

Sustainability Appraisal of Chinese Railway Projects In Nigeria: Afoot

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Abstract: It is no news that Nigeria's infrastructure challenge is enormous. In the global ranking, Nigeria ranked low in quantity and quality of its infrastructural provision which has a great impact on the ease of business transaction. Low investments in transportation have brought about the current infrastructural deficit. Recently, the Nigerian government has made effort to address at least to some extent the infrastructural deficit through Public-Private Partnership, but this has not yielded the desired result. Moreover, the sustainability issues relating to railway projects such as, emissions, noise pollution, ecosystem, and other environmental issues calls for urgent attention. Hence, this necessitated consideration on sustainability appraisal for the Chinese rail project in Nigeria. This study reviews sustainability of railway projects built by the Chinese firm in Nigeria with particular emphasis on the environmental and social impact of these projects. The study further identified issues and challenges in project implementation with a particular focus on civil dialogue and community engagements. A detailed literature search was conducted on railway projects and infrastructure by systematically reviewing selected published articles. The analysis of the selected articles identified sustainability issues and potential for improvement of Chinese railway projects and how they contribute to or inhibit competitiveness in the Nigerian railway market. From the literature searched, some of the projects constructed by Chinese firm revealed that there is economic and social impact of railway projects delivered by the Chinese firm in terms of capacity development and knowledge transfer potentiality. For instance, in the just concluded Lagos-Ibadan railway projects, the study gathered that the project brought about 5000 jobs and local staff were trained by the Chinese company, this will boost man power and local content capability. Also, it will significantly improve Nigeria's infrastructure and boost its economic development. The study suggests that Nigerian government should ensure and provide an enabling environment that is conducive for investment on the continent. Peace, improved security, and decent governance are the best conditions for sustainable transportation growth.

Keywords: Sustainability, Railway, Infrastructure, Chinese Firms, Nigeria

1. INTRODUCTION

Railway has been adjudged as of the man's important means of transporting passengers, good and services; with almost every country has at least a railway system[1]. Good rail system offers a meaningful role in a nation's economy development and growth. Rail is one of the major critical

infrastructures that is required to improve the service and performance of an economy [2]. With rail system in place, it can open up many regions, rural areas as well as hinterland to facilitate agricultural development as well as the growth of large-scale industries. According to (Nwanze, 2002)[3], rail transportation system will attract recreational activities, residential, educational and commercial activities and development around its axis.

About seven decades ago as reported by (Olanrewaju, 1986)[4], Nigeria railways enjoyed an unrivaled operation of both freight and passenger movement when road transportation was initially created to feed them. Railways which were then much in operation has left the front stage to road transportation. Nigerian railways have played a critical part in the country's socioeconomic growth, helping to open up the hinterlands, spurring foreign and domestic trade, agricultural and industrial development, and accelerating urbanization [5]. The Nigerian railway, which was in charge of exporting hides and skins, tin, bauxite, and removing groundnut pyramids during WWII, helped to maintain the fatherland's sovereignty and security. The railway allowed for the import of general products and services, as well as hardware, into the country. Prior to this age of pipeline transportation, railways were widely used for fuel distribution[5]. Typically, the Nigerian Railway Corporation provides both passenger and cargo services, carrying people from the northern section of the country to Lagos at a lower cost than driving. From the hinterlands to the southern areas, the cargo service transports farm produce and hefty raw commodities.

Amba and Danladi (2013)[6] assert that to assess the economic development of a country, transportation can be used as one of the indices. Also, advancement of any country largely depends on how its transport systems is developed (Salim, 2013;Lingaitiene,2006)[7-8].The rail transportation system has the capacity to bring about socio-economic development in Nigeria which will facilitate access to jobs creation, markets, education and health care.Rail transportation, according to [9], has played a critical role in economic development since it supports low-cost freight and passenger travel and contributes to the growth of mining and agriculture.

According to (Olievschi,2003)[10], The creation of a railway system that meets society's travel needs without jeopardizing people's quality of life in the near or far future is known as railway sustainability. Because it offers the physical networks and services that a nation relies on, sustainable transportation systems link economic progress with social and environmental concerns.

