives. 4.2 checks if the sample is actually representative of the target population, as required for generalizability of findings. 4.3 ascertains whether measurements obtained are relevant and validly capture variables of interest. 4.4 takes into account the risk of nonresponse bias, as a high level of nonresponse can result in biased findings and reduced reliability. Also, 4.5 ascertains if the statistical analysis is adequate to answer the research question, making sure that the methods used are valid and correctly applied.

Section five of the appraisal tool is entirely devoted to the appraisal of articles with Mixed Methods Studies. The MMAT (version 2018) proposes five criteria to assess the quality of mixed methods research. 5.1 addresses whether there is a clear and justified argument for the employment of a mixed methods design, i.e., whether the method is appropriate to the research question. 5.2 addresses whether the qualitative and quantitative strands are strongly integrated to answer the research question in its entirety. 5.3 addresses whether the outcomes of this integration are well interpreted, i.e., whether the results from both strands are combined in an understandable manner.

5.4 identifies if any gaps or divergences between qualitative and quantitative results are mentioned and thoroughly debated. 5.5 further seeks to ensure that both parts, qualitative and quantitative, meet the methodological quality standards of their own research tradition for overall study credibility.

For scoring approach in this appraisal instrument, MMAT version 2018 employs a categorical scoring approach to evaluate the methodological quality of studies of various designs. Each of the tool's criteria is scored on one of three responses: "Yes" (criterion met), "No" (criterion not met), or "Can't tell" (insufficient information to assess) (Hong et al., 2018). For example, Yes =√, No = x, Can't tell = +. Importantly, MMAT developers expressly advise against the calculation of an overall numerical score, as this might oversimplify the complex judgment of methodological quality and even mislead conclusions (Hong et al., 2018b). The appraisal in the current research is presented in Table 5.

Table 5: Quality appraisal of included articles using MMAT version 2018

Studies	1. Qualitative					2. Quantitative randomized controlled trials					3. Quantitative non-randomized studies					4. Quantitative descriptive					5. Mixed method				
	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	5.1	5.2	5.3	5.4	5.5
Ojile (2021)																					√	√	√	√	√
Abdulkarim et al. (2022).																					√	√	√	√	√
Baba and Abdulrahman (2024).																√	√	√	+	√					
Nwodo et al. (2022).																√	√	√	√	√					
Omono, Uyang and Okpa (2024).																					√	√	√	+	√
Olufunke, Nwokobia and Onuh (2023).																					√	√	+	+	√
Onuchukwu (2023)																√	x	√	√	√					
Etim and Umoren (2015).																√	√	√	√	√					
Ibanga and Akpan. (2024).																√	√	√	√	√					

Jimoh and Olawuwo (2024)																√	√	√	√	√					
Ogundare (2020)																√	x	√	√	√					
Alade, Olaseni and Ilechukwu (2019)																√	√	√	√	√					
Muhammed et al. (2023).	√	√	√	√	√																				
Oluwakoya and Ogundipe (2019).																					√	√	+	+	√

Source: Authors' compilation (2025)

Evaluation of the articles included in this study involved applying the MMAT (version 2018) to critically appraise papers used for this review cutting across qualitative, quantitative descriptive, and mixed method designs. Notably, all the mixed methods research attained crucial quality standards such as a well-founded reason for using mixed methods and proper integration of findings, although a few did not provide proper clarification with respect to bridging inconsistent findings across study components. The quantitative descriptive study overall was strong in the use of adequate sampling methods and credible measurement tools, with some problems of sample representation and nonresponse bias being observed. The single qualitative study was highly methodologically consistent, with data collection methods appropriately aligned and transparent explanation of results. Overall, the review implies that most of the research was sound methodologically u well-suited to their respective questions, with reflective deployment of survey methods across various methodological approaches.

