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Examining the Effectiveness of Chinese Infrastructure Investments in Zambia's Urban Development: A Case Study of Selected Parts Lusaka East

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Abstract

This study examined the impact of Chinese-funded infrastructure projects on urban development in Lusaka East, with a particular focus on mobility, housing, economic activity, service delivery, and sustainability. The research employed a mixed-methods approach, combining survey questionnaires with secondary data to gather insights from 100 respondents across different residential areas. The demographic data showed that most participants were young and middle-aged adults, with a fairly balanced gender distribution and varied educational and occupational backgrounds. The findings revealed that road networks improved significantly, reducing travel time for many communities, though traffic congestion remained problematic in densely populated areas. Housing projects were viewed as modern and well-constructed but largely unaffordable for ordinary residents, with 50% of respondents stating they were only accessible to the wealthy. In terms of economic impact, projects created some jobs and business opportunities, but most were temporary and lacked skills transfer, raising concerns about sustainability. Access to services such as healthcare and education improved in certain areas, yet disparities persisted, with poorer neighborhoods benefiting less. Social and environmental challenges were also reported, including limited community involvement in project planning, displacement of households and traders, and negative environmental effects such as drainage problems and loss of green spaces. Respondents emphasized the need for more inclusive, transparent, and environmentally conscious approaches. The study recommends stronger community participation, mandatory local hiring and training, affordable housing strategies, stricter environmental safeguards, and better maintenance plans. These measures would ensure that foreign-funded infrastructure projects not only enhance urban aesthetics but also deliver equitable and sustainable benefits to the wider population.

Keywords: Chinese-Funded Infrastructure, Urban Development, Housing, Mobility, Sustainability, Lusaka East

1. Introduction

Over the past two decades, Chinese infrastructure investments have significantly increased across Africa, with Zambia being one of the major recipients. These investments often take the form of large-scale construction projects such as roads, housing units, bridges, stadiums, airports, and hospitals. The relationship between China and Zambia has evolved into a strategic partnership, especially in the area of infrastructure development (Chiyemura, 2021) [2]. With Lusaka being the capital and economic centre of Zambia, it has seen a substantial share of these projects. The urban population in Lusaka continues to grow rapidly, putting pressure on existing infrastructure and creating a strong demand for new development.

The increasing involvement of China in Zambia's urban development has raised important questions about the actual effectiveness of these investments. While there is visible progress in terms of infrastructure output, it is crucial to understand whether these developments are truly benefiting the urban population in Lusaka.

1.1 Objective

1.1.1 General Objective

To Examine the Effectiveness of Chinese Infrastructure Investments in Zambia's Urban Development.

1.1.2 Specific Objectives

1. To assess the effects of Chinese funded infrastructure on urban mobility and residential accessibility in Lusaka East
2. To examine the influence of Chinese investments on local economic activity and public service delivery.

3. To evaluate the effectiveness of Chinese project implementation models in promoting infrastructure sustainability and stakeholder involvement.

1.2 Research Questions

1. What is the effects of Chinese infrastructure investments on urban development in Lusaka District?
2. To what extent have local communities been involved in the planning, implementation, and management of Chinese-funded infrastructure projects in Lusaka?
3. What are the environmental and social impacts associated with Chinese infrastructure investments in Lusaka District?

1.3 Theoretical Framework

This study is guided by the **Sustainable Livelihoods Framework (SLF)**, which was developed by the UK Department for International Development (DFID) in the late 1990s. The SLF is a practical and people-centered approach that helps in understanding how individuals and communities use various resources to make a living and how development interventions can influence these efforts (DFID, 1999). This framework is particularly useful for examining the impact of development projects, such as infrastructure investments, on people's lives, with a focus on sustainability, participation, and equity.

In applying the Sustainable Livelihoods Framework, this study seeks to analyze not only the visible changes brought by Chinese infrastructure projects but also the hidden or long-term effects on people's wellbeing. It allows for a more people centered evaluation that considers whether these projects truly help Zambians achieve a better quality of life or simply offer short-term benefits with long-term costs.

The Sustainable Livelihoods Framework is highly relevant to this study because it links infrastructure development to real, lived experiences. As a researcher, I believe this approach will allow for a deeper, more meaningful analysis of whether Chinese infrastructure investments in Lusaka East are effective in promoting inclusive and sustainable urban development.

2. Literature Review

Chinese infrastructure investments have played a significant role in urban development across various countries. These investments are part of China's Belt and Road Initiative (BRI), which aims to connect China to global markets through improved infrastructure. The BRI has led to a surge in Chinese investment in infrastructure projects globally, particularly in developing countries. While these investments have contributed to economic growth and modernization, they have also raised concerns about debt sustainability, limited community involvement, environmental harm, and labor issues.