Any well-intentioned head of government should strive to establish sustainable rail transportation that serves the mobility and access needs of Nigerians and businesses while also reducing or eliminating greenhouse gas emissions. The continuous upgrading of Nigeria's railway infrastructure will enable the transit of commodities and raw resources, stimulate tourism, improve trade, and overall improve the population's level of living. While In Nigeria, inefficient and poor railroad transportation contributes to high company costs and stifles long-term development. The failure of Nigeria's rail system to meet the standards of modern countries can be attributed to a number of factors: The government has given road transportation a high priority; yet, limited financial resources have prevented railway projects from being funded; strong railway knowledge is in short supply; and political conflicts and natural disasters have created impediments.

It is no news that existing literatures attest to the fact that Nigeria's infrastructure challenge is enormous[11]. Nigeria ranked low in quantity and quality of its infrastructural provision which has a great impact on the ease of business transaction. Low investments in transportation have brought about the current infrastructural deficit. Recently, the Nigerian government has made effort to address at least to some extent the infrastructural deficit through Public-Private Partnership, but this has not yielded the desired result. Moreover, the sustainability issues relating to railway projects such as, emissions, noise pollution, ecosystem, and other environmental issues calls for urgent attention. Hence, this study examined the sustainability of railway projects constructed by the Chinese firms in Nigeria in terms of social and environmental impact of these projects.The

study started with introduction, followed by review of some literatures on railway projects and China engagement in Nigeria, a brief historical perspective is given with how the search were conducted then the study conclude.

2. LITERATURE REVIEW

2.1 Nigerian Railway Sector And China Engagement

A good but detailed chronicles of Nigeria-China relations was undertaking by [5]. The study chronicled in order, the historical perspective of Chinese and Nigeria relationship from 1960 to 2018. It all begin from 1960 when the delegates from China visited Nigeria government to celebrate Nigeria's independence from colonial masters (Richter et al, 2014) [11];and (Raji and Ogunrinu, 2019)[12]. In 1972, the then Head of State, General Gowon, had a visit to China to seek financial aids for the program of reconstruction after post -war.[13]

During General Abacha, Li Peng, Chinese Premier then visited Nigeria in 1998 to further Nigeria-China relationship [14]. In return, General Obasanjo, the president of Nigeria at that time paid an investment motive visit to China purposely to seek China investment in Nigeria economy. Obasanjo's visit to China in 2001 gave birth to Chinese Involvement in downstream and upstream sectors of Nigeria gas and oil industries. This arrangement provided a platform for the construction of rail lines and road by Chinese firms in exchange for oil blocks from Nigeria. The same regime witnessed infrastructure for oil program between China and Nigeria where Nigeria crude oil is exchanged for Chinese rail and road infrastructure provision. In the year 2006, both countries entered a partnership agreement for free access of goods and services across borders. Policies of cash for oil program replaced oil for infrastructure due to the cancellation because investors from Chinese allowed corrupt practices in the bidding process of oil blocks agreement.

Under Ebele Goodluck Jonathan regime, (Reno,1999)[15] reports that a three-loan agreement for the development of Abuja Light Rail Project, 4 Airport terminal construction and expansion of galaxy backbone projects was signed with Exim Bank of China. These loans are 500 million dollars, 500 million dollars, and 100 million dollars respectively. Another 25 billion investment worth to Nigeria was proposed by the China republic in 2013 during Ebele Jonathan presidential visit to China. This is in addition to a 20 billion worth of Memorandum of Understanding signed by China's ministry of energy to generate 20,000 megawatts of electricity. A loan of 6 billion dollars was also suggested by the Chinese government to help in developing infrastructure projects in Nigeria during Buhari administration. Currency swap agreement was also signed by China and Nigeria. This brought a great reduction to the selling price of commodities in both countries.