3.3 Preliminary Synthesis of Included Papers

3.3.1 Synthesis of Included Papers According to Years of Publication

Synthesis of the papers incorporated by years of publication reveals an increasing trend in the interest in how transport impacts socioeconomic growth in Nigeria in research. As elicited in Figure 2, only one article (n = 1) dated between 2015 and 2021, met the set criteria and included in this review, with exemption to 2019 in which two articles (n = 2) were incorporated into the study. Similarly, in 2020, 2022 and 2023, two papers (n = 2) each met the study's inclusion criteria and were included for synthesis. Most importantly, 2024 holds the year with the highest number of included articles with four papers (n = 4), highlighting conspicuous rise in the publication of primary papers on this area of study. This spike in the

publications of primary articles on this subject of investigation lend credence to the increasing interest on the part of scholars to appraise transport infrastructure as one of the important drivers of economic growth in Nigeria. Post-2019 development in this area of investigation is credited to national policy plans such as the Economic Recovery and Growth Plan (ERGP) and the National Development Plan (2021–2025) which places on transport infrastructure development. Arguably, the surge in publication of primary studies on this topical issue in 2024 signals increased emphasis on addressing overriding challenges like urban mobility, rural access, and logistics inefficiencies. It also signifies policy- and research-driven momentum towards harnessing transport systems as sustainable drivers of growth and development.

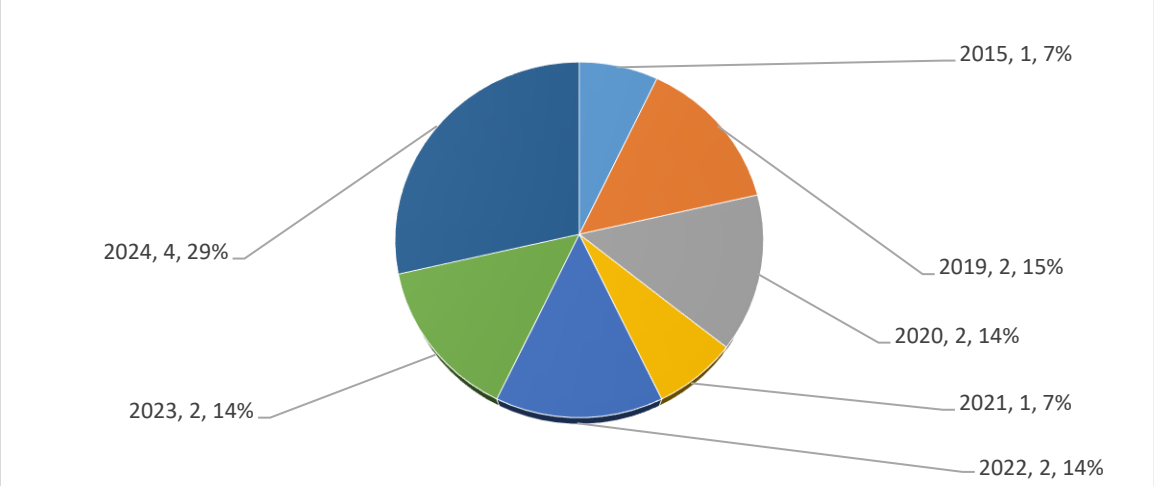

Figure 2: Synthesis of Included Papers According to Years of Publication

Source: Authors' compilation (2025)

3.3.2 Synthesis of Included Papers According to Sampling Techniques

This research work on transportation and socioeconomic development in Nigeria uses a variety of sampling techniques which helps explain research practices in this field. As illustrated in Figure 3, purposive sampling accounting for 35.71% of the cases, is dominant and indicates that a large number of researchers select respondents on purpose with specific experience or knowledge as it relates to transport infrastructure and its socioeconomic effects. The approach delivers targeted insights, but limits the generalizability of findings. Random sampling (21.43%) and stratified sampling (14.29%) indicate efforts towards objectivity and representativeness, enabling researchers to examine how different groups of populations or regions benefit disproportionately from transport development. Multi-stage sampling (14.29%) is particularly useful in extensive studies in the diverse regions of Nigeria, enabling the ability to investigate the effect of transport on socioeconomic wellbeing. The use of systematic (7.14%) and convenience sampling (7.14%) reflect intermittent utilization of ease of access, mainly in pilot studies or areas with logistical challenges.

