

# CHINA-AFRICA COOPERATION IN THE TRANSPORT SECTOR UNDER THE BRI

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## ABSTRACT

The nation's economy and social growth are being greatly supported by the transportation industry. The development of the transport sector can ensure and improve quality of life, influencing a broad spectrum of activities including trade, education, and other social endeavors. Due to the noteworthy and long-term structural flaws, Africa's economic growth has encountered a variety of difficulties over the years, although seeing a stable upward trend in recent years. To support the sustainable growth of African nations, an improved transportation sector is thus urgently needed. While the poor roads and transportation services, in particular, continue to be a millstone around the neck for African nations, severely limiting trade for regional, national, and global markets. As a result, considerable investment in roads and transport is much needed in African countries.

Within the framework of the Belt and Road Initiative (BRI), China has taken efforts to encourage collaboration with Africa on infrastructure projects. Chinese investment is paying particular attention to the transportation sector as it works to promote the social infrastructure and economic growth of African nations. The goal of this study is to examine the difficulties involved in China-Africa transportation sector collaboration under the BRI. Through a thorough examination of China's current investment in Africa's transportation infrastructure, this paper aims to recognize the difficulties that China and Africa confront in their cooperation efforts. It then discusses suggestions that may be made to China and Africa to foster a deeper level of cooperation.

**Keywords:** China-Africa, cooperation, transport sector, investment.

## 1. INTRODUCTION

A nation's socioeconomic environment depends on the transportation sector. The intricate linkage between public transport and regional development represents a vital cornerstone of national progress. An effective transportation network has been scientifically proven to have a significant positive impact on trade and productivity coordination, serving as a catalyst to promote a country's industrial structure and enhance its economy.

The development of a country's infrastructure can contribute to a significant role in its economy (Peters, 2008; Sobrino et al., 2014; Godil et al., 2020). This is particularly relevant when examining the African continent, which is home to a staggering 70% of the world's least developed countries (LDCs). Africa's infrastructure is widely considered to be among the most underdeveloped across the world, a fact which has had severe ramifications for the region's economic growth and development. Despite generally stable economic conditions over the past decade, the woeful state of infrastructure development in Africa remains a major concern. Africa's transportation infrastructure development is

widely considered to be significantly below the global average. Only one-third of the rural population has access to roads throughout Africa. According to the National Bureau of Economic Research, Sub-Saharan Africa has the lowest percentage of paved road coverage, with just 31% of total kilometers per 100 square kilometers of land, compared to other regions of the world (Graff, 2019). Roads and railways are severely inadequate, hindering the development of interconnectivity infrastructure. Indeed, the backward level of infrastructure construction across the continent has severely hampered efforts to propel the African economy towards prosperity. As a result, Africa lags far behind the rest of the world in all areas, highlighting the urgent need for concerted efforts to solve the infrastructure gap and speed up economic development.

Nowadays, China has established itself as a major actor on the international stage, prompting the international community to expect significant contributions from China in the area of global development. The Belt and Road Initiative (BRI) is a large-scale infrastructure and development undertaking, unveiled by the Chinese government in 2013. The goal of the BRI program is to improve commercial and investment ties as well as connectivity between China and the participating countries, including Africa. Given the close relationship between China and Africa, recent years have seen a noticeable rise in China-African collaboration within the BRI framework. Notably, China has been investing its resources in infrastructure development in the areas of transportation, energy, and telecommunications.

Owing to the transportation industry's centrality in China's foreign aid program, and the fact that Africa is deemed as China's pivotal collaborator, China has been channelling vast sums of money into the betterment and creation of transport infrastructure in Africa. This includes a wide range of initiatives, including the thorough development of logistical systems and the construction of trains, roadways, ports, and airports. The Chinese government has also been providing financial aid and loans to African nations in order to encourage these investments and support the expansion of Africa's transportation infrastructure.

