How Chinese infrastructure Investments have influenced Socio-economic Development in Kenya

- A case study of Kenya's Standard Gauge Railway

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Executive Summary

In a peri-pandemic world, we are confronted with African governments aggressively pushing infrastructural developmental agendas to address the economic devastation brought about by the global pandemic. Across the continent, infrastructure has been hailed as a potential panacea for the continent's current woes, with billions of dollars being set aside in national budgets with the promise of economic re-stimulation and development. However, as this study seeks to demonstrate, the focus on the infrastructure development nexus has proved to be a far more complex and multi-faceted challenge than previously appreciated. It has failed to achieve the expected success, and, in future, should thus be approached with more careful consideration and calculation to achieve maximum benefit for the people of the host nation. Coupled with further extenuating factors such as high interest rates from a multitude of donors, neo-patrimonial African governments and super-power rivalry tactics that are rampant across the African landscape, the quest for economic development at the helm of infrastructure presents multiple challenges to navigate. Thus, critical analysis of infrastructural development projects on the continent is of paramount importance to better understand the precise dynamics at play and assess whether the benefits truly outweigh the risks for developing economies.

This study's focus on the newly built Standard Gauge Railway (SGR) in Kenya provides one such example. Built in 2017, Kenya's latest Standard Gauge Railway line is 485km long, extending from Nairobi to Mombasa, and promising unprecedented economic growth to this developing East African nation. The majority (90%) of the funding has come from China's Export Import Bank (EXIM) with all construction being done by China's Road and Bridge Corporation (CBRC). At present Kenya's debt to GDP ratio sits at 70.46%, fuelling concerns that it is at risk of debt distress.

Four years after its construction, the emphasis of this study is to assess whether the Chinese-financed SGR is delivering on its promise of economic development for the Kenyan people. This development agenda comes with substantial risk to the Kenyan government, alongside the potential marginalisation of the most vulnerable in Kenyan society. Upon evaluation of the findings, the SGR was economically unviable from the beginning and evidence shows the true winners of these projects are Kenyan Political Elites and the various Chinese stakeholders involved. The greater Kenyan population are yet to realize the economic benefits and instead are burdened further under the weight of heavier taxes to pay off the debt owed. Transparency, governance, unity amongst African neighbours and sustainability are core to long term economic growth brought about by infrastructure such as SGR. Long term economic growth requires that Infrastructure must be inspired by endogenous demand proportional to the economic needs of the population.

Contents

Abbreviations

BRF	Belt and Road Forum
BRI	Belt and Road Initiative
CCIC	Chinese Commercial International Court
CRBC	China Road and Bridge Corporation
DRC	Democratic Republic of Congo
EAC	East African Community
EFF	Extended Fund Facility
EFC	Extended Credit Facility
EXIM	Export Import Bank of China
FDI	Foreign Direct Investment
FOCAC	Forum for China and Africa Cooperation
GBP	Great British Pounds
GDP	Gross Domestic Product
IBEAC	Imperial British East Africa Company
IMF	International Monetary Fund
KRA	Kenya Railways Authority
MOU	Memorandum of Understanding
NCTA	The 1985 Northern Corridor Transit Agreement
NLC	National Land Commission
SGR	Standard Guage Railway
SIDA	Swedish International Development Cooperation Agency
TAZARA	Tanzanian Zambian Railway
TZS	Tanzanian Shillings
UN	United Nations
US	United States
USD	United States Dollar
WW2	World War 2

1 Introduction

1.1 Background of Study

As a child growing up in Kenya, I thought I lived in the most beautiful country in the world. My childhood was filled with memories of running to buy Coke and biscuits at the local kiosks that lined our streets, after-school trips to Giraffe Park, eating green mangos and chilli every Saturday at my morning swimming meets, takeouts from Hashmi's and monthly family road trips to the coast. It was the perfect childhood. After I moved to South Africa to finish my schooling, my first trip back home was a shock to the system and each time I visited over the following years, I would see Nairobi's transformation. The rapid pace of development in the short span of a few years had changed the Nairobi skyline to one I didn't recognize. I walked down old roads that were once so familiar, searching for places I could identify to bring back that old nostalgia. The family home I had grown up in, had been demolished, and in its place was a high rise apartment block. One, after another, after another. New roads, new buildings, everything so new. This inspired my interest in the rapid pace of infrastructural development and what it means for the local populations who live there. The pace of change I witnessed was as an outsider, but what about the people that were living through it, Sacrificing for the present with the hope of future socio-economic prosperity.