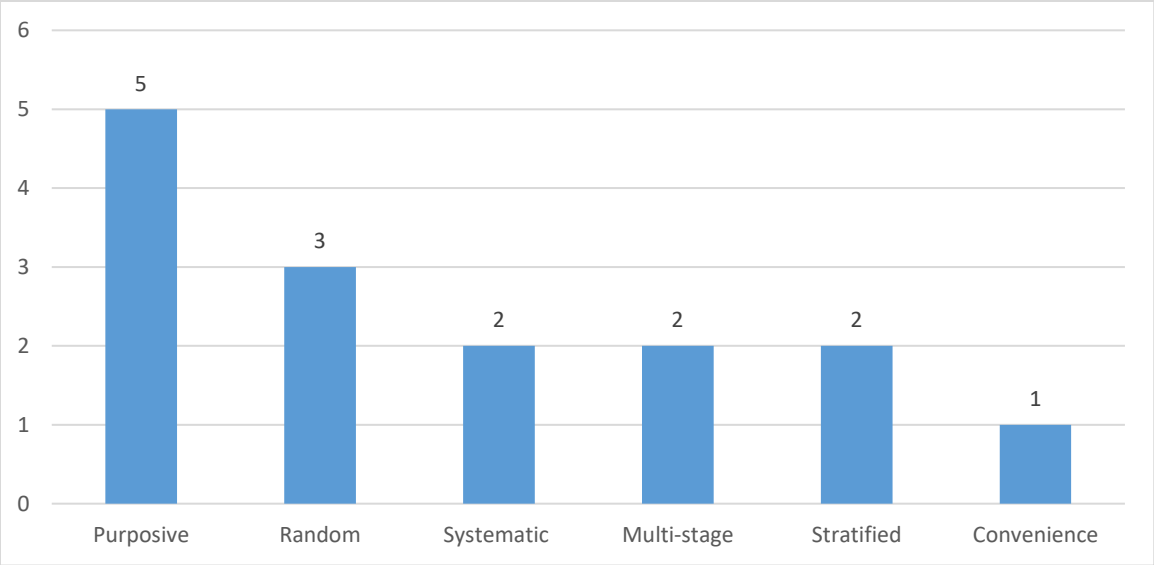

Figure 3: Synthesis of Included Papers According to Sampling Techniques

Source: Authors' compilation (2025)

3.3.3 Synthesis of Included Papers According to States of the Federation

A quick overview of Figure 4 shows that out of the fourteen papers that were included and used for synthesis, Lagos State was the most frequent location, occurring in five studies, representing about 35.7% of the study areas. This is a clear indicator of Lagos's strategic location as Nigeria's commercial and economic hub, naturally drawing wide attention to transport and development studies. This was followed by Akwa Ibom State, occurring in three papers (21.4%), followed by Delta and Cross River states, both appearing in two studies (14.3%). The remaining eleven states and the Federal Capital Territory of Abuja were each once represented in a single paper, which suggests a less concentrated but broader research scope in various areas. This trend suggests that although there are studies that cover numerous areas, a significant cluster of studies target the most economically vibrant and infrastructural dynamic states, which reflects the link between transport infrastructure and economic development among these critical Nigerian states.