With the rapid economic development in Africa, the demand for transportation infrastructure construction will be more crucial. In light of this, it is necessary to examine the China-African collaboration in the transportation sector in further detail, as it has grown to be a potent force that has opened up new avenues for commerce and investment between the two. Cooperation between China and Africa in the transport sector has faced a number of challenges, though, including skepticism regarding the infrastructure's sustainability, the distribution of benefits, and the impacts of these projects on the environment and local communities. This essay seeks to examine the current difficulties that China and Africa are facing in order to have greater cooperation and strengthen their friendship. It then addresses potential solutions that could be put forth in order to improve cooperation and deepen their relationship.

## **2. THE PERFORMANCE OF AFRICA'S TRANSPORT SECTOR**

Before European colonial powers arrived in Africa in the past, local communities had already developed their transportation networks, which were largely powered by humans and animals. The development of transportation infrastructure by the European powers to support their commercial interests in Africa marked the beginning of the colonial era. Africa is highly endowed with natural resources, including diamonds, gold, oil, natural gas, uranium, platinum, copper, cobalt, iron, bauxite and agricultural products such as cocoa, rubber and cotton. As a consequence, a vast number of transportation facilities were

constructed by European countries to exploit and export Africa’s natural resources. The political history has had far-reaching economic implications for Africa’s transport sector. Numerous problems, including unfinished networks, misaligned national systems, ineffective state-run enterprises, corruption, and civil wars, plague Africa’s transportation system. Due to these circumstances, Africa’s transportation infrastructure is underdeveloped, poorly built, and badly maintained (Bofinger, 2011). Historical structural and institutional inequalities in Africa have had a lasting effect that is still apparent today. Following their independence, African countries faced the challenging task of modernizing their transportation systems and improving intra-national connectivity. Unfortunately, a lot of these nations had weak infrastructure and scarce resources, which hampered growth and kept their transportation systems from being developed to their full potential.

Compared to other regions worldwide, Africa experiences significantly higher transportation costs, ranging from 50 to 175 percent. The African Development Bank (AfDB) delivered the Africa Infrastructure Development Index (AIDI), which evaluates the Total Paved Roads (km per 10,000 inhabitants) and the Total Road Network (per km<sup>2</sup> of exploitable land area). As of 2020, North Africa ranks as the highest-performing subregion, while central Africa ranks as the worst-performing. In 2021, Seychelles as the top-ranking country in Africa with a score of 98.45 points, followed by Egypt and Libya with scores of 88.74 and 83.62 points, respectively. However, most African countries have scores below 50 points, with Somalia receiving the lowest score of 4.79 points when assessing the current state of infrastructure development (see Table 1).

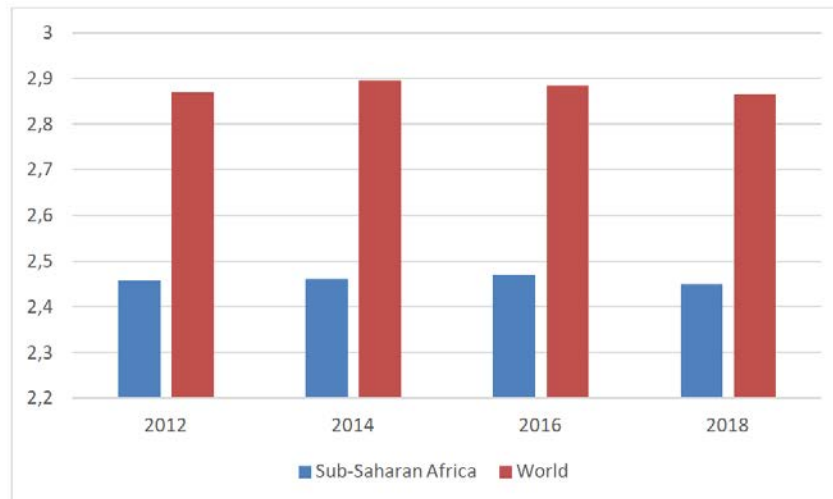
**Table 1: Ranking of AIDI in 2021**

<b>The Top Five African Countries</b>	<b>Score</b>	<b>The Bottom Five African Countries</b>	<b>Score</b>
Seychelles	98.45	Somalia	4.79
Egypt	88.74	South Sudan	5.80
Libya	83.62	Niger	6.25
South Africa	80.19	Chad	7.99
Mauritius	79.87	Eritrea	9.33

The issue of logistical development in Africa is a significant concern due to persistent political and economic obstacles that have hindered progress. Africa has struggled to establish advanced logistical systems to support trade and economic growth. The Logistic Performance Index (LPI) compiled by the World Bank is a key metric to evaluate the efficiency and effectiveness of transportation infrastructure across the continent. Unfortunately, the LPI for Sub-Saharan Africa is only 2.45 in 2018, well below the global average of 2.87 (See Figure 1). This highlights the urgent need for increased investment in transport infrastructure to enhance the efficiency of national and international shipments.

