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Nigeria and the Belt and Road Initiative: Assessing its Impact on Infrastructure Development, 2018–2025

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Abstract

Infrastructure development remains central to Nigeria's economic transformation, yet inadequate transport networks, limited port capacity, poor connectivity and persistent infrastructure financing gaps continue to constrain national development. Nigeria's engagement with China's Belt and Road Initiative (BRI) has therefore attracted considerable attention, particularly because of the involvement of Chinese financing, construction companies and technical expertise in major infrastructure projects. This study examines the impact of the BRI on infrastructure development in Nigeria between 2018 and 2025, with particular attention to railway infrastructure, port and maritime infrastructure, and the wider developmental benefits and challenges associated with BRI-related projects. The study adopted a qualitative documentary research design and relied on secondary materials obtained from government publications, official institutional reports, scholarly studies and relevant international development organisations. Data were analysed thematically in line with the three objectives of the study. The study is anchored on Complex Interdependence Theory, which provides a useful framework for understanding the multiple economic, institutional and technological relationships connecting Nigeria and China. Findings indicate that BRI-related cooperation has contributed significantly to the modernisation of Nigeria's railway infrastructure, particularly through the Lagos–Ibadan and Abuja–Kaduna rail projects. The initiative has also supported the development of modern maritime infrastructure, most notably the Lekki Deep Sea Port. Beyond physical infrastructure, the projects have improved transportation options, strengthened logistics capacity and created opportunities for trade and investment. However, challenges relating to financing, maintenance, local technical capacity, technology transfer, institutional coordination and long-term sustainability remain. The study concludes that the BRI has made a tangible contribution to Nigeria's infrastructure development, but the durability of these gains depends largely on Nigeria's capacity to manage, maintain and integrate the infrastructure into its wider development strategy.

Keywords: Belt and Road Initiative, Nigeria–China relations, infrastructure development, railway infrastructure, maritime infrastructure, Lekki Deep Sea Port, Complex Interdependence.

Introduction

Infrastructure constitutes one of the foundations upon which economic development and social transformation are built. Roads, railways, ports, airports, electricity networks, telecommunications and other public infrastructure facilitate the movement of people, goods, capital and information. For a country such as Nigeria, with a large population, extensive geographical territory and an

economy dependent on both domestic and international trade, the availability of functional infrastructure is particularly important. However, Nigeria has continued to experience significant infrastructure deficits despite successive government programmes aimed at addressing the problem. The African Development Bank has consistently identified infrastructure financing and investment as important requirements for Nigeria's development, while the World Bank has also emphasised the importance of infrastructure and connectivity to productivity, employment and economic diversification. The problem is not simply the absence of infrastructure but also the quality, accessibility, maintenance and integration of existing facilities.

Against this background, China has emerged as one of Nigeria's important external partners in infrastructure development. Nigeria and China have maintained diplomatic relations since 1971, but their economic relationship became substantially stronger from the beginning of the twenty-first century. Cooperation expanded into transportation, telecommunications, construction, energy and other sectors. The launch of China's Belt and Road Initiative in 2013 created another framework for this expanding relationship. Nigeria formally joined the BRI framework in 2018 through the signing of a Memorandum of Understanding with China. The agreement provided an institutional platform for deeper cooperation in infrastructure connectivity, trade, investment and other areas. The importance of the BRI in Nigeria therefore needs to be understood within the wider history of Nigeria–China economic relations rather than as an entirely new relationship beginning in 2018 (Ajah & Onuoha, 2025).

Transportation infrastructure represents one of the most visible areas of Nigeria's cooperation with China under the BRI period. Railway development is particularly significant because Nigeria's railway system experienced decades of underinvestment and deterioration. The development and operation of standard-gauge railway services linking Abuja and Kaduna and Lagos and Ibadan have provided important alternatives to road transportation. The Nigerian Railway Corporation currently lists Lagos–Ibadan and Abuja–Kaduna among its passenger services, demonstrating that these railway connections have moved beyond construction into operational use. In 2025, the corporation announced additional Lagos–Ibadan services during periods of increased passenger demand and additional coaches on the Abuja–Kaduna service, indicating continued utilisation of the infrastructure (Nigerian Railway Corporation, 2025a, 2025b).