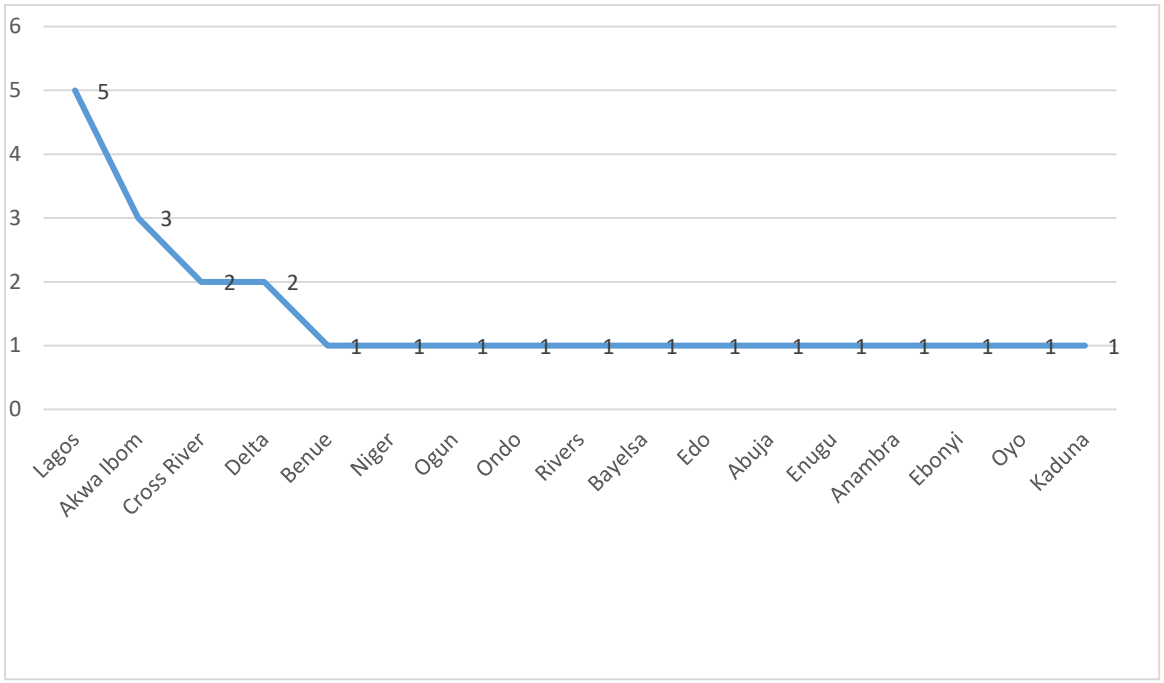

Figure 4: Synthesis of Included Papers According to States of the Federation

Source: Authors' compilation (2025)

3.3.4 Synthesis of Included Papers According to Research Methods

Looking at the research methods of the studies included in review, it is obvious in Figure 5 that most of those papers used quantitative and mixed method of research. 50% of the articles used quantitative methods which emphasizes how researchers focus on using quantitative data to evaluate the effects of transport infrastructure on social and economic issues. With these tools, researchers can assess if making roads better lowers prices in the transport industry and translates to socioeconomic growth and development. Figure 5 further showed that approximately 42.86% of the included papers further employed mixed method, evidence that more attention is being given to leveraging the strength of both quantitative accuracy and qualitative depth. This approach is particularly useful in following the multimodal, multidimensional interdependence of transport systems and society. Only one study (7.14%) employed qualitative technique, an indication that case study and in-depth interviews are not widely used, likely due to the fact that they take too long and were considered to be non-generalizable.

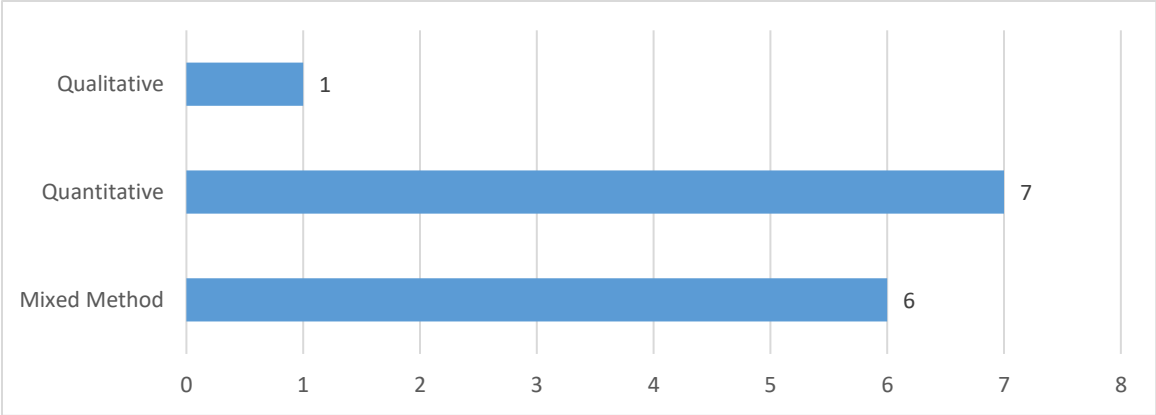

Figure 5**:** Synthesis of Included Papers According to Research Methods

Source: Authors' compilation (2025)

3.4 Positive Socioeconomic Impacts of Transportation

Table 6 captured varied positive socioeconomic impacts of transport reported in the review as well as the articles reporting each of these impacts and the total number of included articles.

Table 6: Positive Socioeconomic Impacts of Transportation

	Positive Impacts	Articles Reporting Positive Impacts	Number of Articles Reporting Positive Impacts	Total Number of Included Articles
1	Improved Access to Education	Baba and Abdulrahman (2024), Ibanga and Akpan (2024), Jimoh and Olawuwo (2024), Onuchukwu (2023)	4	14
2	Facilitate Access to Healthcare	Ibanga and Akpan (2024), Jimoh and Olawuwo (2024)	2	14
3	Improved Access to Markets/Trading	Abdulkarim et al. (2022), Etim and Umoren (2015), Jimoh and Olawuwo (2024), Ojile (2021), Onuchukwu (2023)	5	14
4	Generate Employment Opportunities	Abdulkarim et al. (2022), Etim and Umoren (2015), Jimoh and Olawuwo (2024), Ojile (2021), Onuchukwu (2023)	5	14
5	Increased Economic Activities	Etim and Umoren (2015), Ojile (2021)	2	14
6	Economic Growth/Development	Abdulkarim et al. (2022), Nwodo et al. (2022), Ibanga and Akpan (2024), Muhammed et al. (2023), Omono, Uyang and Okpa (2024)	5	14