Road transportation is the primary mode of motorized transportation in Africa, with a majority of goods and passengers transported via roads. More than 80% of all goods traffic and 90% of all passenger traffic are carried by roads, and it is the only means of transportation in most villages. But Africa’s limited road infrastructure connectivity results in poor linkages between major cities and economic centers. Africa’s road network density is much lower compared to the rest of the world, and the cost of building such networks is high per capita. Consequently, these conditions impede trade and commerce, and limit

access to markets and resources. Low-income countries have 134 kilometers of paved road per 100 square kilometers of land, whereas Africa has only 31 kilometers, indicating the vast infrastructure disparity within Africa and among other low-income countries (Foster & Briceño-Garmendia, 2010). The inadequate road network in Africa seriously impedes transportation and mobility across the continent.



**Figure 1: LPI from 2012 to 2018**

The state of the road transport network is inadequate, with numerous roads in need of maintenance and upgrades. Neglected roads can restrict mobility, significantly increase vehicle operating expenses, and escalate the frequency of accidents, leading to a higher cost related to human life and property damage. Additionally, such situations can result in poverty, poor health, and lower levels of education in rural areas. According to the World Health Organization (WHO), approximately 1.3 million people worldwide lose their lives each year as a result of road traffic accidents. Road traffic fatalities in Africa vary significantly across different regions of the continent, and regional road traffic death rates have remained stagnant since 2010. Over 90% of fatal traffic accidents occur in low- and middle-income countries, which is a heavy burden. The African region has the highest rates of road traffic injury deaths, whereas the European region has the lowest rates among these countries. According to the WHO, the rate of road traffic fatalities across the African continent in 2018 was 26.6 per 100,000 people, which was significantly higher than the global average of 18.2 in 2016.

Apart from the African roads mentioned above, in terms of railways, it is anticipated to play a progressively significant role in the transportation of freight over long distances due to its efficient energy use, reduced greenhouse gas emissions, and lower cost per ton-kilometer. However, the rail transport market share in many countries across the continent remains under 20% of the total volume of freight transport. This can be attributed to insufficient investment in infrastructure and a lack of supporting institutional framework (AfDB, 2015). The African railway industry has encountered a substantial downturn in the past few decades. This downturn can be attributed to the transport operations that have been meandering along substandard international norms. Moreover, the rail transport systems operating within the African continent are predominantly under the dominion of government entities. Regrettably, these government entities have exhibited a scarcity of investment towards enhancing rail infrastructure. Such a lack of investment has consequently culminated in an unfavorable situation, whereby the railway systems are being inadequately maintained. Consequently, there has been a shortage of replacement parts for these railway systems, leading to an unacceptable reduction in service quality.

Furthermore, it is noteworthy that many African nations are grappling with challenges regarding the modernization of their rail systems. These challenges are largely driven by the prevalence of outdated technology, the paucity of access to financing, and the difficulties that these countries face in terms of attracting private investment.

When it comes to the aviation sector in Africa, it has exhibited steady growth in recent years, with a 4% compound annual growth rate (CAGR) since 2015. The total number of airline seats available for travel within the continent increased by 19% to 112 million between 2015 and 2019, representing a CAGR of almost 4%. However, Africa still has relatively low air transport volumes compared to other regions, with air travel accounting for a small fraction of total passenger and freight transport. The East African region, spanning from South Africa to Kenya and extending to Ethiopia, is characterized by significant aviation hubs and a firmly established network of air routes. However, West Africa lacks similar air transport hubs, while Central Africa has limited air transport services. These disparities in the distribution of air transport capacities across different regions of Africa can have implications for accessibility and connectivity within the continent. Generally, the aviation industry in Africa faces significant challenges due to limited and inadequate air transport infrastructure across the continent. The majority of airports are in need of modernization to comply with international standards. Furthermore, air traffic management systems are typically obsolete and inefficient, thereby impeding the growth and development of the aviation industry.