It is clear that Africa suffers from an infrastructure deficit, but the rate at which some African nations are pursuing high-cost infrastructural development projects, even before the economic demand is present, is alarming. It is vital to find the right balance between having the necessary infrastructure for growth, without over-indebting a country with unrealistic targets that will never be met. Yes, appropriate infrastructure does bring growth, but African countries suffer from a range of factors that complicate and mitigate this statement. Thus, the infrastructure must be realistically relational to the growth potential of a population. This could mitigate the pressures of overbuilding with the mere hope that the infrastructure being present will be enough to ignite the economic demands required for it to be a sustainable project.

Throughout history, railways have always symbolized industrialization, progress and development. In particular, Post-independent African railways, carry the message of African leaders taking their economic futures by the helm, free from the shackles of past masters. This research paper presents a study on the Standard Gauge Railway (SGR) which represents the greatest symbol in Kenya's quest for development through transport infrastructure. Built in 2017, Kenya's latest Standard Gauge Railway line is 485km long extending from Nairobi to Mombasa, promising unprecedented economic growth to this developing East African nation. Most (90%) of the funding has come from China's Export Import Bank with all construction being done by China's Road and Bridge Corporation. The SGR has come under severe criticism due to its exorbitant initial cost of $3,6bn and its impact on the local people. Defying all warnings of the SGR being commercially unviable, the Kenyan government is attempting to pursue further loan agreements with China to extend the routes. At present Kenya's debt to GDP ratio sits at 70.46%, fuelling concerns that it is at risk of debt distress (IMF Press Release No.21/98, 2021).

This paper seeks to investigate the extent to which the Chinese-financed and -constructed SGR has brought about socio-economic development for the Kenyan people. The first section of this paper goes back to the evolution of rail in East Africa, with a specific look at The Lunatic Express and then at the Tanzanian Zambian Railway (TAZARA). The next part of this study will delve into the Belt and Road initiative and how Kenya's transport projects fit into China's greater global strategy. The third section will take a closer look at China in Kenya through the lens of Kenyan politics and will then move on to a commentary on the superpower rivalry between the US and China played out on Kenyan soil. The fourth chapter will analyse and discuss the SGR as well as the various promises made by President Uhuru Kenyatta as to how the SGR will benefit the Kenyan people. It is these promises that provides the framework for analysis, which will be presented in the fifth chapter, as the findings of this study. Lastly, the conclusion will draw from the findings to extract the value of this study and share the insights gained, to best answer the question of the how Chinese infrastructural projects have brought about socio-economic benefits for the Kenyan people.

1.2 Research Design and Methods

Main Research question

How has the Chinese financed and constructed railway infrastructure brought about socio-economic development in Kenya?

- A single case study of Kenya's Standard Gauge Railway (SGR)

To guide the investigation of the main research question, these sub-questions will be interrogated.

1. Was the SGR a commercially viable investment project?
2. Who emerges as the real winner in these infrastructural megaprojects?
3. What needs to accompany infrastructural development in order to ensure long term economic growth?

Formulation of Hypothesis

'Increased Chinese-funded and constructed railway infrastructure leads to an increase in social and economic development'

To test this hypothesis, I will be looking specifically at social and economic development at both micro and macro-economic levels.

Data collection and Analysis

The research employed has been mixed-method. Both quantitative and qualitative means of analysis will be utilised to acquire research data. These will be from a variety of primary and secondary sources.

The quantitative data used for this study has been extracted from existing online indexes and data sets within specific time frames from sources such as the Kenyan government statistics bureaus, World Bank, UNCTAD, OECD, The China Africa Research Initiative, as well as multiple reports from banks and consultancies such as Mckinsey and Deloitte. This study has not compiled its own quantitative data sets due to time and budgetary constraints.

The qualitative data and process-tracing has been obtained in the form of primary sources such discussions, Twitter and Facebook feeds from relevant actors, as well as government documents and legislation. Secondary sources such as online document reviews, newspaper and academic journals have also formed an integral part of the materials sourced in compiling this research paper.