Maritime infrastructure represents another important dimension of the Nigeria–China infrastructure relationship. The development of the Lekki Deep Sea Port has attracted particular attention because of its modern design, large vessel-handling capacity and strategic location within the Lekki Free Zone corridor. The Nigerian Ports Authority reports that the port was commissioned in 2023 and operates under a 45-year Build-Own-Operate-and-Transfer arrangement. It has a 1.2-kilometre quay, a depth of 19 metres and designed capacity of 2.7 million twenty-foot equivalent units (TEUs). China Harbour Engineering Company was involved in the engineering and construction of the facility. The project demonstrates how Chinese construction expertise and Nigeria's public-private infrastructure strategy intersected during the BRI period (Nigerian Ports Authority, 2024).

Nevertheless, the completion of major infrastructure projects does not automatically translate into sustainable development. Questions remain concerning the financial structure of infrastructure projects, debt sustainability, maintenance, technology transfer, local participation and the ability of Nigerian institutions to manage and sustain completed facilities. Scholars have also debated whether the BRI represents a significant departure from earlier China–Nigeria infrastructure

arrangements or simply another phase of a long-standing relationship (Ajah & Onuoha, 2025). It is against this background that this study assesses the impact of the BRI on Nigeria's infrastructure development between 2018 and 2025, focusing on railway infrastructure, port and maritime infrastructure, and the wider developmental benefits and challenges associated with the initiative.

Statement of the Problem

Nigeria's infrastructure deficit has remained a major obstacle to economic development despite repeated government interventions and international partnerships. The transportation sector illustrates this challenge clearly, as inadequate railway infrastructure, pressure on road networks, port congestion and weak intermodal connectivity have historically increased the cost and difficulty of moving people and goods across the country. The BRI has provided Nigeria with access to Chinese financing, construction expertise and technical resources for major infrastructure projects, particularly in railway and maritime development. Since 2018, projects associated with the wider Nigeria–China infrastructure partnership have produced visible outcomes, including the operationalisation of modern railway services and the commissioning of the Lekki Deep Sea Port. However, questions remain regarding the actual developmental impact of these projects beyond their physical completion. Concerns about financing arrangements, debt obligations, technology transfer, local participation, maintenance and institutional capacity raise important questions about whether BRI-related infrastructure can generate sustainable long-term benefits for Nigeria. Existing studies have examined individual aspects of Nigeria–China relations and the BRI, but there remains a need for an integrated assessment of the infrastructure outcomes between 2018 and 2025. This study therefore examines the contribution of the BRI to railway development, port and maritime infrastructure, and the broader benefits and challenges associated with BRI-related infrastructure projects in Nigeria.

Objectives of the Study

The general objective of this study is to assess the impact of the Belt and Road Initiative on infrastructure development in Nigeria between 2018 and 2025.

The specific objectives are to:

i. Examine the contribution of the Belt and Road Initiative to railway infrastructure development in Nigeria between 2018 and 2025.
ii. Assess the impact of the Belt and Road Initiative on port and maritime infrastructure development in Nigeria between 2018 and 2025.
iii. Examine the broader developmental benefits and challenges associated with Belt and Road Initiative infrastructure projects in Nigeria between 2018 and 2025.

Conceptual Review

The Belt and Road Initiative

The Belt and Road Initiative is a Chinese-led framework for international economic cooperation launched by President Xi Jinping in 2013. It was initially presented around the idea of strengthening connectivity between China, Asia, Europe and Africa through infrastructure, trade, investment and people-to-people cooperation. Over time, the initiative has developed into a broad framework encompassing transport infrastructure, energy, telecommunications, industrial cooperation, finance and other forms of economic engagement.