Regarding the African coastline, it is a crucial gateway for international trade, linking the continent to the global community through a network of port facilities. These ports serve a range of needs, including commercial shipping, fishing, and tourism, and are vital for regional economic integration, facilitating access to global markets and resources while promoting sustainable development in coastal communities. With a coastline spanning over 30,000 kilometers, African ports and maritime transport are pivotal in achieving these goals. Major ports in Africa are predominantly situated in the northern and southern regions, which include ports in Morocco, Egypt, South Africa, and Nigeria. These ports handle most of Africa's international trade and serve as primary gateways for the continent's import and export activities. However, Africa's ports and maritime sector are plagued with several issues. Outdated port facilities and inefficient bureaucratic processes result in extended waiting times and higher costs for companies. Furthermore, inadequate investment in infrastructure and equipment has resulted in limited capacity, which makes it challenging for ports to keep up with the growing demand for trade. Moreover, the security of ports and maritime transport in Africa is a significant concern due to the prevalence of piracy and armed robbery at sea, which can cause substantial financial losses and deter shipping companies from using African ports. As a result, this may limit the growth and development of the African maritime industry and impede the region's ability to connect to global markets.

On the whole, Africa's transportation system is widely perceived as having an underdeveloped transportation infrastructure, characterized by poor road conditions, limited access to transportation services, and a lack of connectivity between different regions. The inadequate transportation infrastructure is attributed to various factors, including limited and outdated road and railway infrastructure systems that are poorly maintained in many countries. The limited interconnectivity of infrastructure in African countries significantly restricts the development of intra-regional trade within the continent. According to the United Nations Economic Commission for Africa, the intra-regional trade in Africa accounted for 17% of the whole trade in 2017, compared to 69% in Europe and 59% in Asia, which is lower than other parts of the world. The inadequate transportation

infrastructure hinders the mobility of goods and people between regions, severely limiting economic development in Africa. Inland transport costs in Africa are significantly higher than those in other regions worldwide. African landlocked countries experience slow and unreliable freight delivery. Moreover, the connection between the port and rail system is weak. Rail transportation has an advantage over road transportation for the long-distance movement of non-perishable goods, and therefore, international trade in Africa relies heavily on rail transport. Besides, the suboptimal quality of transportation infrastructure in Africa presents a significant challenge, leading to elevated costs for firms that participate in intra-African or global trade. These costs can negatively impact the competitiveness of such businesses. Furthermore, while logistics plays a vital role in enhancing the efficiency of product output and distribution in industrialized countries, it has been progressively sluggish to develop in Africa. Therefore, expediting customs procedures and enhancing the speed of ship movements are crucial to improving services along border corridors. According to the OECD, transport costs make up between 30% to 40% of the final price of commodities traded within Africa. For landlocked countries, logistics costs can be even higher, rising to 60% (OECD Development Centre & OECD Emerging Markets Network, 2019). Additionally, the development of the transportation sector is constrained by inadequate investment, insufficient maintenance, and deficient planning. In Africa, the level of investment in transportation infrastructure is generally low compared to other regions. This low investment is attributed to the limited availability of private-sector investment and restricted government funding. Consequently, the infrastructure for numerous roads, railways, and ports in Africa is in a deplorable state and is incapable of meeting the demands of the population. Maintenance is another major issue affecting Africa's transportation infrastructure. Due to inadequate maintenance, numerous roads and rail lines are in a state of disrepair, resulting in hazardous road conditions and unsafe travel. This situation makes it difficult for enterprises to transport goods, which hinders corporate operations and economic growth.

