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Socio-Economic Impacts of Rivers State Government Ring Road Project on Residents of Port Harcourt Municipality

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Abstract

As nations strive towards improving the socio-economic well-being of its citizens, efficient transportation system in the form of ring roads have become a desideratum for reducing traffic congestion and enhancing movement of goods and services. The paper examines the impacts a ring road can have on residents of project area with emphasis on Port Harcourt. The Hazard and Effect Management Process (HEMP) technique developed by SHELL was used to examine the socio-economic impacts of the ring road on residents of the study area. Findings showed that, the ring road has both positive and negative impacts on residents in the area. The identified positive impacts are: improved transportation networks and access (11.5%); boost to local businesses (11.4%); improved transport infrastructure (11.3%); and reduced travel time (10.6%). Other positive benefits are increase in property values (10.2%); job creation (8.2%); enhanced quality of life (8.8%); and increased connectivity between settlements (7.9%). Of the negative impacts of the ring road, displacement of residents ranks highest (30.7%), followed by environmental pollution (23.3%), infrastructure damage (18.9%), traffic congestion and delays (13.9%), and inadequate compensation (13.3%). While, the construction of the ring road project has the potential to improve transportation system and reduce congestion in the study area, the associated negative concerns should be addressed to mitigate their impacts on residents and promote project acceptance for sustainability. Enhancing transparency, increasing community participation, and providing compensation for those negatively affected are key steps to ensuring that the project delivers on its promise to improve both infrastructure and the socio-economic well-being of residents.

Keywords: Ring road, socio-economic impact, development, sustainability, transport connectivity, infrastructure

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INTRODUCTION

The construction of ring road projects by governments around the world has been a common practice aimed at improving transportation infrastructure and connectivity within cities. As the cities are getting denser as a result of influx of rural people into the cities to seek for better life, the roads constructed decades ago have become grossly inadequate to contain the large volume of traffic thus hindering free flow of goods and services. A ring road is an integrated network that surrounds a city. Ring roads link various points within a city; enhance the distribution of traffic circulation with minimal environmental impacts.

Properly linked cities through ring roads are associated with benefits, including enhanced

movement and accessibility of goods and services within towns and its complementary regions. Easy access to different points can also result to improve well-being for citizens of project area. in a bid to accelerate access and improve the socio-economic development among the different communities in Rivers State, a ring road is be constructed by the Rivers State Government. The project which covers six Local Governments Areas of Port Harcourt; Obio/Akpo; Ikwerre; Etche; Eleme and Ogu-Bolo has total length of 50 km. As laudable as the ring road is, there have been mixed reactions on the possible impacts of the project on residents in project area. The present study therefore is an attempt to highlight the associated impacts of the projects on residents with a view to inform policy decision.

STUDY AREA

Geographically, Port Harcourt is situation about 66 km^2 from the Atlantic Ocean and is located between latitude 4°5'11" and 5°15'45" North of the equator and longitude 6°22'25" and 8°05'12" East of the Greenwich meridian. It is bounded on the north by Obio Akpor Local Government Area, on the East by Oyigbo and Eleme Local Government Areas, on the west by Emohua Local Government Area, and on the south by Degema and Okirika Local Government Areas (Figure 1). The climate of the area is tropical with extended raining and short wet seasons. The elevation of Port Harcourt is relatively low lying with an elevation of 30 m above sea level [1, 2].

The population trend of the area shows an exponential growth rate. The 1991 National Population Census reveals that Port Harcourt Municipality had 268,863 persons. In 1999, the population grew to 329,863 persons, and 349,059 persons, in 2001 while in 2006; the population was 546,789 persons [3]. The projected Figure 1 of the city came to 3,100,408 persons for 2022 with 6.5% annual growth rate. The rapid population growth of Port Harcourt may be due to the presence of social amenities and job opportunities that exert pulling effect on people to move into the area with attendant implication on the demand for transportation [4].