Infrastructure remains one of the most visible dimensions of the BRI. Railways, ports, highways, airports, power facilities and telecommunications infrastructure have featured prominently in BRI-related cooperation across developing countries. The initiative therefore responds, at least in part, to the infrastructure financing needs of developing economies while also creating opportunities for Chinese companies, financial institutions and suppliers to operate abroad. The relationship is consequently not one-sided. Participating countries seek infrastructure, financing and technical expertise, while China obtains opportunities for international economic cooperation and commercial engagement (Ajah & Onuoha, 2025).

Nigeria's participation in the BRI in 2018 formalised an important dimension of an already expanding China–Nigeria economic relationship. Chinese firms had participated in Nigerian infrastructure projects before 2018, meaning that the BRI should not be treated as the beginning of Chinese infrastructure involvement in Nigeria. Instead, the initiative provided a broader framework within which existing infrastructure cooperation could be strengthened.

It is also important to recognise that BRI infrastructure projects do not all follow one financing model. Some involve government-backed loans, while others use public-private partnerships, commercial financing, equity participation or combinations of these arrangements. The Lekki Deep Sea Port, for example, was developed through a public-private partnership and a 45-year concession arrangement rather than being treated simply as a conventional Chinese government-funded project. This distinction is important when assessing the BRI because it prevents every infrastructure project involving a Chinese company from automatically being classified as a Chinese loan project.

Infrastructure Development

Infrastructure development refers broadly to the construction, expansion, rehabilitation, modernisation and maintenance of physical systems that support economic and social activities. It includes transportation infrastructure such as roads, railways, ports and airports, as well as electricity, water, telecommunications and other facilities. Infrastructure provides the physical foundation through which production, distribution and consumption take place.

The importance of infrastructure to development is particularly evident in developing economies. Efficient transportation reduces travel time and logistics costs, improves access to markets and encourages investment. Ports facilitate international trade, while railways can provide relatively efficient movement of passengers and bulk goods over long distances. Infrastructure can therefore influence productivity and economic competitiveness beyond the immediate value of the physical facility itself.

However, infrastructure development should not be measured simply by the number of projects constructed. The effectiveness of infrastructure depends on utilisation, reliability, affordability, maintenance and integration with other infrastructure systems. A railway may be physically completed but generate limited economic value if freight connections, maintenance systems and complementary roads are inadequate. Similarly, a modern seaport may have substantial capacity but fail to deliver its full economic potential if customs processes, roads, rail connections and logistics systems remain inefficient.

This broader understanding is important to the assessment of the BRI in Nigeria. The relevant question is not merely whether China-supported infrastructure projects were constructed between

2018 and 2025, but whether those projects have improved connectivity and generated wider developmental opportunities.

Railway Infrastructure Development in Nigeria

Railway infrastructure has historically been an important component of Nigeria's transportation system. However, decades of underinvestment and inadequate maintenance weakened the railway network and reduced its capacity to support national transportation needs. The modernisation of railway infrastructure therefore became an important component of Nigeria's infrastructure development strategy. The development of standard-gauge railway lines has represented a major change in Nigeria's railway system. The Abuja–Kaduna railway provides a connection between Nigeria's political capital and Kaduna, while the Lagos–Ibadan railway connects Lagos with important urban and commercial centres in the South-West. The NRC currently operates passenger services on both routes, alongside the Warri–Itakpe service (NRC, 2025a).

The operational status of these services provides evidence that railway development during the period has moved beyond policy statements and project agreements into actual transportation services. In 2025, for example, the NRC announced additional Lagos–Ibadan trips in response to increased passenger demand and additional coaches for Abuja–Kaduna services during the Eid period (NRC, 2025b). Such developments suggest that the infrastructure has become part of Nigeria's contemporary transportation system. The Chinese role has been important in financing, construction and technical expertise associated with several railway projects. However, the long-term developmental value of the railway system depends on more than Chinese construction involvement. Maintenance, security, operational management, local engineering capacity, freight integration and connections with roads and ports are equally important. Consequently, railway development should be evaluated both in terms of physical infrastructure and the institutional capacity to sustain it.