### **3. CHINA'S INVESTMENT IN AFRICA'S TRANSPORTATION SECTOR UNDER THE BRI**

Africa is the world's second-fastest-growing region, experiencing an average annual GDP growth of 4.6% for the period between 2000 and 2016. The economic growth of Africa is estimated to weaken to 3.8% in 2023 from 4.1% in 2022 due to subdued investment and falling exports. With the rapid development of Africa, Africa must focus on accelerating industrialization, trade liberalization, and infrastructure development. According to the Organisation for Economic Co-operation and Development (OECD), to enhance Africa's infrastructure could contribute to an additional 2.2% of GDP growth annually (OECD Development Centre & OECD Emerging Markets Network, 2019). As a result, infrastructure is a crucial prerequisite for both industrialization and trade liberalization in Africa, implying an inevitable surge in the demand for constructing transportation infrastructure across the continent.

Since 1979, Chinese engineering companies have been exploring the international market and sealed their initial deals with African countries. Currently, China plays a crucial role as a significant partner in the African infrastructure sector by providing funds, technical know-how, and construction services for various projects. These projects encompass extensive infrastructure works, such as roads, railways, ports, airports, as well as energy and telecommunications infrastructure. Africa has long been a significant market for China's "Going Out" strategy, which was implemented by the Chinese government in the early 2000s to promote Chinese companies' expansion of operations and investments overseas. The implementation of China's "Going Out" strategy has led to a growing number of

engineering contracting enterprises seizing opportunities to enter the African market and explore transportation projects.

Chinese government has resulted in a considerable surge in bilateral relations between China and Africa since the BRI framework was launched in 2013. The primary objective of China's BRI is to boost economic growth and enhance connectivity between the two regions by making substantial investments in African infrastructure. Consequently, this initiative has created a foundation for China's infrastructure projects in Africa. China's BRI has heavily invested in infrastructure across Africa, providing a framework to promote economic development and connectivity between China and African nations. Several memorandums of understanding (MoUs) were signed between the African Union and China, focusing on the development of highways, railways, and aviation, which are critical contents of Africa's Agenda 2063 (Dossou, 2018). Nowadays, China has built over 6,000 kilometers of roads, 6,000 kilometers of railways, nearly 20 ports, and more than 80 large-scale power facilities in Africa.

One of the significant projects in Kenya is the construction of the Mombasa-Nairobi Highway. China's BRI aims to establish a connection with Africa by using the Mombasa port in Kenya and extending inland through the Mombasa-Nairobi line. The Mombasa-Nairobi Highway plays a crucial role in Kenya's transportation infrastructure, being the primary route that connects the port city of Mombasa to the capital city of Nairobi. The road's dilapidated state and the frequent occurrence of traffic accidents have significantly impacted Kenya's economy and people's livelihoods, given its vital role as an economic artery for the country. To improve the situation, China and the Kenyan government have entered into a cooperative agreement to enhance the Mombasa-Nairobi Highway Improvement Project. The project entails the reconstruction and expansion of the 485 kilometer road connecting Mombasa to Nairobi. It includes the construction of a four-lane expressway, bridges, tunnels, and other essential infrastructure. In May 2017, the Nairobi Expressway Project commenced, which marks one of China's most significant infrastructure initiatives in Africa under the BRI framework. The project is led by Chinese company CALE and aims to convert the current road into a dual carriageway with four and six lanes, respectively, by the end of 2022, spanning 27.1 kilometers. Once completed, the road in Nairobi will be relieved of traffic congestion, thereby enhancing Kenya's transportation conditions, promoting local economic development, and improving living standards.

The fundamental significance of erecting railway systems that interconnect the landlocked hinterlands to the maritime harbors cannot be overstated in East Africa. The cardinal railway undertakings stipulated in the East African master plan encompass the formidable Djibouti-Addis Railway and the Nairobi-Mombasa Railway, the latter of which has been envisaged to serve as a catalyst for the economic development of the region. Djibouti, a small yet strategically situated nation, holds a pivotal position in Ethiopia's commercial sphere as it serves as a crucial conduit for the inflow and outflow of commodities to and from Europe, Asia, and other parts of Africa. Indeed, the Djibouti route assumes an indispensable role as the fulcrum of Ethiopia's export and import activities, further underscoring its position as an indispensable commercial nucleus in the East African domain. The Addis Ababa-Djibouti Railway, constructed and operated by Chinese firms, links Ethiopia's capital, Addis Ababa, to the port city of Djibouti. Covering a distance of 759 kilometers, the railway has substantially reduced travel time from three days by road to a mere 12 hours by rail. Launched in 2016, the Addis Ababa-Djibouti Railway, which was financed by China, is considered one of the most successful projects, as it has notably improved trade and transit between Ethiopia and Djibouti's port, serving as a