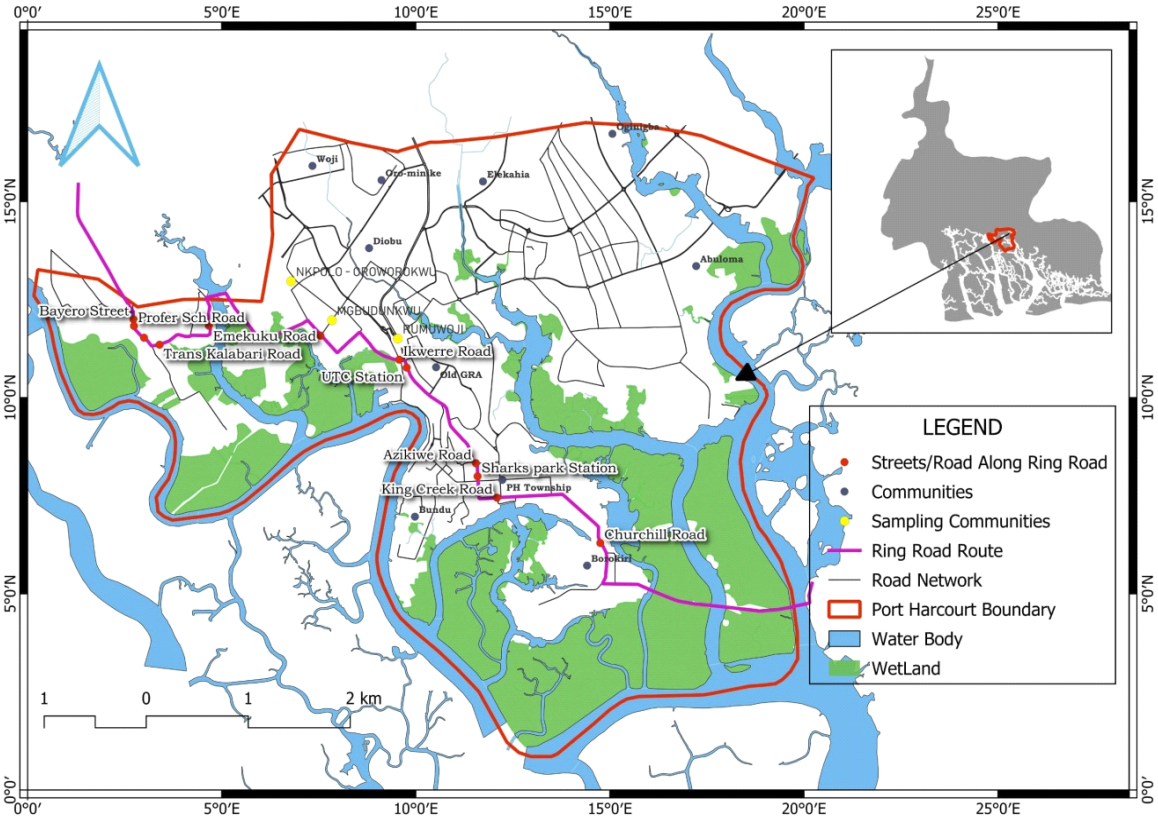

Figure 1. Rivers State showing ring road route and communities.
(Source: Rivers State Ministry of Works.)

Port Harcourt, the capital of Rivers State in Nigeria, is a major economic and commercial hub in the Niger Delta region. The city's transportation network plays a crucial role in facilitating movement of people and goods within and beyond its boundaries.

Overall, the transportation network in Port Harcourt is diverse and vital for supporting the city's economic activities, social interactions, and urban development. Despite its relatively well-developed transportation network, Port Harcourt faces challenges such as traffic congestion, inadequate road infrastructure, and limited public transportation options. This may have informed the construction of the ring road by the government.

METHODS AND MATERIALS

Primary and secondary data were used for the study. Data were collected through the use of Questionnaires and interview guide distributed to respondents. The survey research design was adopted since there was no manipulated of the variables under study. The population for this study comprises of all the residents in the 25 communities that make up Port Harcourt Municipality [3]. The targeted audience are heads of households in the three communities that the ring road project passes through in Port Harcourt Municipality to include Rumuwoji, Mgbudunkwu, and Nkpolu-Oroworukwo. The projected population of the three selected communities using the exponential formula to 2024 is 1,218,299 persons with an annual growth rate of 6.5% [3]. To determine the sample size, the total number of households from the three communities chosen for study was ascertained to be 203,049 with an average household size of 6 persons [3]. A sample size of 400 respondents was gotten through the use Taro Yamane formula at 5% level of precision. To determine the number of questionnaires to be distributed in each community, the proportional allocation method was used as shown in Table 1.