7	Improved Well-being/Quality of Life	Abdulkarim et al. (2022), Baba and Abdulrahman (2024), Omono, Uyang and Okpa (2024)	3	14
8	Reduced Travel Time/Commuting Stress	Ogundare (2020), Ojile (2021)	2	14
9	Increased Agricultural Production	Ibanga and Akpan (2024)	1	14
10	Tourism Development	Ojile (2021)	1	14
11	Sustainable Livelihoods	Alade, Olaseni and Ilechukwu (2019)	1	14
12	National Integration	Ojile (2021)	1	14

Source: Authors' compilation (2025)

The table aggregates the benefits of transport to Nigerian socioeconomic development, as shown by evidence of 14 articles included in the review. The most prevalent benefits discussed include improved access to market and trading (n = 5) articles, employment generation (n = 5) articles, and economic growth/development (n = 5) articles. Other notable effects are increased access to education (n = 4) papers, increased well-being (n = 3) papers, and increased healthcare access (n = 2) papers. One article (n = 1) reported benefits like increased agricultural production, tourism development, sustainable livelihoods, and national unification. The narrative synthesis of these beneficial effects are presented in headings as follows.

3.4.1 Improved Access to Education

Four studies (n = 4) representing about 28.6% of the included articles reported that increased transport infrastructure in Nigeria has improved access to education highlighting the key role of the transportation sector in increasing education opportunity (Baba and Abdulrahman, 2024; Ibanga and Akpan, 2024; Jimoh and Olawuwo, 2024; Onuchukwu, 2023). Studies including Baba and Abdulrahman (2024) established this link with chi-square (χ^2 = 791.5), Ibanga and Akpan (2024) revealed moderate correlation between transport development and access to education (r = 0.548, p = 0.041). In Oyo, Jimoh and Olawuwo (2024) achieved increased school attendance, and Onuchukwu (2023) in Lagos recorded significant association (χ^2 = 78.46), which was higher than the critical value of 21.0261.

3.4.2 Facilitate Access to Healthcare

A quick look at the findings in Table 6 showed that two papers (n = 2) corresponding to about 14.3% of the articles included in the review established that improved transport infrastructure significantly improves Nigerian health care services accessibility further affirming its contribution to public health advancements (Jimoh and Olawuwo, 2024; Ibanga and Akpan, 2024). Ibanga and Akpan (2024) established statistically significant positive moderate correlation between access to healthcare and transportation in Akwa Ibom State (r = 0.461, p = 0.034). Similarly, Jimoh and Olawuwo (2024) in Oyo State recorded improved accessibility to healthcare services showing increased attendance at health facilities and reduced travel obstacles. These observations highlight the importance of improved transport networks in ensuring timely and equitable access to basic healthcare.

3.4.3 Improved Access to Markets/Trading

From Table 6, five articles (n = 5) accounting for roughly 35.7% of included studies confirmed that improved transport facilities considerably improve access to markets and trading opportunities within Nigeria (Abdulkarim et al., 2022; Etim and Umoren, 2015; Jimoh and Olawuwo, 2024; Ojile, 2021; Onuchukwu, 2023). Findings on this subject-view explicitly showed that transport infrastructure development significantly improved market access and trade across Abuja, Ikot Abasi, Oyo, and Lagos. Ojile (2021) reported improvement in fishing by 27.5% and trading by 24.4%, while Etim and Umoren (2015) reported petty trading to contribute 30% of employment in Ikot Abasi. Onuchukwu (2023) observed a highly significant association of transport with access to market ($\chi^2 = 79.903 > 21.0261$). These findings all highlight the contribution of transport towards economic activity and livelihood opportunities.