crucial connection between the two locations. The transportation infrastructure funded by China as the central part of the BRI has significantly improved Nairobi's connectivity through various road and railway projects. These projects have facilitated travel and trade not only within Kenya but also to other parts of Africa. Among these projects, the railway network linking Mombasa to Nairobi has had a particularly transformative impact. This railway project is expected to enhance regional connectivity by linking Kenya with neighboring countries such as Uganda, Burundi, Ethiopia, South Sudan, the Democratic Republic of Congo, and Rwanda. As a result, this connectivity is poised to create new trade opportunities within the region and facilitate international trade with other parts of the continent.

To summarize, China has played a pivotal role in the development of various infrastructure projects in Africa. This includes the establishment of airports, seaports, and roadways. Furthermore, China has introduced advanced transportation technologies such as high-speed railways and intelligent transportation systems in some African nations. As of now, Chinese enterprises have upgraded and constructed over 10,000 kilometers of railways, approximately 100,000 kilometers of roads, installed 120 million kilowatts of power capacity, and established a communication backbone network spanning 150,000 kilometers. Moreover, China has also established more than 400 medical facilities, over 1,200 educational institutions, and increased the clean water treatment capacity by 400,000 tons per year, creating a total of 4.5 million jobs across Africa.

The rapid spread of Chinese products, technologies, services, and standards on the global market has been significantly boosted by mutually beneficial cooperation with Africa, facilitating the unprecedented success of numerous Chinese enterprises in the field of international commerce. Furthermore, the transportation infrastructure of Africa is primarily funded through a combination of investments from both the public and private sectors. Prominent financial organizations that offer funding for transportation-related projects across the Africa include the World Bank (WB) and the African Development Bank (AfDB). While in recent years, China has fervently invested considerable amounts in enhancing the transportation infrastructure across Africa, under the BRI. According to China's Ministry of Commerce, Africa has now emerged as the second most substantial market for China's foreign contracting projects, a testament to the enormity of China's investment in the region. Chinese firms have been instrumental in facilitating African countries to implement a vast number of infrastructure and livelihood projects with financial aid and a variety of funding mechanisms, thereby successfully improving the connectivity of African facilities and bolstering the quality of life of the local people.

#### **4. OPPORTUNITIES AND CHALLENGES OF CHINA-AFRICA COOPERATION IN THE TRANSPORTATION SECTOR UNDER THE BRI**

The diverse and extensive transportation infrastructure, comprising highways, railways, ports, and airports, is continuously expanding and enhancing the connectivity between China and Africa. China's considerable investments in Africa have created a complex transportation network aimed at modernizing and improving the region. This intricate web of transport infrastructure has generated numerous distinctive opportunities for Africa. However, Optimal performance and operation necessitate the resolution of a myriad of complex and multifaceted challenges.

The emergence of Chinese investment in the transport sector may have a spillover effect in promoting economic diversification in African countries. Improved infrastructure can attract investment in other sectors, including manufacturing, agriculture, and services, by



enhancing the overall business environment and reducing transportation and logistics costs. The upgrading of African ports and airports has yielded positive results in enhancing logistics, making it easier for companies to transport goods between China and Africa. As a result, delivery times have been reduced, and trade efficiency has been increased. In addition, the proliferation of advanced infrastructure is likely to stimulate the emergence of new industries and generate job opportunities for local communities. Therefore, African countries can move away from their dependence on extractive industries and transform into a more diversified and sustainable economic model.