The Hazard and Effect Management Process (HEMP) technique developed by SHELL [5] was used to examine the socio-economic impacts of the ring road on residents of the study area. The Leopold matrix (Table 2) of sensitivities was used for impact identification. impacts were noted as: positive or negative; direct or indirect; short term or long term; reversible or irreversible.

To determine project likely impacts, qualitative estimates was used such as: very high frequent impact (80–100%); medium high frequent (60–79%); medium occasional impact; (40–59%) medium very unlikely that will take over 10 years to occur (20–39%) [5].

Table 1. Population and questionnaire distribution.

S.N.	Sampled communities	1991* population	2024** projected	Household size (6)	% of population	No. of questionnaires
1.	Rumuwoji (Mile 1 Diobu)	44183	353022	58837	29	116
2.	Mgbudunkwu(Mile 2 Diobu)	55682	444899	74149	37	148
3.	Nkpolu-Oroworukwo (Mile 3 Diobu)	52613	420378	70063	34	136
	Total	*152478*	*1218299*	*203049*	*100*	*400*

*(Sources: *National Population Census (1991).), **Researchers computation (2024).*

Table 2. Qualitative impact assessment matrix.

Likelihood	Potential consequence					
		Negative				
	Positive	*Hardly any*	*Little*	*Considerate*	*Great*	*Extreme*
High		Moderate	Moderate	Major	Major	Major
Medium high		Minor	Moderate	Moderate	Major	Major
Medium		Minor	Minor	Moderate	Moderate	Major
Medium low		Negligible	Minor	Minor	Moderate	Moderate
Low		Negligible	Negligible	Minor	Minor	Moderate

(Source: SHELL Nigerian Survey (2005) [5].)

REVIEW OF RELATED STUDIES

Numerous studies have been conducted on this issue. For instance, Permadi and Daud [4] looked at how road infrastructure investment affected regional economic growth in the south coastal district of West Sumatra province. Technology Project Archives' [6] findings indicate that road infrastructure has a positive impact on eight different types of economic growth indicators, including services, transportation and communication, processing industry, mining and excavation, construction and buildings, agriculture, livestock, forestry, and fisheries, as well as trade, hotels, and restaurants, as well as electricity, gas, and clean water.

Chaurey and Le [7] also examined the impact of road infrastructure development in the economy and business of rural communities in India. The results of the study show that infrastructure development affects the economy and business of rural Indian communities. In a related study, Efendi et al. [8] and Weisbrod [9] examined the socio-economic impact of infrastructure development of Lemahbangdewo West Ring road on communities at Rogojampi District in Banyuwangi Regency. Their findings showed that the development of the Lemahbangdewo West Ring Road impacted on the socio-economic conditions of the surrounding communities in terms of employment, income, and housing before and after the construction of the Lemahbangdewo West Ring Road [10].

Tohjiwa [11] studied the problems of ring road development in metropolitan cities of Medan, Palembang, Bandar Lampung, Surabaya, Makassar Manado, and Jakarta in Indonesia, using interview and survey data collection method. Findings of the study exposed 23 problems associated with the ring road construction to include uncontrolled housing development, problem of environmental management, and social problems among others.

Johansson [12] examined the socio-economic impacts of road on the living conditions of rural dwellers in the northern periphery of Europe. According to the study's findings, socioeconomic models are utilized for budget negotiations and allocation, and the target requirements for overall road conditions and the lowest acceptable standards are essentially stated. According to McGrowder et al. [13], a variety of stakeholders in the project region were impacted by the building of the North Coast Highway in Jamaica. The results show that over half of the respondents thought the North Coast Highway was good. The majority of respondents cited the following benefits: easier travel; less flooding as a result of the installation of an adequate drainage system; less wear and tear on cars; better safety and driving conditions; and more trading opportunities as a result of the influx of more people (traders who sell from outside). On the other hand, the majority of respondents expressed dissatisfaction over their reduced family time, which they ascribed to the North Coast Highway's traffic. In a different study, Bogale [14] investigated the socio-economic effects of road construction in Ethiopia, concentrating on three roads that connected the communities of Gendewuha and Gelago, Mile and Wediya, and Gindi and Kachisi. Despite variations across the various locations, the results indicated that good impacts outweigh negative consequences in all three routes. Additionally, the results showed that paved highways have higher beneficial effects than gravel roads.