Port and Maritime Infrastructure Development

Ports occupy a strategic position in Nigeria's economy because the country depends heavily on maritime transportation for international trade. Efficient ports facilitate the import and export of goods, support industrial activity and connect domestic producers to international markets. Historically, congestion and capacity constraints at some existing ports have created logistical difficulties and increased the cost of trade. The development of the Lekki Deep Sea Port represents an important attempt to expand Nigeria's maritime capacity. According to the Nigerian Ports Authority, the facility was commissioned in 2023 and has a 1.2-kilometre quay, 19-metre depth and designed capacity of 2.7 million TEUs. It was developed under a public-private partnership and a 45-year BOOT concession arrangement (NPA, 2024).

The project is particularly important because of its potential to accommodate larger vessels and improve Nigeria's position within regional maritime trade. Its location within the Lekki corridor also provides opportunities for interaction with industrial, commercial and logistics activities in the area. Chinese construction expertise was an important part of the project, demonstrating the role of China in Nigeria's maritime infrastructure development.

Nevertheless, the contribution of a modern port to national development depends on the wider logistics system. Efficient road access, rail connectivity, customs administration, cargo clearance, warehousing and distribution networks are necessary if port capacity is to translate into lower

logistics costs and increased trade. The development of Lekki Port should therefore be understood as part of a wider infrastructure ecosystem rather than as an isolated facility.

Theoretical Framework: Complex Interdependence Theory

This study is anchored on Complex Interdependence Theory developed by Robert Keohane and Joseph Nye. The theory emerged as a challenge to approaches that viewed international relations primarily through military power and state-to-state competition. Keohane and Nye (1977) argued that contemporary international relations involve multiple channels connecting societies, governments, institutions, firms and other actors. They also emphasised the growing importance of economic and social issues alongside traditional security concerns. Under complex interdependence, states may depend on one another for resources, finance, technology, markets and other forms of cooperation, although such relationships may also produce unequal levels of dependence.

The theory provides a useful explanation of Nigeria–China infrastructure cooperation under the BRI. Nigeria possesses substantial infrastructure needs and seeks external financing, technology and construction capacity, while China has financial resources, infrastructure companies, technology and commercial interests that create incentives for overseas cooperation. The relationship therefore involves mutual interests, but it does not necessarily mean that both sides possess equal bargaining power. The theory also helps explain the involvement of multiple actors, including government ministries, financial institutions, construction companies, port authorities, railway authorities and private investors. In this study, Complex Interdependence is used to interpret both the opportunities and vulnerabilities created by BRI-related infrastructure cooperation. It helps explain why Nigeria can benefit from Chinese infrastructure expertise and financing while simultaneously needing to manage issues of dependency, debt, technology transfer and domestic institutional capacity.

Methodology

The study adopted a qualitative documentary research design to examine the impact of the Belt and Road Initiative on infrastructure development in Nigeria between 2018 and 2025. Data were obtained from secondary sources, including Nigerian government publications, Nigerian Railway Corporation documents, Nigerian Ports Authority reports, Chinese government publications, international development reports, peer-reviewed academic articles and relevant policy documents. Documents were purposively selected based on their relevance to the three objectives of the study and the period under investigation. Particular attention was given to evidence concerning railway infrastructure, port development, financing, project implementation, transportation services and wider developmental effects. The data were analysed using thematic analysis, with information organised around the three objectives of the study. The approach allowed the study to identify patterns in infrastructure development, assess documented outcomes and examine recurring challenges associated with BRI-related projects. Rather than attempting to establish a statistical causal relationship between the BRI and every infrastructure outcome in Nigeria, the study focused on identifying the contribution of BRI-related cooperation within the broader context of Nigeria's infrastructure development policies and Nigeria–China relations.