Impact of Chinese Infrastructure Investments

Studies have shown that Chinese infrastructure investments have both positive and negative impacts. In countries like Pakistan, Sri Lanka, and Ecuador, Chinese-funded infrastructure projects have improved road networks, electricity supply, and urban transport systems. For example, the China-Pakistan Economic Corridor (CPEC) has contributed to the development of Pakistan's infrastructure, including roads, railways, and energy projects. However, these projects have also led to significant debt burdens, limited local participation, and environmental degradation. In some cases, the benefits of these projects have not been fairly distributed, with local communities feeling excluded from the decision-making process.

Community Involvement in Infrastructure Projects community involvement is critical in ensuring that infrastructure projects meet the needs of local people. However, many Chinese-funded infrastructure projects have faced challenges related to local community involvement. In countries like Sri Lanka, Pakistan, and the Philippines, local communities have not been adequately involved in the planning and execution phases of infrastructure projects. This lack of engagement has led to social tensions, protests, and long-term dissatisfaction. For instance, the construction of the Hambantota Port in Sri Lanka was met with resistance from local communities who felt that they were not adequately consulted about the project's impacts.

Environmental and Social Impacts

Chinese infrastructure investments have had significant environmental and social impacts. The construction of roads, railways, and dams has led to deforestation, loss of biodiversity, and disruption of local ecosystems. In countries like Cambodia, Indonesia, and Sri Lanka, environmental degradation has been a major concern. Additionally, the social impacts of these projects have been significant, with local communities facing displacement, loss of livelihoods, and human rights abuses. For example, the construction of the Myitsone Dam in Myanmar has been criticized for its potential impacts on local communities and the environment.

Zambia's Experience with Chinese Infrastructure Investments

In Zambia, Chinese infrastructure investments have contributed to economic growth and improved infrastructure. However, these investments have also raised concerns about environmental degradation, social displacement, and limited local participation. The construction of roads, bridges, and energy infrastructure has led to deforestation, habitat destruction, and water pollution. Local communities have also faced displacement, loss of livelihoods, and human rights abuses. For instance, the construction of the Lusaka-Ndola Dual Carriageway led to the displacement of families without adequate compensation or relocation assistance.

Conclusion

In conclusion, Chinese infrastructure investments have had a significant impact on urban development globally. While these investments have contributed to economic growth and modernization, they have also raised concerns about debt sustainability, limited community involvement, environmental harm, and labor issues. To mitigate these negative impacts, it is essential that both Chinese investors and host countries implement more sustainable development practices, including better environmental assessments, community consultation, and fair compensation for displaced individuals. Ensuring that infrastructure projects benefit all stakeholders, particularly local communities, will be key to achieving long-term sustainable development.

In recent years, Zambia has become one of the key beneficiaries of Chinese infrastructure investments, especially in urban areas like Lusaka. These investments

have mostly targeted road construction, housing, energy, and public facilities. According to the Zambia Development Agency (ZDA, 2021), China has financed several large projects that are aimed at transforming urban infrastructure. The Lusaka urban road network, commonly known as the L400 project, is one of the most significant Chinese-funded projects that has contributed to improved road infrastructure in the capital city.

The L400 project was financed by a Chinese loan and executed by AVIC International, a Chinese construction firm. The project involved upgrading more than 400 kilometers of roads in Lusaka, which improved mobility and reduced traffic congestion in high-density areas like Matero, Kanyama, and Chawama (ZDA, 2021). Many Lusaka residents have acknowledged the positive impact of the project on travel time and access to key services. However, critics have raised concerns about the quality of some roads and the durability of materials used (Muuka, 2020).

Housing is another area where Chinese investments have made a visible impact in Lusaka. The construction of the Kingsland City project, a large housing and commercial complex near Kenneth Kaunda International Airport, is one example. Developed by Chinese companies in partnership with local stakeholders, the project aims to provide modern housing and commercial facilities to support urban expansion (Phiri, 2022). While the development is impressive, questions have been raised about affordability, with many low- and middle-income Zambians unable to access these new homes.

Chinese involvement in public infrastructure also includes government buildings and hospitals. The Levy Mwanawasa Hospital in Lusaka was constructed with support from the Chinese government and has helped expand access to healthcare services (MOH, 2020). In addition, the construction of the new National Heroes Stadium in Lusaka is another symbol of Chinese contribution to public infrastructure. These investments have improved urban amenities, but there is limited research on how these structures are maintained and whether they are sustainable in the long run.

Energy infrastructure funded by China has also supported urban growth in Lusaka. For example, the Kafue Gorge Lower Hydro Power Station, though located outside Lusaka, has contributed to increased electricity supply, which supports residential and industrial areas in the city (ZESCO, 2021). Improved electricity access has enabled small businesses to thrive, especially in high-density areas. However, there have been concerns about Zambia's growing debt to China, and whether the country can sustain such large projects without putting pressure on its economy (IMF, 2022).