Figure 2.1. Chinese Built Rail Projects in Nigeria

Source: CCECC on Global Times

(United Nations Economic Commission for Africa n.d)[16] and (Foster et al, 2008)[17] assert that Nigeria and China are complementary countries in terms of economic due to the trade relationship that existed between the duo. Why are they complementary? China has developed its technology capability but lacks the resources that its industries needed. Nigeria, on the other hand is blessed with these resources but does not have adequate infrastructure and technology to harness her naturally endowed resources. (Richter et al, 2014)[11] examined the implication of bilateral relationships for the economic security between Nigeria and China. The study traced the origin, importance, key areas of investment and implication on the economy of Nigeria.

Oni and Okanlawon (2011)[1] evaluated railway infrastructure development in Nigeria and discovered that the performance of railway over the years has been on decline with attendant deficit. Their study called for urgent revitalization of railway system in Nigeria because the railway system in Nigeria can be said to be static and the one that is lagging behind when compared with other developed nations.

Richter et al,(2014)[10] researched into environmental and societal impact of sustainability of Chinese railway projects in Africa. The study made use of qualitative and quantitative approach to elicit information on issues of sustainability from Chinese companies and stakeholders who have experience in railway organization in Africa. This study identified challenges and sectoral bottleneck in the project implementation in terms of community engagement and civil dialogue. Some of the issues of sustainability revealed by the study are innovation, engagement of stakeholders, supply chain, human rights, environmental and health and safety. The study further suggests capacity development and knowledge transfer potentiality of the impact of railway projects undertaking by the Chinese in Africa.

2.2 Belt and Road Initiative (BRI)

According to [18], the Chinese government's Belt and Road Initiative (BRI) was developed out of collaboration and connections that China aims to have with other countries in order to promote and support trade and other development strategies in a certain region. The importance of having links with other countries in terms of development strategy and growth is very important for the Chinese. Railway projects are expected to be accommodated under the BRI umbrella because railways are regarded one of the most efficient modes of transportation. Within the framework of the BRI, (Oyeranti et al, 2011)[18], studied the key risks connected with railway projects. The study used a combination of sensitivity and fuzzy risk analysis to identify 24 potential risks in BRI railway projects, which were then divided into six groups. The most crucial risks in railway projects, according to the survey, include geopolitical risk, loan risk, design revisions, partnerships between BRI countries and China, and complex geological terrain conditions.

According to a common Chinese mantra “If you want to get rich, build a road” China has seen this as a strategy for growth through investment in infrastructure [19]. Nigeria’ infrastructural deficit could be addressed to a large extent through the provision of finance from Chinese as submitted by (Andric et al,2019)[19] because railway infrastructural investment is one of the major areas where China’s presence on Africa continent can be felt. This could bring huge benefits in terms of economic development, trade promotion, man power training and job opportunities for the jobless.

2.3 Sustainability Issues

A review of the Canadian Railway Sector report from a sustainability conversation in 2014 found eight key sustainability challenges. The report convened a one-day workshop with stakeholders

from non-governmental organizations (NGOs) and academia to identify major sustainability challenges for the sector. Employees, climate adaptation, emissions, customers, safety, ethics/governance, stakeholders/communities, and the environment/ecosystems are some of the sustainability issues discussed [20]. The panel analysed current railway sustainability plans in use in the Canadian railway sector prior to this discussion, which served as a basis for the dialogue between industry practitioners and academia. This was built on the Social, Economic, and Environmental sustainability tripod principles [21].

Sustainable issues in railway infrastructure transportation projects in Nigeria was conducted by [22] using a case study method. Using the case study of Abuja light rail mass transit, the study examined challenges and issues that hinder successful sustainable railway infrastructure project delivery in Nigeria. The study developed a model for infrastructure projects towards a sustainable railway system. Part of the recommendations proposed by the study is that sustainability best practices should be institutionalized and integrated in the transportation, operation, construction and design of infrastructural projects. Concerns have been raised concerning Chinese companies' operations in Nigeria, particularly in terms of environmental and labor issues. These issues were attributed to China's lax environmental standards and the lack of effective labor legislation in the hosting countries. Chinese companies are known to employ more of their own citizens than citizens of their host nations in some cases as reported by (Oraegbune et al, 2017) [23].