3.4.4 Generate Employment Opportunities

Five articles (n = 5) as indicated in Table 6 corresponding to about 35.7% of the studies included in this review found that transport infrastructure development in Nigeria offers deep opportunities for employment (Abdulkarim et al., 2022; Etim and Umoren, 2015; Jimoh and Olawuwo, 2024; Ojile, 2021; Onuchukwu, 2023). Specifically, Abdulkarim et al. (2022), Etim and Umoren (2015), Jimoh and Olawuwo (2024), Ojile (2021), and Onuchukwu (2023) established encouraging impact of transport infrastructure on employment opportunities in Abuja, Ikot Abasi, Oyo, and Lagos. Ojile (2021) revealed that the current construction of the coastal highways from Lags to Calabar has created about 11,000 jobs, while Etim and Umoren (2015) noted petty trading accounted for 30% of total employment. Onuchukwu (2023) confirmed the robust association between transport projects and employment outcomes ($\chi^2 = 44.496 > 21.0261$).

3.4.5 Increased Economic Activities

Two papers (n = 2) approximately 14.3% of papers used in this study reported transport infrastructure led to increased economic activities in the concerned study locations (Etim and Umoren, 2015; Ojile, 2021). Etim and Umoren (2015) and Ojile (2021) demonstrated unequivocally that transport infrastructure raised economic activities significantly. In Ikot Abasi, economic activities expanded from 35 between 1988 and 1990 to 156 between 2006 and 2008. Similarly in Lagos, fishing increased by 27.5% and trading by 24.4%, reflecting the beneficial effect of improved access on livelihood and business in the city.

3.4.6 Economic Growth/Development

In Five studies (n = 5) as illustrated in Table 6, representing 35.7% of the articles included in the review, economic development and growth in Nigeria were explained as being positively associated with transport improvement (Abdulkarim et al., 2022; Ibanga and Akpan, 2024; Muhammed et al., 2023; Nwodo et al., 2022; Omono, Uyang and Okpa, 2024). They show how transport infrastructure promotes economic development and growth in several Nigerian states. This is further illustrated statistically ($R = 0.648$ and R^2 of 0.419) (Nwodo et al., 2022), ($r = 0.615$ and $p = 0.002$) (Ibanga and Akpan, 2024) and ($R = 0.729$) (Omono, Uyang and Okpa, 2024).

3.4.7 Improved Well-being/Quality of Life

Three papers (n = 3) accounting for about 21.4% of the articles included for review as highlighted in Table 6 reported that transport infrastructure positively impact well-being and quality of life (Abdulkarim et al., 2022; Baba and Abdulrahman, 2024; Omono, Uyang and Okpa, 2024). Findings on the interlink between transport and socioeconomic development cutting across Abuja, Niger State, and Cross River points towards increased well-being and quality of life. Using means, chi-square and regression tests to analyze survey data, the authors established a high mean score of 3.79, a ($\chi^2 = 791.5$), and a significant correlation coefficient ($R = 0.729$), which indicated significant relationships between transport development and better quality of life of the residents in the study areas.

3.4.8 Reduced Travel Time/Commuting Stress

As shown in Table 6, two articles (n = 2) approximately 14.3% of the studies included in this analysis indicated that reduced travel time and commuting stress constitute some of the socioeconomic benefits of transport infrastructure (Ogundare, 2020; Ojile, 2021). Analyzing this nexus in Lagos, Ogundare (2020) recoded a mean weighted value (MWV) of 3.25, indicating moderate agreement on reducing stress levels. Ojile saw an immense cut in travel time from 10–12 hours to half.

3.4.9 Increased Agricultural Production

One study (n = 1) approximately 7.1% of the included papers for review, as seen in Table 6 found that transport infrastructure significantly influence boost agricultural production (Ibanga and Akpan, 2024). The authors looked at how agricultural production in Akwa Ibom is propelled by transportation infrastructure by using a Pearson correlation approach. The study revealed that better transport infrastructure significantly correlate with increases in farm produce ($r = 0.615$, $p = 0.002$). The takeaway from this synthesis is that improved roads and logistics play pivotal roles in helping farmers get their supplies and sell their crops resulting in increased productivity.

3.4.10 Tourism Development

One article (n = 1) covering around 7.1% of the included studies reported that transport infrastructure favorably impact tourism development (Ojile, 2021). The author examined the relationship between transportation infrastructure and tourism development in Lagos and established that road infrastructure and ease of accessibility significantly affect tourist inflow and visitor satisfaction. The point of analysis here is that better transport facilities stands to facilittate the visit to tourist destinations, reduced travel time, and promote local economic activity associated with tourism.