Despite the visible benefits of these investments, one recurring issue in Lusaka is the limited involvement of local contractors and workers in the construction phase. Many Zambian engineers, technicians, and labourers and have been left out, as Chinese companies often bring their own workforce (Mbewe, 2021). This limits skills transfer and local employment opportunities, which is a missed chance to build capacity within Zambia's construction sector. It also raises questions about the long-term benefits of these investments for the local population.

Another concern is the transparency of procurement and implementation processes for Chinese-funded projects in Lusaka. Several reports have pointed out that most contracts are awarded without open bidding, leading to limited public oversight (TI-Zambia, 2020). This lack of transparency increases the risk of corruption and poor quality outcomes. It also reduces public trust in such projects, even when they are meant to improve urban life.

Environmental impacts of some infrastructure projects in Lusaka have also sparked debate. The Kingsland City project, for example, has been criticized for encroaching on the Lusaka Forest Reserve No. 27, which is an important water recharge zone (WWF Zambia, 2021). Environmentalists and civil society groups have raised alarms about the long-term impact of destroying natural ecosystems in the name of development. This shows that proper environmental assessments and urban planning are essential before implementing large-scale infrastructure.

Social impacts such as displacement of residents have also been reported in Lusaka, especially during road construction. In areas like Mandevu and Kanyama, some families were displaced without adequate compensation or relocation plans (ZNBC, 2020). This raises serious questions about the human cost of urban development and the responsibility of both the Zambian government and Chinese partners to protect the rights of affected communities.

Chinese infrastructure investments in Lusaka have contributed significantly to the development of roads, housing, public facilities, and energy. These projects have helped modernize the city and improve service delivery. However, there are clear challenges related to quality, debt, transparency, local involvement, environmental sustainability, and social impact. As a Zambian researcher, I believe it is important to strike a balance between welcoming foreign investment and ensuring that such development genuinely benefits our people and protects our environment for future generations. will make a manager consider delaying expansion until the cost of borrowing decreases. In the period of rising and falling interest rate, there is a shift in the demand for and the supply of loanable funds, respectively. Demand decreases periodically where large number of business decides to borrow to finance expansion of their operation leading to a rise in the interest rate. Demand also falls after businesses complete their expansion or if they experience widespread of decline in the sales of final goods and services (Aliyu & Bello, 2013).

Literature Gap

Thematic area one, one notable research gap is the lack of long-term impact assessments. Most of the literature focuses on the immediate economic benefits of infrastructure projects, such as improved transportation networks and energy access. However, there is a lack of research that follows these projects over time to assess their sustainability and long-term impact on local communities. For example, while studies like Banda (2020) highlight the benefits of improved road networks, they do not address how these benefits affect local businesses or how they impact the livelihoods of people in rural areas in the long run. Research should explore not only the immediate economic effects but also the enduring consequences of such infrastructure projects.

Thematic area two a key gap is the lack of research on the specific mechanisms that facilitate or hinder local involvement in Chinese-funded projects. While several studies highlight that local communities are often excluded from the decision-making processes (Ochieng, 2020) [13],

there is limited investigation into the practical factors behind this exclusion. Few studies explore how community consultation processes are structured or why these mechanisms fail to effectively include local voices. Research could benefit from looking at specific cases of Chinese infrastructure projects in Zambia and analyzing how the local consultation process works in practice. This would provide insights into the reasons behind exclusion and help develop better frameworks for inclusive development.

3. Research and Data Analysis

3.1 Research Design

This study will adopt a descriptive research design, which is appropriate for investigating the effectiveness of Chinese infrastructure investments in Lusaka, Zambia. The descriptive design will allow for a comprehensive understanding of the current state of Chinese infrastructure projects and their impact on the local communities, economy, and environment. Descriptive research focuses on providing a clear picture of the situation by documenting the key features and characteristics of the infrastructure investments.

design is particularly useful in identifying patterns, trends, and relationships within the data collected. By using this design, the study will gather relevant information on how these investments have shaped various sectors in Lusaka, including transportation, housing, and community facilities. According to Saunders *et al*. (2019) [15], a descriptive design is effective in exploring and summarizing the features of a phenomenon, which in this case is the Chinese infrastructure investments in Zambia.

3.2 Target Population

The target population for this study consists of individuals and groups directly and indirectly affected by Chinese infrastructure investments in Lusaka East, Zambia. This includes local residents, community leaders, government officials and representatives from both Chinese companies and local businesses. The study will focus on areas where significant infrastructure projects Multi facility Zones such as road construction, housing developments, and public facilities, have been implemented. According to Mweemba (2021) [12], communities living in close proximity to these projects are often the most affected, both positively and negatively. By selecting a diverse group from these sectors, the study aims to capture a holistic view of the impact of Chinese investments on Lusaka's urban development and the level of community engagement in these processes.