Analysis and Findings

Belt and Road Initiative and Railway Infrastructure Development in Nigeria, 2018–2025

One of the clearest areas in which BRI-era China–Nigeria cooperation has produced visible infrastructure outcomes is railway development. Nigeria's railway system suffered from prolonged neglect, and the modernisation of standard-gauge lines therefore represented an important shift in the country's transportation infrastructure. The Abuja–Kaduna and Lagos–Ibadan railway corridors are particularly significant because they connect major population, administrative and commercial centres. The evidence indicates that these railway projects have progressed from construction to regular passenger operations. The NRC lists both Lagos–Ibadan and Abuja–Kaduna among its operational passenger services. The Lagos–Ibadan service connects Lagos with Abeokuta and Ibadan, while the Abuja–Kaduna service provides an important connection between the Federal Capital Territory and Kaduna (NRC, 2025a). The continued publication of schedules and fares by the corporation further demonstrates that the railway infrastructure is being used as part of the country's transportation system.

The operationalisation of these railway lines has also generated evidence of continuing passenger demand. In June 2025, the NRC announced an additional Lagos–Ibadan trip because of increased passenger demand during the festive period. The corporation also announced additional coaches for the Abuja–Kaduna service. Such operational adjustments indicate that the infrastructure is not merely symbolic but has become relevant to passenger mobility (NRC, 2025b). The Chinese contribution has involved financing arrangements, engineering and construction expertise. Ajah and Onuoha (2025) argue that BRI-era projects demonstrate more tangible implementation outcomes than some earlier China–Nigeria infrastructure agreements, particularly in railway development. Their study identifies railway projects among the major areas where BRI-related cooperation has contributed to addressing Nigeria's infrastructure deficit.

However, the railway achievement should not be interpreted as a complete solution to Nigeria's transportation problems. Nigeria still requires a wider railway network capable of connecting the northern, eastern, western and central parts of the country. In addition, the economic benefits of rail transportation depend on freight movement, maintenance, security, station management and integration with other modes of transportation. The NRC's continuing attention to maintenance and operational disruptions also shows that railway infrastructure requires continuous institutional management rather than one-time construction.

The finding under this objective is therefore that the BRI has made a substantial contribution to the modernisation and operationalisation of selected railway infrastructure in Nigeria between 2018 and 2025, particularly through the Abuja–Kaduna and Lagos–Ibadan corridors. However, the contribution remains part of a larger national railway modernisation process and does not by itself eliminate Nigeria's wider transportation infrastructure deficit.

Belt and Road Initiative and Port and Maritime Infrastructure Development

The second major area examined is port and maritime infrastructure. Nigeria's economic dependence on international trade makes port infrastructure particularly important. For many years, limitations in port capacity and congestion created challenges for importers, exporters and other businesses dependent on maritime transportation. The development of the Lekki Deep Sea Port represents a major attempt to expand the country's maritime capacity. The Lekki Deep Sea Port was commissioned in 2023 and developed through a public-private partnership. According to the Nigerian Ports Authority, the facility was granted a 45-year concession under a BOOT arrangement. It has a 1.2-kilometre quay, a depth of 19 metres and a designed capacity of 2.7

million TEUs. The port is also equipped to handle large vessels through ship-to-shore cranes and modern cargo-handling facilities (NPA, 2024).

The scale of the facility has important implications for Nigeria's maritime infrastructure. A deeper port capable of accommodating large vessels can potentially improve cargo-handling efficiency and provide additional capacity for international trade. The project also strengthens the infrastructure base around the Lekki corridor, where industrial and commercial activities have expanded. Chinese participation in the project is significant, particularly through the role of China Harbour Engineering Company in construction. However, it is analytically important not to attribute the entire project solely to the BRI. The Lekki Port was developed through a PPP structure involving Nigerian and private-sector interests, while Chinese participation was primarily connected to construction and infrastructure delivery. This demonstrates the complex nature of BRI-related projects, where Chinese companies may participate alongside Nigerian government institutions and private investors.

The wider impact of the port will depend on its integration with Nigeria's broader logistics network. The availability of a modern seaport is more valuable when cargo can move efficiently from the port to industrial centres, markets and other parts of the country. Road infrastructure, railway connections, customs procedures and cargo clearance systems therefore remain important to determining the ultimate economic value of the facility. The finding under this objective is that the BRI-era China–Nigeria infrastructure relationship has contributed to significant maritime infrastructure development, particularly through Chinese construction participation in the Lekki Deep Sea Port. The project has expanded Nigeria's modern port capacity and created opportunities for improved trade and logistics. However, its wider developmental impact depends on effective management and integration with roads, railways, customs and other logistics infrastructure.