3.4.11 Sustainable Livelihoods

A cursory overview of Table 6 revealed that one paper (n = 1) accounting for approximately 7.1% of the included studies reported that transportation positively propel sustainable livelihoods (Alade, Olaseni and Ilechukwu, 2019). The authors investigated the effect of transport networks on sustainable livelihoods in Lagos. Their findings showed a statistically significant positive association (χ^2 (1) = 25.441, $p < 0.01$), suggesting that better transport infrastructure improves access to work, markets, and basic services.

3.5 Challenges and Negative Impacts

Table 7 labels series of barriers and deleterious effects arising from the interplay between transport and socio-economic nexus in Nigeria identified in the review, and articles reporting each of these limiting factors along with the number of articles employed in the study.

Table 7: Challenges and Negative Impacts

	Challenges and Impacts	Articles Reporting Positive Impacts	Number of Articles Reporting Positive Impacts	Total Number of Included Articles
1	Policy Implementation Barriers	Abdulkarim et al. (2022)	1	14
2	Displacement of Small Businesses	Muhammed et al. (2023)	1	14
3	Inaccessible/Poor Road Conditions	Olufunke, Nwokobia and Onuh (2023)	1	14

Source: Authors' compilation (2025)

Table 7 presents major challenges and negative impacts reported in the literature, including policy implementation barriers, displacement of small businesses, and poor road networks. The narrative synthesis of these barriers and negative impacts are synthesized in headings as follows.

3.5.1 Policy Implementation Barriers

As indicated in Table 7, one study (n = 1), approximately 7.1% of included publications identified policy implementation problems (Abdulkarim et al., 2022). Thematic analysis was employed by the researchers in Abuja to explore policy implementation barriers. In the research, funding gaps and corruption were identified as significant barriers that hinder proper implementation of development policies inhibiting project progress, efficiency of resource utilization, and aggravating public mistrust.

3.5.2 Displacement of Small Businesses

As reported in Table 7, one publication (n = 1) constituting about 7.1% of the articles included in the review highlighted the negative impact of transport growth on displacement of small businesses (Muhammed et al., 2023). The researcher applied a thematic approach to investigate the effects of transport infrastructure expansion in Kaduna and found that urban revitalization and highway widening schemes dislocated small business owners, disrupting livelihoods and local economies. The synthesis further uncovered that majority of the dislocated business owners do not have the necessary legal documentation to challenge their expropriation leading to little or no compensation.

3.5.3 Inaccessible/Poor Road Conditions

One study (n = 1) as shown in Table 7, making 7.1% of the included papers for review, identified the challenge of poor or impassable roads as one of the limiting factors of socioeconomic development of transportation (Olufunke, Nwokobia and Onuh, 2023). The authors studied road accessibility in Benue by using simple frequency analysis and thematic interpretations. The study demonstrated that 55.7% of respondents strongly dismissed the idea of having good roads, reflecting how dissatisfied they were about road conditions. The takeaway from this synthesis is that limited mobility, greater transport costs and less access to key services tends to affect socioeconomic development.

4.0 Discussion

Findings from the review established series of socioeconomic impacts of transport infrastructure in Nigeria, highlighting its central role in national development. Most apparently, transport was found to enhance access to markets and trade, generate employment, and induce economic growth which is in tune with Ebelechukwu et al. (2024) that transport growth reduces unemployment and spurs economic growth through enhanced market connectivity. These benefits reflect the importance of transport as a stimulant of commerce and job generation via the mobility of goods, services, and labour, particularly in big urban and peri-urban agglomerations such as Lagos, Abuja, Oyo, and Ikot Abasi. Access to health and education was also significantly improved, with several of the included studies noting higher school attendance and reduced barriers to accessing health. This is consistent with studies like Ekpenyong, Matheson and Serrant (2022) which linked improved mobility with education in South-South Nigeria and Olapoju (2025) which demonstrated improved healthcare access for pregnant women in Oyo State following improved transport. These impacts demonstrate the indirect but critical contribution of transport infrastructure on human capital formation and public health delivery. Moreover, findings from the review linked transport to improved well-being and quality of life, where evidence showed high correlations between mobility and overall standards of living. This is in line with Oviedo and Sabogal, (2020) that access to transport is closely related to well-being in impoverished Nigerian communities. Findings in this study further revealed that the positive