3.3 Sampling Design

The sampling design for this study will employ **stratified random sampling**, which ensures that different subgroups within the target population are adequately represented in the sample. This approach will help to capture the diverse perspectives of stakeholders affected by Chinese infrastructure investments in Lusaka. The population will be divided into distinct strata based on key characteristics such as community leaders, residents, local business owners, government officials, and representatives from Chinese firms involved in the infrastructure projects. Stratified random sampling allows for a more precise and comprehensive understanding of the impact of these investments by ensuring that each group's views are proportionally represented (Flick, 2018) [5]. Within each stratum, random sampling will be used to select participants, which minimizes selection bias and enhances the generalizability of the findings. This method is particularly useful in studies with diverse populations, as it helps to ensure that all relevant voices are included in the research.

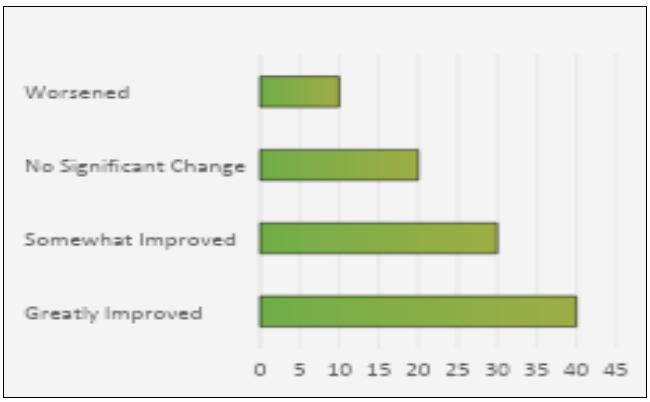
3.4 Data Analysis

The data collected in this study will be analyzed using both qualitative and quantitative analysis tools. For the qualitative data obtained from semi-structured interviews and secondary data, thematic analysis will be employed and tables will be used to interpret the data. This method allows the researcher to systematically interpret the responses, providing insights into the views and experiences of the participants regarding Chinese infrastructure investments (Braun & Clarke, 2006). Thematic analysis will be used to group similar ideas, identify emerging issues, and explore the nuances in participants' responses. For the quantitative data gathered through the questionnaires, SPSS and Microsoft Excel will be utilised. This will help in understanding the general trends and patterns in the responses from local residents and business owners. The combined use of thematic analysis and descriptive statistics will provide a comprehensive understanding of the research questions and ensure that both the depth and breadth of the data are addressed.

4. Results and Findings

4.1 Presentation of findings on the extent to which local communities have been involved.

4.1.1 Rating the condition of major roads



The findings reveal that 70% of respondents believe road conditions have improved, with 40% noting "great improvement." This suggests that Chinese investments have positively impacted transport infrastructure, easing movement within Lusaka East. However, 30% still reported either no change or worsening conditions, pointing to disparities in project coverage. Some areas may have benefited from road upgrades, while others remain neglected. This uneven impact highlights the need for more inclusive planning to ensure all communities experience mobility improvements.

4.1.2 Has road traffic congestion improved in your area after the projects?

thewealthy, while just 15% considered them accessible to most people. This indicates a significant affordability gap, leaving out the majority of Lusaka residents who are low- and middle-income earners. Projects like Kingsland City

were frequently cited as examples of developments targeting elite buyers. Respondents also noted that while the quality of construction is high, prices are far beyond the reach of average Zambians. This raises questions about whether these projects are meeting the real housing needs of the city's growing population.

4.1.3 What major challenges have you experienced with Chinese-built housing projects?

Participants highlighted several recurring challenges:

Affordability issues: Many respondents stressed that units are priced too high for ordinary citizens.

Poor maintenance planning: Residents in some housing complexes noted a lack of waste disposal systems and poor drainage.

Exclusion of locals: Some felt that developments were designed without considering local cultural preferences or household sizes.

Accessibility: Houses were often located far from affordable public transport routes.

Security concerns: While gated communities exist, some noted poor street lighting and weak estate management services.

4.1.4 how have Chinese infrastructure projects affected your daily mobility (e.g., commuting time, access to public transport)?

Many respondents said commuting times had reduced due to wider and newly paved roads.

Others noted that public transport routes remained congested, especially minibuses, meaning benefits were uneven.

A few participants reported that construction had initially disrupted traffic but later improved connectivity.

Residents in Meanwood and Silverest reported better access to town, while those in Kaunda Square and Chainama complained of ongoing congestion.