2 Literature Review

2.1 China Africa Relations

The Bandung Conference in 1955 set the foundations for South-South cooperation, as a group of 29 representatives from African and Asian states pledged their commitments to an agenda based on peace, decolonization, and economic development. The 'Spirit of Bandung' envisioned a future where developing leaders had common goals and worked together to achieve them for mutual benefit by forming diplomatic relations. These goals included economic and cultural cooperation, political self-determination, protection of human rights, an end to colonization and harmonious peaceful existence. The end of the Cold War saw the "Spirit of Bandung" wane as political leaders changed and began to fulfil self-interested agendas. However, the sentiments created around the conference have largely lived on in Sino-African projects.

There has been a dramatic change in the discourse surrounding China-Africa relations. As the social and political links have matured, so too has the literature. The dated allegations of 'debt-trap diplomacy' and 'resource for infrastructure deals', which were used as fear tactics, have largely given way to a more considered analysis, in which both African states and China are scrutinized under the now vast tome of knowledge on China-Africa affairs. The Hambantota port in Sri Lanka, which is consistently used as the 'debt-trap diplomacy' example to elicit fear and weariness of Chinese loans in Africa, is clearly explained through the country's political context, dispelling Machiavelian suspicions (Brautigam 2019). The knowledge that China is here to stay, given that China is Africa's largest trading partner with total trade exceeding USD192 bn in 2019, has resulted in comprehensive datasets and think tanks dedicated to exploring the intricate nature of the bilateral relationship between Africa and China; expelling many of the myths surrounding the discussion and giving a more balanced viewpoint. The foundation for this kind of balanced thought has been built through the lived experiences by seminal minds such as Deborah Brautigam and Chris Alden, who offer rational explanations, free from the paranoia centred around neo-colonial claims. However, as the 'China-Africa' context of any Chinese engagement in Africa is given so much attention, it distracts the focus from the actual projects on the ground themselves (Basu and Janiec 2020). This prevents space for neutrality, independent assessment and the ability to see 'Sino-Africa' without preconceived biases.

This has also come about as more Chinese and Africans engage, learn and grow from one another across the great cultural exchanges that have taken place. The literature on the China-African relationship is now as much about what Africa can get from China as what China can get from Africa. This shift in discourse can be attributed to the need to understand what steps need to take place to guide the structural transformation needed for the continent's development. (Le Pere et al 2017). The trite belief that risk would not be considered through collateralization of assets when risk-based pricing has not been performed, has finally given way to a more holistic view of China's engagements as commercial transactions.

Amongst the body of literature on China in Africa, an area of debate is the continued African agency in the face of China's deeper entrenchment into the host nation's economies. The balancing act for African states to maintain leverage and internationally competitive behaviour, whilst at the same time trying to keep their major partner happy, to enjoy increased gains, will continue to be a driving point in the relationship. An overdependency will ultimately threaten this delicate balance and will seriously inhibit genuine development (Taylor 2020).

2.2 China's Peaceful Development and the 8 Principles

This chapter within the literature review provides a starting point to understand the nature of China's developmental engagements with Africa and what guides this relationship.

In 1964, Zhou Enlai outlined China's commitment to its 8 Principles of Development that would guide its' foreign aid programmes, which began as far back as the 1950s. China's initial roots in developmental assistance began by backing revolutionary movements. However, China's first official foreign aid started with two countries closer to home; namely The People's Republic of Korea and Vietnam. Over the next few decades, this commitment to developmental assistance has grown substantially, with China now one of the world's leading donors. Some reports suggest contributions of up to USD 6.4bn in 2018, with more than half of this going to Africa (Tjonneland 2020, p3).

The following 8 Principles continue to shape the Sino-African relationship. Although not always entirely evident in substance, there is considerable effort to maintain the public perception of benefit:

1. Mutual benefit – An acknowledgement that both parties enjoy equality in the benefit of the engagement. This discourages a unilateral approach favouring only one nation.
2. No conditions attached – China has always pledged to not become directly involved in a nation's domestic political affairs or tie economic assistance to specified political progression.
3. Economic assistance is provided in the form of no-interest or low-interest loans which may be subject to extended repayment timelines to ensure that the loan does not cause a debt burden for the recipient country.
4. Economic assistance from China must not result in a dependence on the Chinese state but must stimulate a culture of self-reliance and sustained economic development.