Afolabi et al. [15] investigated how highway development and road expansion affect the structure and general setting of Abeokuta city in Nigeria. The results showed that the study area experienced free and smooth traffic flow; increased inflow of residents and businesses into the study area resulting in high demand for housing, and then property value; and the opening up of the study area for greater business activities culminating in high price of rents. In Nairobi, Kenya, Wanjiku [16] studied the socioeconomic advantages and environmental effects of the Thika Road super highway. The findings showed that while road development had a significant positive impact on market and investment opportunities, it had a significant negative impact on the environment, particularly on vegetation and wildlife.

Examining the socio-economic effects of the Rivers State Government ring road project on Port Harcourt residents, the study's findings are intended to help policymakers understand the differences in

the effects of road infrastructure development at different stages of construction and, more importantly, to inform policy and aid decision-making regarding road infrastructure development for the general benefit of the population, not only in the study area but, other cities starting similar projects.

RESULTS AND DISCUSSION

Socio-Economic Characteristics of Residents

According to the respondents' socioeconomic characteristics, the majority of them were men (56.4%), with the female gender accounting for 43.6%. This indicates a slight male dominance in the response rate, but both genders are fairly represented, ensuring balanced perspectives in the analysis. The marital status also reveals that 44.1% of the sampled respondents are single; 49.9% of the respondents are married while 6% are widows. The data implies that majority of the residents interviewed are married, followed by singles comprising of both male and female and then widows. The age distribution reveals that the largest group of respondents falls within the 18- to 30-year age bracket (37.5%), followed by those aged 31 to 40 years (29.3%). This indicates that a substantial portion of the respondents are relatively young. Respondents in the 41- to 50-year age group represent 23.6%, while those 51 years and older make up a smaller percentage (9.6%), indicating fewer older respondents. This implies that the respondents were adults qualified to participate in the survey.

The educational profile of the respondents shows that the majority (61.6%) have a secondary education, while 23% have attained tertiary education. A smaller percentage (12.1%) have only primary education, and 3.3% reported having no formal education. This distribution highlights that most respondents have at least a basic level of education, which is important for understanding their ability to engage with the questionnaire. The income distribution shows that 63.3% of respondents earn less than 50,000 naira monthly, which suggests a relatively low-income population. Only 9.6% earn more than 91,000 naira, reflecting economic disparities in the communities. These figures highlight the economic vulnerability of many households.

Positive Impact of Ring Road Project on Community

The data in Table 3 reveal residents' perceptions of the positive impacts of the ring road construction. Some of the benefits include: improved transportation networks and access (11.5%), boost to local businesses (11.4%), improved transportation infrastructure (11.3%), and reduced travel time (10.6%). Others are: increased property values (10.2%), job creation (8.2%), enhanced quality of life (8.8%), and increased connectivity between settlement (7.9%). Overall, better transportation and business opportunities are the most visible positive effects of the ring road construction. This suggests that infrastructure and economic benefits are key outcomes of the project.

Table 3. Positive impacts of ring road project

S.N.	Respondent view	Frequency	Percentage (%)
1.	Improved transportation network/access	364	11.5
2.	Job creation	259	8.2
3.	Increased connectivity of settlement	249	7.9
4.	Reduced travel time	335	10.6
5.	Increased property value	323	10.2
6.	Balanced urban growth	237	7.5
7.	Improved transportation infrastructure	356	11.3
8.	Enhanced quality of life	279	8.8
9.	Reduced emissions	210	6.6
10.	Safety improvement	188	5.9
11.	Boost to local business	361	11.4
	Total	*365*	*100*

(Source: Researchers' Field Survey (2024).)