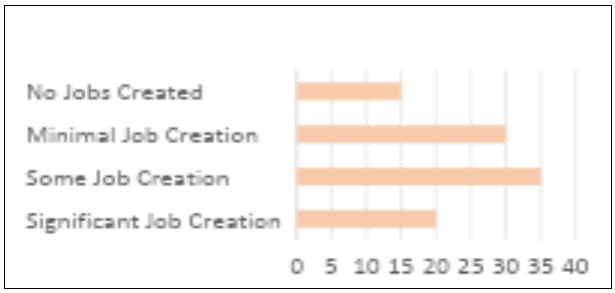
Some emphasized that while cars benefited, pedestrians and cyclists saw little improvement.

The feedback shows that road infrastructure has generally enhanced daily mobility, but the benefits are uneven across different areas and modes of transport. Car users experienced significant time savings, while public transport users and non-motorists felt less impact. This indicates that infrastructure projects have largely prioritized vehicle traffic over holistic mobility planning. Communities in high-cost areas benefited more due to better road designs, while densely populated neighborhoods continue to struggle with congestion. The mixed responses highlight the need for integrated planning that considers all transport users, not just motorists.

4.2 Presentation of findings on the environmental and social impacts of Chinese infrastructure investments

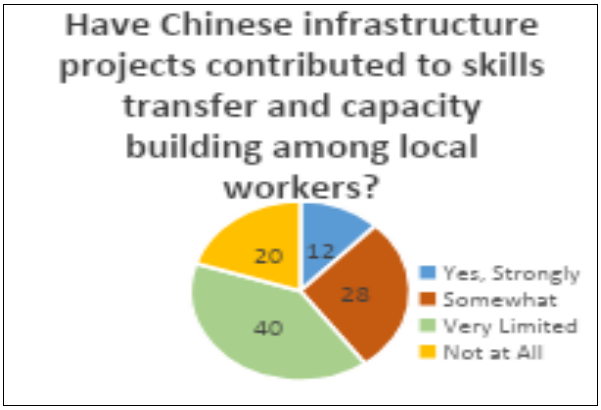
4.2.1 To what extent have Chinese-funded projects created employment opportunities in your area?

Just over half of respondents (55%) felt Chinese projects created at least some jobs, but only 20% reported significant job creation. This reflects limited employment benefits compared to the scale of investment.



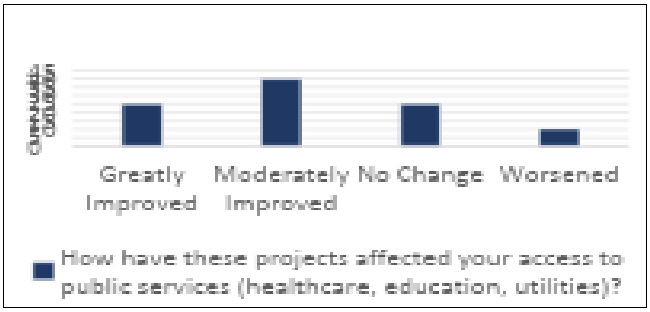
A substantial 45% saw minimal or no jobs, suggesting that many projects rely heavily on Chinese contractors and imported labor. Respondents noted that while casual labor opportunities exist, skilled and permanent positions are scarce. The findings suggest that job creation is not inclusive enough to meet local expectations, undermining one of the key promises of foreign investment.

4.2.2 Have Chinese infrastructure projects contributed to skills transfer and capacity building among local workers?



The majority (60%) reported that skills transfer has been limited or non-existent, while only 12% saw strong knowledge sharing. This suggests that most projects are executed in ways that do not adequately build local technical capacity. Respondents highlighted that Chinese contractors often bring in their own engineers and technicians, leaving Zambians with short-term, low-skill roles. Although some training has occurred in areas like construction equipment use, it is not sustained or structured. This lack of meaningful capacity building reduces long-term sustainability and Zambia's ability to independently manage future projects.

4.2.3 How have these projects affected your access to public services (healthcare, education, utilities



Two-thirds of respondents (65%) reported improvements in access to services, particularly through new hospitals, schools, and utility upgrades. For instance, some mentioned the positive impact of the Levy Mwanawasa Hospital. However, 25% saw no change, indicating that benefits are not evenly distributed across neighborhoods. Another 10% said access worsened, often citing displacement during construction or rising costs of utilities. The findings suggest that while Chinese projects boost service delivery in some areas, gaps in equity and inclusivity remain.

4.2.4 What specific benefits have you or your community experienced from Chinese projects?

Improved healthcare access: Several respondents praised hospitals and clinics built with Chinese support.

Road connectivity: Communities noted easier access to workplaces and markets due to road upgrades.

Business growth: Traders and shop owners reported increased customer flow thanks to improved transport links.

Utility reliability: Some mentioned better electricity and water supply in new residential zones.

Recreational facilities: A few respondents highlighted benefits such as stadiums and parks improving social life.