Improving infrastructure connectivity in African countries could enhance their economic capacity, leading to increased productivity and foreign investment. A well-developed African transport sector may also stimulate FDI in the region, creating a more competitive business environment, and decreasing operating costs for businesses. Besides, improving transport infrastructure in Africa will create new markets and opportunities for Chinese businesses in the continent. The upgraded infrastructure will enable African countries to have easier access to the vast Chinese market and reach out to new customers. With better transport systems, the cost of moving goods and services between China and Africa has reduced, thereby making it more economically feasible for companies to trade with each other. This, in turn, will enhance trade and commerce between the two regions. In effect, businesses will find it easier to trade with Africa, and African enterprises will have better access to global markets. Moreover, the improved transport infrastructure will facilitate the exchange of knowledge, ideas, and culture between China and Africa, fostering stronger economic partnerships and cultural ties.

However, China-Africa collaboration in transportation has encountered various challenges. Contrary to the optimistic viewpoint on China's investment projects in Africa, critics contend that China's motive is to extract minerals and gain market access for its products, rather than promoting sustainable economic growth and development in African countries (Ndumbe Anyu & Afam Ifedi, 2008). Also, the construction of infrastructure projects in Africa is frequently financed through loans provided by foreign governments or international financial institutions. Although these projects can bring considerable benefits to the local communities, there are concerns regarding their long-term sustainability. A significant worry is whether these projects can generate adequate returns to repay the loans and offer lasting advantages to the local communities. Critics argue that these projects might be excessively costly and that the loans obtained to fund them could result in debt distress. Some African nations question the expanding Chinese presence in Africa's transportation industry due to concerns that it could erode their sovereignty and exert undue political influence. These concerns are partly due to China's practice of granting loans and aid to African countries with few conditions attached. Additionally, concerns exist regarding the quality, durability, and effective maintenance and operation of the infrastructure. Furthermore, there is a potential for negative impacts on the environment and local communities. Reports indicate that some of the infrastructure projects being built by Chinese companies in Africa are associated with labor abuses and environmental damage.

According to some critics, Chinese companies tend to prioritize their interests at the expense of local communities and the environment. For instance, the construction of large-scale infrastructure projects like dams or highways can displace people from their homes and cause environmental harm. Some African nations have been reconsidering their ties with China due to these concerns and have been exploring other options for investments and aid. However, the majority of African nations still consider China to be a significant ally

in fostering economic growth, and they are dedicated to collaborating with China to enhance their transportation infrastructure and advance commerce and investments.

## **5. SUGGESTIONS FOR CHINA'S INVESTMENT IN AFRICA'S TRANSPORTATION SECTOR UNDER THE BRI**

The transportation sector plays a vital role in promoting economic growth and development in Africa by facilitating efficient transportation networks that improve trade both within and outside the continent, despite the fact that Chinese investment in Africa's transportation infrastructure sector began later than that of developed countries. To enhance the collaboration between China and Africa in the field of transportation infrastructure, the Chinese government should take further actions to facilitate and support the emergence of globally competitive investment entities in Africa.

First of all, the potential impact on local communities, as well as the environmental and social sustainability of the projects, must be carefully considered. Infrastructure projects should be designed and implemented sustainably, considering the needs and interests of local communities and maintaining high-quality sanitation on a large scale to address these concerns. This approach ensures that infrastructure development is carried out in a manner that is sensitive to the needs of the local population and promotes environmental and social sustainability. Executing successful projects necessitates close collaboration with local stakeholders and conducting comprehensive assessments of the projects' economic, social, and environmental effects. Moreover, ensuring the financial feasibility of the projects and the ability of local governments to sustain and operate them is crucial for their long-term viability. As a result, it is important to prioritize transportation infrastructure projects such as roads, railways, and airports, as they improve connectivity and provide access to markets and resources.

Then, collaborating with local governments and businesses is imperative to ensure sustainable and mutually beneficial projects for the community. The cost of inland transportation in Africa is notably higher than other regions. China ought to work together with African governments and businesses through multiple channels. Economic and trade agreements provide one of the main avenues for China to offer investment and trade opportunities to African countries in return for access to the African market. Furthermore, China ought to persist in offering development aid to African nations via transport infrastructure undertakings like constructing roads, bridges, and ports, as well as endowing loans and grants for other developmental schemes. Additionally, China should engage in partnerships with African enterprises through joint ventures and strategic alliances, whereby Chinese firms invest in or collaborate with African businesses to access local resources and markets.