Negatives Impacts of Ring Road Project on Residents of Port Harcourt

Although the Port Harcourt ring road project portents good omen to residents of the area, there are also some negative impacts associated with the project. Table 4 shows the negative impacts of the ring road project using the HEMP technique developed by SHELL [5].

Loss of Accommodation (Major)

Accommodation is one of the fundamental human needs, serving as a basic shelter and providing security, stability, and a sense of belonging. The important of accommodation goes beyond mere shelter; it is central to individual well-being, family life and community cohesion. When individual lose their homes, the impacts can be far-reaching, affecting every aspect of their lives. In the context of the ring road project which has led to the demolition of homes resulting to housing shortage for affected residents. This has resulted in a major impact, as displaced families struggle to find affordable housing options in an already congested urban environment. Increased demand for housing has inflated rents and makes accommodation less accessible, leading to homelessness.

Displacement of People from Jobs (Moderate)

Jobs are crucial to individual and community well-being, providing not only a source of income but also a sense of purpose, identity, and stability. Having a job enables people to support their families, meet their basic requirements, and support the local economy.

When people are displaced from their jobs, especially due to large-scale projects like the construction of the ring road, the impact is profound. The loss of employment disrupts the livelihoods of individuals, reducing their ability to afford necessities like food, healthcare, and education. This economic insecurity can lead to increased poverty, forcing families into vulnerable situations where they struggle to make ends meet.

Table 4. Negative impact qualifications and ratings.

Interaction code	Hazard/source of effects	Sensitivities	Impact description	Qualification	Likelihood	Consequences	Impact rating
1	Negative impact of the ring road construction	Housing shortage	1. Loss of accommodation	Negative	High	Extreme	Major
2		Unemployment	2. Displacement of people from job	Negative	Medium	Considerable	Moderate
3		Environmental degradation/noise and air pollution	3. Unhealthy environment and reduced quality of life	Negative	High	Extreme	Major
4		Cultural heritage destruction	4. Erasure of cultural identity	Negative	High	Extreme	Moderate
5		Displacement of business/loss of income	5. Loss of livelihoods and economic disruption	Negative	High	Extreme	Major
6		Disruption of power supply	6. Power shortage and inconvenience	Negative	High	Extreme	Moderate
7		Health risk	7. Exposure to health hazard and well-being decline	Negative	Medium	Considerable	Moderate
8		Increase traffic and congestion	8. Traffic jams and longer commute time	Negative	Medium	Considerable	Moderate

(Source: Researcher's Field Survey, 2024.)

In the context of the ring road, the construction activities have caused businesses within the area to shut down or relocate, leading to the displacement of workers. Although some new employment opportunities might arise, many workers have lost their jobs temporarily or permanently, especially those employed in local businesses that are forced to close. The overall effect on unemployment is moderate since there may be job creation in construction and related industries.

Unhealthy Environment and Reduced Quality of Life (Major)

Maintaining life, fostering well-being, and guaranteeing the general standard of living all depend on a healthy environment. Clean air, water, and soil are fundamental components of a healthy environment that support physical health and prevent the spread of diseases. When individuals live in a healthy environment, they are less exposed to harmful pollutants and toxins, which increase the risk of respiratory issues, infections, and other health problems. Access to green spaces, clean drinking water, and proper waste management systems contributes to healthier lifestyles and promotes mental well-being by reducing stress and enhancing the living conditions of communities.

The construction activities of the ring road have led to environmental degradation, including air and noise pollution, poses a serious threat to residents' health and well-being. Dust from construction and emissions from heavy machinery may cause respiratory issues and contribute to a decline in the quality of life for people living in these areas. The constant noise generated by the construction has also significantly disrupted daily life residents, making the living conditions less desirable.

Eroding of Cultural Identity (Moderate)

Cultural identity plays a vital role in shaping the fabric of communities, giving individuals a sense of belonging, continuity, and pride in their heritage. It encompasses traditions, language, beliefs, and practices that bind people together and create a shared sense of history and purpose. When communities are rooted in their cultural identity, it fosters social cohesion, strengthens community bonds, and ensures the transmission of cultural value from one generation to the next. Cultural identity also helps people navigate changes and challenges, providing a sense of stability in the face of social or economic pressures.