impacts of transport and socioeconomic development nexus include reduced travel time and stress, increased agricultural productivity, development in the tourism sector, empowerment of sustainable livelihoods, and national integration. For instance, agricultural yield was found to rise with better logistics and road connectivity in Akwa Ibom, whereas tourism and national unity were facilitated by improved connectivity in Lagos and across state boundaries. These findings are in line with Akpan and Morimoto (2022) that smallholder farmers in Akwa Ibom experienced higher productivity with better roads, and national connectivity supports tourism. The variety of these improvements illustrates the integrative function of transport as both an economic enabler and a social equalizer to broader development goals such as poverty reduction and inclusive growth. Despite the numerous socioeconomic benefits of transport highlighted across the studies, the review also unearthed significant barriers and negative impacts. These include the displacement of small businesses, uneven access to transport infrastructure and policy implementation issues marked with corruption and financing which jeopardize inclusive growth and sustainability. The implication of business owner displacement is highly affirmed by Walker et al. (2018) that the majority of the transport and development projects in Nigerian cities (e.g., Lagos, Abuja) entail compulsory eviction and displacement of small businesses without due compensation or resettlement plans. The result in this review highlighting unequal access to transport infrastructure as a constraining influence of transport-socioeconomic development potentials aligns with Ajayi et al. (2022) that such inequity encroaches on their quality of life and diminishes prospects for socioeconomic advancement. Most importantly, the result in this study that policy implementation issues aggravated by corruption and finance problems significantly undermine transport-socioeconomic relations aligns with Agbigbe (2016). The researcher confirmed that pervasive corruption diverts public funds meant for roads infrastructure to private use, with little or no avenues for accounting for the economic dividends of Nigeria's road investment in either the short or long term. In a nutshell, the evidence presents the same storyline across Nigerian states; where transport systems exist and are modernized, they initiate a range of developmental impacts that extend beyond economic indicators to influence social well-being, access to basic services, and adaptation within communities. These impacts underscores the urgency of long-term investment in transport infrastructure, policy stability, and equitable development planning across regions with a view to making the gains of transport sector both widespread and inclusive.

5.0 Conclusion and Recommendations

This systematic review explored the intricate relationship between transport infrastructure and socioeconomic development in Nigeria. A synthesis of 14 peer-reviewed studies published between 2015 and 2024 revealed that there is a strong and significant link between transport and national development. The review pointed out that better transport infrastructure increases access to services and markets and helps in boosting the local economy and job market. Significant development was largely noticed in cities Lagos and Akwa Ibom among others with attendant benefits spreading to various regions. Nonetheless, the study revealed significant challenges policy implementation challenges including finance constraints and corruption which in turn impede transport investments. Besides, the review further established that transport infrastructure expansion sometimes leads to the displacement of small and medium enterprises, with negative impacts on livelihoods and local economies. The issue of poor road conditions as identified in this review also limits the positive impacts of transport development. The study concluded by proffering the following suggestive recommendations:

. . Federal and state governments should improve and upgrade rural roads urgently in order to enhance agricultural productivity, reduce travel time to schools and hospitals, and boost rural incomes and access to services.

- There is a need to forge a synergetic collaboration between investors and private companies with the government in the form of public private partnerships (PPPs) to invest in and run transport infrastructure, especially where it encourages business, employment opportunities, and industrial development.
- Going by the finding in this study that transport sustains tourism and sustainable livelihoods, tourist-focused transport corridors should be planned with last-mile connectivity, road signage, and security facilities. Similarly, small business zones (e.g., food and craft markets) should be integrated into transport hubs to spur community-level economic activity.
- With transport linked to high agricultural production, the federal ministry of agriculture and rural development and other agencies of government should develop transport master plan enhancing farm-to-market logistics, particularly in production areas. This includes constructing farm access roads, cold chain outlets, and collection points in farming villages.
- In a bid to expand on the contribution of transport to well-being, market access, and economic development, governments should form strategic collaborations with universities and data agencies to implement impact-tracking programmes using GIS and mobile-based feedback platforms. It enables real-time evaluation of the most effective transport schemes, informing timely policy adjustments and evidence-based investment prioritization.
- The National Urban Development Agency should formulate holistic resettlement and compensation policies for small businesses when affected by transport infrastructure development. This would include legal tools to protect the rights of affected businesses and offer fair compensation.
- Together with the state authorities, the Federal Road Maintenance Agency should develop a full road maintenance programme to deal with the concerns over poor road conditions. There should be routine inspections, scheduled repairs and thought-out strategies for maintaining roads sustainably.

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