Third, it is vital to provide technical assistance and training to local workers to enhance their capacity and facilitate technology transfer. China ought to incorporate training programs, such as on-the-job and classroom training, to enable African workers to acquire new skills. This approach would significantly contribute to enhancing the awareness of African people regarding effective ways to improve transport sectors. China's technical assistance is vital in providing expert guidance and support to assist Africans in overcoming technical challenges. China should explore the use of local suppliers and manufacturers to promote economic development in Africa. Also, governments and development organizations should offer financing and technical assistance to help both Chinese and African companies overcome challenges related to language and cultural barriers.

Fourth, developing mutually beneficial partnerships between Chinese and African firms is essential for promoting trade and investment. Building infrastructure is vital to enhance and encourage intra-African trade, while ensuring the equitable distribution of its benefits across the region. Arranging introductions and networking opportunities can be an effective strategy for promoting cooperation between China and Africa. Governments and business organizations should facilitate the collaboration between Chinese and African companies by organizing meetings and forums, fostering knowledge exchange, and promoting the establishment of joint ventures and strategic partnerships. Chinese and African companies can collaborate by pooling their resources, expertise, and market access to co-create innovative products and technologies. African companies can enhance their operational efficiency and competitiveness by learning from Chinese companies' best practices through knowledge sharing.

Finally, to build trust, it is imperative to promote transparency and responsible business practices, which helps in establishing long-term relationships and creating a favorable investment environment. It is essential to establish a system to monitor and evaluate the social and environmental impacts of transportation projects in Africa. China must conduct thorough environmental and social impact assessments before approving any projects to ensure their sustainability and to minimize harm to the environment and local communities.

## **6. CONCLUSION**

Transportation is a crucial industry that plays an essential role in the realization of the objectives of poverty reduction and sustainable development. By improving connectivity and accessibility, transportation infrastructure can facilitate the movement of people, goods, and services, leading to economic growth and reduced poverty. At the same time, sustainable transport policies and practices play a significant role in protecting the environment and contributing to a more sustainable future for all. Countries can enhance their trade, promote investment, and create job opportunities by improving their transport infrastructure. Furthermore, a better road network can facilitate the movement of people, goods, and services, enabling individuals and businesses to access markets and services with greater ease. Policy reforms aimed at promoting regional integration and improving transport infrastructure can effectively reduce trade costs, increase connectivity, and promote cross-border trade and regional growth.

The development of transportation is widely considered crucial for the growth and development of the African economy. However, existing economic, technological, and institutional conditions have exacerbated the problem. The significance of transportation infrastructure in economic development is apparent, but in Africa, it is hindered by two major factors. Firstly, the region lacks transportation facilities in comparison to other parts of the world. Its road system is less dense, the railroad system is built to a low standard, ports are not adequately equipped for containerized transport, and the air transport system is technologically inadequate in terms of traffic control and navigation services. Secondly, the region's infrastructure has difficulty providing good transport services because it is not well maintained, managed or utilized. As a result, African transport infrastructure services are problematic in terms of facilities and management.

China and Africa share a community with a shared future, particularly in the transportation industry where they have worked closely together for several decades. China's BRI aims to increase trade flows and connectivity, decrease travel time and costs, and facilitate global movement of goods. The improvements in African infrastructure will enable better

integration of Africa into global value chains, enhancing its participation in international trade and fostering economic growth and development. Additionally, the Chinese government places high value on promoting economic and trade cooperation, breakthroughs, and developments with Africa. Chinese enterprises are actively assisting in the construction of transportation infrastructure projects in Africa, making significant contributions to the serious lack of various transportation modes. Furthermore, China's investment in Africa's transportation infrastructure sector will aid the continent's industrialization and trade liberalization, supporting its goal of regional economic integration. China's cooperation with Africa's transport sector demonstrates China's firm commitment to promoting friendship between the two countries and building a community of human destiny.

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