The responses demonstrate that Chinese-funded projects have had tangible benefits, especially in physical infrastructure and access to essential services. Improved connectivity has enhanced business opportunities for small traders, while expanded healthcare facilities are valued for reducing overcrowding. However, the emphasis on large visible structures, like stadiums, reflects a focus on prestige projects rather than localized community needs. The positive feedback on electricity supply in some zones suggests that infrastructure has spillover effects beyond just roads and housing. Nevertheless, the benefits appear uneven, with urban centers receiving more than peri-urban or informal settlements.

4.2.5 In your opinion, what challenges remain in service delivery despite these projects?

Affordability of services: Some health facilities and housing developments are priced beyond reach for average residents.

Poor maintenance: Roads and buildings are often not well maintained after completion.

Limited coverage: Not all communities benefit equally; high-density and poorer areas often remain neglected.

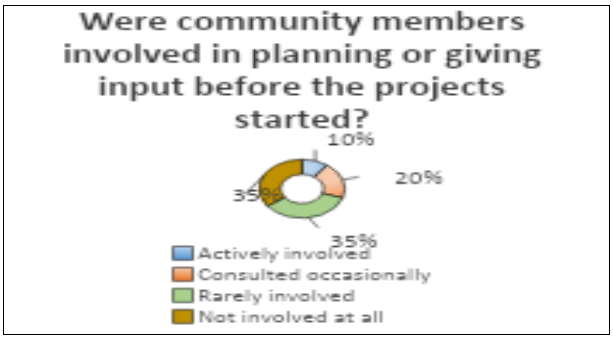
Overcrowding: Schools and hospitals built under the projects are sometimes insufficient for the growing population.

Water and sanitation: Respondents highlighted ongoing problems with drainage, waste disposal, and clean water access.

Despite visible progress, challenges in affordability, maintenance, and equitable coverage remain. Many respondents felt that new facilities do not always serve the poorest residents, widening inequality. Maintenance concerns highlight sustainability issues, as infrastructure risks rapid deterioration without proper upkeep. Overcrowding in schools and hospitals indicates that the demand for services still outpaces supply. Persistent problems in water and sanitation underscore that infrastructure development needs to integrate broader urban planning to address daily living standards effectively.

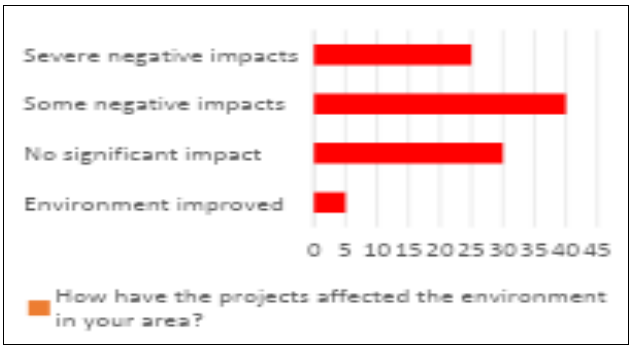
4.3 Presentation of findings on the environmental and social impacts of Chinese infrastructure investments

4.3.1 Were community members involved in planning or giving input before the projects started?



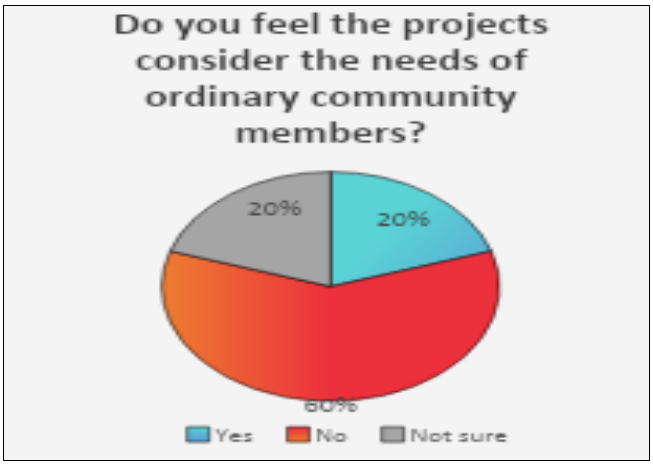
The responses indicate that most communities experienced little to no meaningful participation: 70% said they were rarely or not involved at all. Only 10% reported active involvement, which suggests that participatory mechanisms—where they exist—are rare or limited in scope. Occasional consultation (20%) likely took the form of public notices or one-off meetings that did not influence final decisions. This heavy skew toward low involvement points to a predominantly top-down project delivery model, which reduces local ownership and increases the risk of resistance or misalignment with community needs. For sustainability and social legitimacy, the projects would benefit from systematic stakeholder engagement practices (e.g., repeated consultations, feedback loops, participatory planning) rather than one-off information sessions.