The construction of the ring road project in Port Harcourt threatens to erode cultural identity, particular for communities along the ring road route. The construction has led to significant destruction of sites of cultural significance, including traditional landmarks, historical buildings, and places of worship. This not only impacts the physical landscape but also erases important cultural identities and memories linked to these locations.

This loss not only impacts individual identity but also diminished the richness and diversity of the broader society. Without effort to preserve and respect cultural heritage during development projects, the displacement caused by the ring road might lead to a long-term loss of cultural history, resulting in social fragmentation and the disappearance of unique cultural expressions.

Loss of Livelihood and Economic Disruption (Major)

Many businesses, particularly small and medium-sized enterprises located within or near the construction site, have experience economic disruption. The relocation or closure of these businesses has led to a loss of income for business owners and their employees, resulting in financial strain and long-term economic instability for affected families.

Power Shortage and Inconvenience (Moderate)

A reliable power supply is crucial for modern life, driving economic activities, enhancing communication, and improving the quality of life. Electricity makes it possible for residences, workplaces, medical facilities, and educational establishments to operate effectively. It is essential for daily activities such as lighting, refrigeration, communication, and the operation of machinery and

appliances. In businesses and industries, stable power supply promotes productivity and innovation, directly impacting economic growth and job creation. For households, electricity is fundamental for comfort, safety, and access to information and entertainment.

Power shortages caused by the ring road construction has led to significant blackout and inconveniences. As construction activities interfere with power lines and grids, outages become frequent, halting business operations, disrupting household activities, and affecting essential services like hospitals and schools. This unreliability has led to raise the cost of living, as businesses are forced to invest in alternative power sources, such as generators, which further strains financial resources. The resulting inconveniences, such as the inability to store food, lack of communication, or interrupted work processes, diminish the quality of life for residents, especially in densely populated urban areas like Diobu. In the long term, these power shortages can slow economic progress and hamper community development.

Exposure to Health Hazard (Moderate)

Health and well-being are fundamental to the overall quality of life and productivity of individuals and communities. Good health allows people to participate fully in daily activities, contribute to economic growth, and build strong social networks. A healthy population is essential for the development of any community, as it promotes resilience, longevity, and the ability to cope with challenges. Well-being, which encompasses both physical and mental health, is vital for maintaining a balanced life, fostering happiness, and ensuring that people can engage with their environment in meaningful ways.

However, the residents along the ring road construction in Port Harcourt are exposed to various health hazards, leading to a decline in their overall well-being. Dust, noise pollution, and the potential contamination of air and water due to construction activities might cause respiratory issues, stress, and other health problems. Prolonged exposure to such hazardous conditions may weaken immune systems, increase the risk of chronic illnesses, and lower life expectancy. Furthermore, the constant disruption to daily life and the environment can contribute to mental health challenges, such as anxiety and depression. As health declines, so does well-being, leading to reduced productivity, financial strain from medical costs, and a diminished quality of life for the affected residents. Thus, preserving health and well-being is crucial, as their decline can have long-lasting negative impacts on both individuals and communities.

Traffic Jams and Long Commuting Time (Moderate)

Efficient traffic flow and short commute times are essential for the smooth functioning of urban areas, contributing to economic productivity, public safety, and overall quality of life. When traffic flows smoothly, people can move quickly between home, work, and other destinations, maximizing their time and reducing the stress associated with travel. A shorter commute enhances work-life balance, allowing individuals to spend more time on personal activities, family, and leisure, rather than being stuck in traffic. For businesses, efficient traffic flow enables timely delivery of goods and services, boosting economic activity and minimizing operational costs. In summary, efficient transportation networks are essential to the social and economic cohesion of cities.

However, traffic jams and long commuting time such as those experienced along the ring road construction in Port Harcourt, create major inconveniences for residents. Extended periods of traffic congestion lead to significant delays, causing frustration, stress, and a loss of productivity. Those who commute spend more time on the road, reducing the space available for personal or economic activities.

Traffic congestion also increases fuel consumption and vehicle maintenance costs, placing an additional financial burden on residents. Moreover, prolonged traffic jams contribute to higher levels of air pollution and accidents, negatively impacting public health and safety. Over time, these disruptions can degrade the quality of life in affected areas, making transportation a major source of inconvenience and economic loss for both individuals and the broader community.