Broader Developmental Benefits and Challenges

Beyond individual railway and port projects, BRI-related infrastructure cooperation has broader implications for Nigeria's economic development. Improved transportation infrastructure can reduce travel difficulties, expand market access and facilitate the movement of goods and people. Railway infrastructure provides alternatives to road transportation, while modern port infrastructure creates additional opportunities for international trade. Infrastructure projects can also stimulate economic activities during construction and operation through employment, procurement, services and associated commercial activities.

The BRI has also created opportunities for Nigeria to access Chinese construction expertise and infrastructure technology. The involvement of Chinese firms in large-scale projects exposes Nigerian institutions and workers to international construction practices and technologies. However, the developmental value of such exposure depends heavily on the extent to which technology and technical knowledge are transferred to Nigerian personnel rather than remaining concentrated within foreign companies.

Another issue concerns financing and debt sustainability. Infrastructure projects require significant financial resources, and Nigeria's dependence on external financing can create long-term financial obligations. The question is therefore not simply whether external financing is available but whether projects generate sufficient economic and social value to justify the associated costs. Ajah and Onuoha (2025) note that concerns about financing, debt and dependency remain part of the wider debate surrounding China's infrastructure engagement in Nigeria. Local participation is

another important concern. Large infrastructure projects may create jobs and business opportunities, but the scale and quality of local participation depend on procurement arrangements, subcontracting opportunities and training programmes. Where domestic firms are able to participate meaningfully, infrastructure projects can contribute to local industrial development. Where participation is limited, the wider developmental effect may be narrower.

Institutional coordination also affects outcomes. Railway and port infrastructure require cooperation among federal ministries, regulatory agencies, security institutions, customs authorities, private operators and local governments. Weak coordination can reduce the benefits of otherwise successful infrastructure projects. This is particularly important where different forms of infrastructure need to function together as a single logistics system. The broader finding is that BRI-related infrastructure has created tangible opportunities for connectivity, transportation, trade and investment in Nigeria. At the same time, the benefits are accompanied by challenges involving financing, maintenance, local capacity, technology transfer and institutional coordination. The BRI should therefore be understood neither simply as a source of infrastructure nor solely as a source of financial risk. Its developmental consequences depend significantly on how Nigerian institutions negotiate, implement, operate and sustain the resulting infrastructure.

Discussion of Findings

The findings demonstrate that the BRI has contributed to visible changes in Nigeria's infrastructure landscape during the period under review. Railway projects such as Abuja–Kaduna and Lagos–Ibadan have moved into operational use, while the Lekki Deep Sea Port has expanded Nigeria's modern maritime infrastructure. This represents an important development when compared with earlier periods in which several Nigeria–China infrastructure agreements experienced delays, funding difficulties or incomplete implementation. Ajah and Onuoha (2025) similarly observe that BRI-era projects have produced more tangible outcomes than some previous China–Nigeria infrastructure arrangements. The evidence therefore suggests that the BRI has strengthened the implementation dimension of Nigeria–China infrastructure cooperation.

The findings also support the relevance of Complex Interdependence Theory. Nigeria requires financing, technology and infrastructure expertise, while China has financial, technical and commercial interests that encourage overseas infrastructure cooperation. The relationship consequently creates opportunities for both parties. At the same time, interdependence can produce vulnerabilities when one party becomes highly dependent on external financing, technology or technical expertise. The Nigeria–China infrastructure relationship therefore reflects both cooperation and asymmetry. The central issue for Nigeria is not whether external cooperation should exist, but how such cooperation can be structured to strengthen domestic capacity and ensure that infrastructure serves long-term national development.