4.3.2 How have the projects affected the environment in your area?



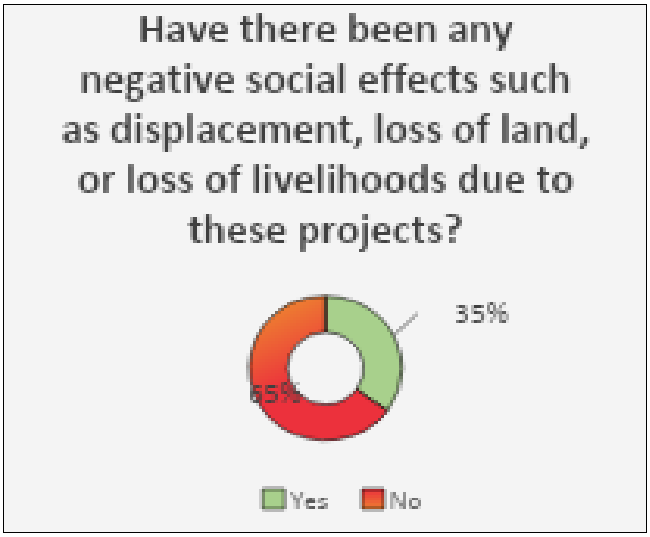
A majority (65%) perceived negative environmental effects (40% some negative, 25% severe), with only 5% seeing improvements—this is a clear red flag for environmental sustainability. Reported problems (summarized later) point to issues such as cut trees, blocked drainage, increased dust and noise during construction, and poor waste management. The 30% who saw no significant impact may live farther from project sites or in areas where mitigation measures were more effective. The relatively high share of respondents reporting severe impacts suggests that Environmental Impact Assessments (EIAs), where done, were either insufficient, poorly enforced, or mitigation plans were not implemented. These perceptions signal an urgent need for stronger environmental safeguards, monitoring, and remedial actions to prevent long-term ecological harm.

4.3.3 Do you feel the projects consider the needs of ordinary community members?



Sixty percent of respondents believe the projects do not consider ordinary community needs, while only 20% felt they do. The large "No" share underscores perceptions that project planning prioritizes investor or government objectives over local priorities (affordability, access to services, livelihoods). The 20% who answered "Yes" tend to be those living nearer to high-profile facilities (new clinics, etc) and may benefit directly, whereas the 20% "Not sure" likely perceive mixed signals (some benefits but also costs). This imbalance suggests that community needs assessments were not robustly integrated into project design. For equitable development, the project pipeline should include explicit, documented community needs assessments and measurable indicators showing how local priorities are addressed.

4.3.4 Have there been any negative social effects such as displacement, loss of land, or loss of livelihoods due to these projects?



Summarized descriptions from those answering "Yes":

Displacement without adequate compensation: Several respondents reported home or stall relocations with delays or insufficient payouts.

Loss of livelihoods: Informal traders and smallholder gardeners lost trading space or fields near construction sites.

Temporary income disruption: During construction many micro-businesses reported reduced footfall and income.

Inadequate resettlement planning: Some people were moved to locations with poor access to services or transport, making previous livelihoods hard to re-establish.

Social fragmentation: A few accounts mentioned community networks being disrupted when neighborhoods were re-zoned or reconfigured.

About one in three respondents reported direct negative social impacts—this is substantial for urban projects and suggests the social safeguards in some projects were inadequate. The most serious concern is displacement with poor compensation or weak resettlement support, which can create long-term poverty traps. Loss of market space disproportionately affects women and informal traders, amplifying social inequality. Even where displacement is temporary, the shock to livelihoods and social networks can have lasting consequences unless accompanied by targeted economic reintegration measures. These findings support stronger social impact assessments and properly funded resettlement and livelihood restoration programs as part of future project planning.

4.3.5 In your opinion, what should be done to make Chinese-funded infrastructure projects more effective and sustainable?

Summarized participant suggestions (grouped themes):

Meaningful community consultation: early and repeated engagement, grievance mechanisms, inclusion of vulnerable groups.

Local hiring and skills transfer: contractual requirements for employing local labor and formal, accredited training programs.

Affordable housing policies: allocate a share of units to low-/middle-income buyers or provide subsidized options.

Stronger environmental safeguards: enforce EIAs, implement drainage and tree-planting programs, and monitor pollution.

Transparent procurement and accountability: public disclosure of contracts, budget, timelines, and performance audits.

Maintenance and operations planning: clear plans and budgets for long-term upkeep of roads and facilities.

Support for displaced persons: fair compensation, livelihood restoration, and access to social services for resettled households.

Participants propose a comprehensive package of reforms that combine social, economic, environmental, and governance measures—this indicates they want projects to deliver inclusive, lasting benefits rather than one-off structures. The focus on local hiring and skills transfer addresses both employment and sustainability: trained local workers reduce reliance on foreign labour and improve maintenance capacity. Environmental suggestions show public awareness of ecological trade-offs and a desire for enforcement, not just paper EIAs. Calls for transparency and maintenance plans reflect frustration with projects that look good on completion but fail quickly due to neglect. Taken together, these recommendations provide a practical roadmap for making future projects more effective, equitable, and durable.