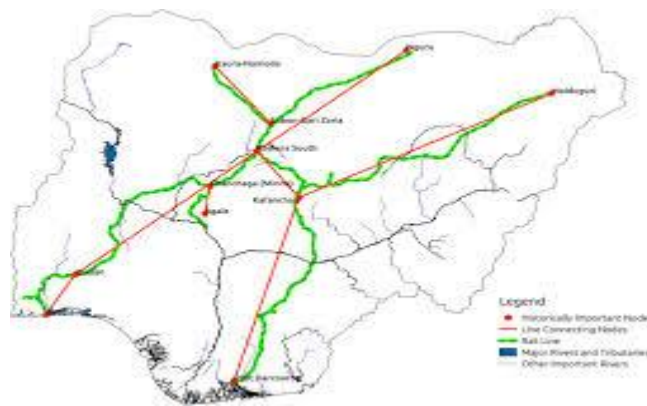


Figure 2.2 Colonial Rail Road in Nigeria

Source: Google

3. STRATEGY FOR SEARCH AND METHODOLOGY

Since this review is part of larger study, the methodology adopted was review of literatures in the aspect of railway projects constructed by Chinese firms in Nigeria. This research used a systematic review of literature on the sustainability appraisal of Chinese-built railway infrastructure projects in Nigeria. The systematic literature review begins by looking for relevant papers in databases like Web of Science, Google Scholar, and Scopus, among others. The search was conducted using the terms "rail infrastructure sustainability" and "railway projects." Journals, conference proceedings, reports, and books are all included in the search. Prior to the start of the review analysis, the publications that were acquired from multiple databases were filtered. All papers written in a language other than English were sorted out. In addition, any non-peer-reviewed articles and author information that was incomplete were eliminated.

4. CONCLUSION

This study has reviewed the sustainability of railway projects constructed by the Chinese firms in Nigeria in terms of its social and environmental impact. The following are the sustainability issues highlighted in the literature as a result of the review. Land usage, society, human rights, handling safety, labor practices, community service, and occupational health and safety are all examples of social issues. Noise vibration, climate change adaptability, other air emissions, materials, water, wildlife, biodiversity energy, energy, greenhouse gas (GHG) emissions, and waste Economic performance, community effect, and procurement are all factors to consider. Despite all of these concerns with sustainability and the negative effects of rail transportation, railways continue to play an important role in the development of Nigerian economies by delivering freight and passengers at low costs and allowing mining and agricultural to thrive.

According to a popular Chinese proverb, "If you want to get rich, build a road," China has viewed infrastructure investment as a strategy for growth. Because railway infrastructure investment is one of the primary areas where China's presence on the African continent can be felt, Nigeria's infrastructural deficit might be remedied to a considerable part through the deployment of Chinese money. Economic development, trade promotion, manpower training, and job prospects for the unemployed might all gain greatly from this. This can be accomplished by swapping resources. Nigeria is rich in natural resources, and China is in desperate need of them. In exchange, China can offer infrastructure to compensate for the lack of resources.

From the literature searched, one of the main objectives of Belt and Road Initiatives of China in Africa is to seek collaboration and connections with other countries in order to promote, support trade and other development strategies in a certain region. Some of these objectives is achieved as evident from the just concluded Lagos Ibadan railway project built and finance by Chinese firm. The Lagos Ibadan railway project brought about 5000 jobs. Local staff were also trained in order to bring about knowledge transfer by the Chinese company, this will boost man power and local content capability. It will also promote the development of regional economy. This will significantly improve Nigeria's infrastructure and boost its economic development. The project will bring enormous economic benefits to Nigeria, injecting a new vitality to its transportation and economic development. There is economic and social impact of railway projects delivered by the Chinese firm in terms of capacity development and knowledge transfer potentiality.

RECOMMENDATION

Nigeria as a country must develop policies to strengthen its ability to monitor and enforce labor, safety, and environmental protections by ensuring that Chinese firms involved in the construction of railways in Nigeria adhere to global standards and the International Labour Organization's rules. The Nigerian government should ensure and provide an enabling environment that is conducive for investment on the continent. Peace, improved security, and decent governance are the best conditions for sustainable transportation growth.

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