The findings further indicate that physical infrastructure is only one part of development. A railway line or seaport creates potential economic value, but that value is realised through effective management, maintenance, security, complementary infrastructure and productive economic activities. The Lekki Port, for example, requires efficient road and rail connections, customs administration and logistics systems if its capacity is to generate wider benefits. Similarly, railway infrastructure requires maintenance, safety, operational efficiency and integration with freight and other transport networks. The long-term impact of the BRI in Nigeria will therefore depend not only on the projects that are constructed but also on Nigeria's capacity to manage, maintain and integrate them into the national economy.

Summary of Major Findings

The first objective examined the contribution of the BRI to railway infrastructure development in Nigeria between 2018 and 2025. The study found that China–Nigeria cooperation during the period contributed to the development and operationalisation of important standard-gauge railway infrastructure, particularly the Abuja–Kaduna and Lagos–Ibadan corridors. The continued operation of passenger services and adjustments to services in response to passenger demand demonstrate that these projects have become functional components of Nigeria's transportation system. However, the railway infrastructure remains part of a broader national modernisation process, and further expansion, maintenance, security and freight integration are necessary to maximise its value.

The second objective assessed the impact of the BRI on port and maritime infrastructure. The study found that Chinese participation in the development of the Lekki Deep Sea Port contributed to Nigeria's expansion of modern maritime infrastructure. The port's 19-metre depth, 1.2-kilometre quay and 2.7 million TEU design capacity represent significant additions to Nigeria's port infrastructure. The project also provides opportunities for trade, logistics and investment around the Lekki corridor. Nevertheless, its wider developmental impact depends on efficient customs administration, road and rail connections and effective logistics management.

The third objective examined the broader benefits and challenges associated with BRI infrastructure projects. The study found that BRI-related infrastructure has created opportunities for improved connectivity, transportation, trade and investment while also facilitating access to Chinese construction expertise and technology. However, challenges remain in the areas of financing, debt management, maintenance, technology transfer, local participation and institutional coordination. The evidence therefore indicates that infrastructure cooperation can produce substantial benefits, but those benefits are not automatic. Domestic institutions play a central role in converting infrastructure investment into sustained economic and developmental outcomes.

Conclusion

The study concludes that the Belt and Road Initiative has made a tangible contribution to infrastructure development in Nigeria between 2018 and 2025, particularly in railway and maritime infrastructure. The operationalisation of the Abuja–Kaduna and Lagos–Ibadan railway services and the development of the Lekki Deep Sea Port demonstrate that Nigeria–China infrastructure cooperation has produced visible physical outcomes during the period. These projects have improved transportation options, expanded maritime capacity and created opportunities for wider economic activity. At the same time, the study shows that the long-term developmental value of the BRI cannot be measured by project completion alone. Financing arrangements, maintenance, technology transfer, domestic technical capacity, institutional coordination and integration with other infrastructure remain critical. Viewed through Complex Interdependence Theory, the relationship presents both opportunities and vulnerabilities for Nigeria. The central challenge is therefore to ensure that external infrastructure cooperation strengthens domestic productive capacity and contributes to sustainable national development.

Recommendations

1. Strengthen railway maintenance and domestic technical capacity**:** The Nigerian government should strengthen railway maintenance systems and expand the training of Nigerian engineers and technical personnel. Future railway agreements should place greater emphasis on structured technology transfer, local engineering participation and long-term maintenance arrangements rather than focusing mainly on construction.
2. Improve the integration of port infrastructure with the wider logistics system: The government should prioritise efficient road and railway connections to the Lekki Deep Sea Port and improve customs, cargo clearance and logistics procedures. This will enable the port's large handling capacity to translate more effectively into lower logistics costs, increased trade and wider economic activity.
3. Ensure sustainable financing and stronger Nigerian participation in BRI projects: Future BRI-related infrastructure agreements should be guided by transparent financing arrangements, debt sustainability assessments, technology-transfer provisions and meaningful participation of Nigerian companies and workers. Project planning should also include clear provisions for maintenance, skills development and long-term economic returns so that infrastructure investment contributes to domestic capacity rather than creating excessive dependence on external actors.

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