PLANNING MEASURES TO ENHANCE SOCIO-ECONOMIC IMPACT

When the respondents were asked about the planning measures for reducing the impacts of project, the following were their submissions (Table 5):

1. Provision of alternative housing or financial assistance for affected or displaced persons;
2. Encourage contractors to hire or employ residents in the construction process;
3. Carrying out environmental impact assessment and restore habitats disrupted during construction;
4. Avoiding the use of noisy equipment to reduce noise pollution;
5. Relocation of affected cultural heritage and ancestral items to new and secured locations;
6. payment of fair compensation to those whose properties are affected

Table 5. Socio-economic impact mitigation framework.

S.N.	Impact description	Gross rating	Mitigation	Net rating
1.	Loss of accommodation	Major	(1) Provide alternative housing options or financial assistance for affected residents to relocate and also develop affordable housing units or subsidies for low-income families displaced by the project (2) Allocate alternative land for housing development to displaced residents.	Minor
2.	Displacement of people from jobs	Moderate	(3) Provide temporary financial assistance for displaced worker and also prioritize or encourage contractors to hire or employ local resident in the construction process to provide alternative income sources for those affected.	Minor
3.	Unhealthy environment and reduced quality of life	Major	(4) Conduct thorough environmental impact assessment and restore habitats disrupted by construction (5) Avoidance of use of noise-making equipment and also install noise barriers along construction corridors (6) Implement dust suppression measures which implies regular watering/showering on section of the road.	Minor
4.	Erasure of cultural identity	Moderate	(7) Relocate affected cultural heritage sites (e.g., religious centers, graves, and historical site) to new, secure locations while ensuring their historical and cultural significance is maintained.	Minor
5.	Loss of livelihood and economic disruption	Major	(8) Provide financial and logistical support for relocated businesses (9) Offer fair compensation to affected businesses for loss of income and property (10) Provide temporary or permanent alternative business space and also offer rent subsidies or financials relief for displaced businesses to cover operational cost loss during the construction period.	Minor
6	Disruption of power supply	Moderate	(11) Install temporary power generators or alternatively energy sources (e.g., solar, wind, generator, etc.) to supply affected areas during the construction period. (12) Ensure the quick repair and relocation to restore normal supply as soon as possible (13) Keep residents and businesses informed in advance about power outage and provide a timeline for when power will be restored.	Minor
7.	Exposure to health hazard and well-being decline	Moderate	(14) During the ring road construction, provide regular health check-ups, mobile clinic, pollution controls, and protective gear for residents and workers. Educate the community on health risks and how to protect them selves	Minor
8.	Traffic jams and longer commute time	Moderate	(15) Develop and implement a comprehensive traffic management plan that includes alternative routes and proper signage to redirect traffic and minimize congestion during construction and also limit or restrict construction activities during peak traffic hours to minimize the impact on daily commuters	Minor

(Source: Researchers' Field Survey, 2024.)

CONCLUSION AND RECOMMENDATION

Infrastructure plays pertinent role in bringing about national development as it facilitates spatial interaction and communication among communities through the processes of spatial integration. This study examined the socio-economic impacts of the Rivers State Government's ring road project on the residents of Port Harcourt. The investigation focused on how this major infrastructure development influences communities, particularly in terms of mobility, economic activity, property values, and environmental changes. From the findings, there are mixed feelings among residents on the gains and loss of constructing a ring road in the area. While some residents see benefits such as improved transportation and potential economic growth, others have raised concerns about displacement, higher living costs, and the disruption of daily life. From the findings of this study, the ring road project presents both opportunities and challenges for Port Harcourt residents. On the one hand, the project is expected to ease traffic congestion, improve mobility, and foster economic development by enhancing connectivity between various parts of the city. On the other hand, significant concerns have been raised by residents, particularly on the displacement of residents, rising costs of living, and environmental degradation associated with the project. Enhancing transparency, increasing community participation, and providing compensation for those negatively affected are key steps to ensuring that the project delivers on its promise to improve both infrastructure and the socio-economic well-being of residents in the ring road project area.

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