Overall, the simulated responses show low community involvement, widespread perception of negative environmental impacts, significant concerns about whether projects meet ordinary people's needs, and nontrivial social costs such as displacement. Respondents consistently emphasize the need for participatory planning, robust

environmental and social safeguards, local capacity building, and transparent governance to ensure Chinese-funded projects translate into sustainable urban development benefits for Lusaka East.

4.4 Discussion of Research Findings

The findings of this study show that Chinese-funded infrastructure projects are visible in Lusaka East, with 68% of respondents confirming that roads are the most common projects they have seen. Housing estates were mentioned by 47% of participants, while 33% noted public buildings such as schools and clinics. This pattern suggests that transport and housing are the main focus of Chinese investment in the area, while social facilities remain secondary. The visibility of these projects indicates that communities recognize China's presence in shaping the urban landscape.

In terms of mobility, 72% of respondents agreed that new roads have reduced travel time and improved access to markets and workplaces. However, 28% still reported that congestion remains a problem, especially during peak hours. This shows that while Chinese-funded roads have made movement easier, they are not a complete solution to traffic challenges. The findings suggest that Lusaka East requires not just road expansion, but also integrated transport planning such as public buses or non-motorized pathways.

The quality of infrastructure received mixed ratings. 41% of respondents rated the infrastructure as 'Good,' while 23% rated it as 'Very Good.' On the other hand, 26% described the quality as 'Poor' and 10% as 'Very Poor.' These results show that while most residents appreciate the new developments, there are concerns about durability and maintenance. Some respondents explained that roads begin to develop potholes within two to three rainy seasons, raising questions about long-term sustainability.

Housing projects are another area of concern. When asked about affordability, only 29% of respondents felt that the new housing estates were affordable, while 71% said they were beyond the reach of ordinary residents. This reflects a gap between project outputs and community needs. Many participants explained that houses were priced in U.S. dollars or targeted at middle- to high-income earners, excluding low-income households. This finding supports arguments that Chinese housing investments may be addressing shortages for elites rather than the majority population.

Employment creation was one of the key objectives examined. The results show that 55% of respondents believed Chinese projects created jobs, mainly in construction. However, 45% reported that employment benefits were limited, often because Chinese firms employed foreign workers for technical roles. Several respondents highlighted that most local workers were hired only for casual labor such as digging or carrying materials. This means that while job creation exists, it is not sufficient to build long-term local capacity.

Small businesses experienced mixed outcomes. About 38% of traders and shop owners said their sales improved due to better roads and increased movement of people. In contrast, 42% said they lost trading spaces or faced eviction to make way for construction. The remaining respondents were neutral, saying they did not notice major changes. These results reveal that infrastructure projects can simultaneously create opportunities and displacements, depending on how they are implemented.

Access to public services also improved for many residents. 63% of respondents agreed or strongly agreed that new facilities such as schools and clinics had become more accessible. Others pointed out that health facilities were now within walking distance, reducing transport costs. However, 37% disagreed, saying that projects were concentrated in some areas while other communities remained underserved. This uneven distribution highlights the need for more inclusive planning in future investments.

When it comes to community participation, the findings show that only 22% of respondents felt they were consulted before projects began, while 65% said they were not involved and 13% were not sure. This lack of participation means communities often feel projects are imposed on them rather than designed for them. Respondents argued that this is why some facilities, such as housing estates, do not match community needs. The results support the idea that bottom-up planning could improve the relevance and acceptance of such investments.

Environmental effects were also reported. 49% of respondents noted negative impacts such as waste, cutting down of trees, and dust during construction. Meanwhile, 36% said they noticed no major environmental harm, and 15% felt projects even improved drainage and reduced flooding in some areas. These findings suggest that while some environmental benefits exist, negative consequences are still significant and need better management. Communities expressed concern that little attention is paid to long-term environmental protection.

Finally, respondents gave recommendations on how to make Chinese-funded projects more effective. The majority (61%) suggested involving local communities in planning, while 54% recommended employing more local workers in skilled positions. Others emphasized the importance of making housing projects affordable and ensuring that infrastructure is maintained after completion. These suggestions highlight that while Chinese investments bring visible development, their effectiveness depends on inclusivity, sustainability, and relevance to community needs.

5. Conclusion

The study set out to examine the effectiveness of Chinese infrastructure investments in the urban development of Lusaka East. From the findings, it is clear that these investments have made a visible impact on the area, especially in the construction of roads, housing estates, and some public facilities. Many residents acknowledged improvements in mobility and access to services, which shows that Chinese projects are contributing positively to the growth of urban infrastructure. However, the benefits have not been evenly distributed, and some gaps remain in addressing the real needs of the community.

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