5. The Chinese government pledges to help the recipient country with projects that rather require less investment with quicker returns, which will better facilitate an increase in the recipient's capital.
6. China endeavours to provide the best quality materials and equipment at a competitive world market price. Failure to do so will result in refunds or payment replacements.
7. Regarding technical assistance, the Chinese government will ensure that there is sufficient local mastery by transferring the necessary skills.
8. If any Chinese construction personnel are dispatched to the recipient country, there will be equal treatment of both Chinese and local workers with no special benefits for the Chinese contingent.

- China's Eight Principles for Economic Aid and Technical Assistance to Other Countries (January 1964)

2.3 Developmental Assistance Distinctions

It is imperative to distinguish between the various forms of Foreign Direct Investments (FDI) so as not to have unrealistic expectations from the vehicles presented. Often these definitions are interchanged which results in confusion and perpetuates misconceptions. It must be noted that overall, the Foreign Direct Investment (FDI) from China is still significantly smaller than FDI from the United Kingdom and France, and that Africa is still receiving substantially less FDI than any other emerging region. From the USD60bn pledged at the 2018 Forum on China Africa Cooperation (FOCAC), it was communicated that USD20bn would be in credit lines. This is a pre-set amount agreed to recipient nations, which they can utilize until the limit is reached. Once the amount is repaid, they can have continued access to this facility. USD15bn of the pledged amount would be in the form of grants, interest-free loans and concessional loans, whilst USD10bn would be investment financing. What these terms allude to are integral for understanding the Chinese models of investment on the continent. Perhaps the most unique characteristic of China's finance in Africa is that it uses more hybrid forms of investments, often blurring the lines between conventional FDI and aid, thus making it increasingly difficult to track, categorize and evaluate. This method of hybrid financing explains the data weaknesses evident in the analysis of Chinese investment in Africa. Concessional loans are generally more generous than market loans as they have considerably lower interest rates than the market, generous grace periods and are more open to renegotiation of terms. Commercial loans are typically loans to businesses that have high interest rates, tied to prime and typically require collateral as security for the loan. Public-Private Partnerships are financing arrangements that bring in a range of financiers from both public and private spheres, thus mitigating the associated risks.

2.4 Infrastructure Development and Economic Growth Nexus

The inadequate development of infrastructure inhibits economic growth in Sub-Saharan Africa (Chakameda and Alagededa 2017). There has never been a more appropriate time to consider the literature of the infrastructure development and economic growth nexus, as Africa sees its greatest influx of infrastructural development. The African Development Bank acknowledges that if a scenario in which the demand for infrastructure is not met, the ability to do business in Africa will be constrained. Rapid infrastructural development is predicated on Modernisation theory which ultimately seeks to understand the rationale for the underdevelopment of poor nations and offer solutions to alleviate it (Thomson 2017). Modernisation theory is Western-centric and characterised by a capitalist industrialist approach. Rostow's 5 Stages of Economic growth offers a version of modernisation theory which provides a road map for underdeveloped states to achieve development. Stage 2's 'pre-conditions for lift off' describe infrastructural development as a catalyst to ascend to the following Stage 3's 'take off' (Rostow 1959). The 'Barriers to development' explanation has been used at length as justification for numerous foreign infrastructure development projects in Africa. Infrastructure is defined as "the structural elements of an economy that facilitate the flow of goods and services between buyers and sellers" (Fedderke and Garlic 2008). Using the generalised method of moment model (GMM) estimator for 100 countries, Calderon and Servens (2004) were able to show that "growth is positively affected by the stock of infrastructure and that income inequality declines with higher infrastructure quantity and quality." This study did include the causal effects of exogenous infrastructure. However, Africa's infrastructural economic growth network provides a distinctly unique set of mitigating factors to consider, given the high percentage of exogenous infrastructure concentrated in specific regions. "The demand for transportation improvements emerges locally as a response to the demand for inter-regional trade." (Trew 2019), thus when the impetus for infrastructural development comes from the outside, success is not always guaranteed. Remi Jedwab extends the notion that "infrastructure investments are typically endogenous", thus putting special focus on the instances and impacts that follow when infrastructural development and investment is exogenous.

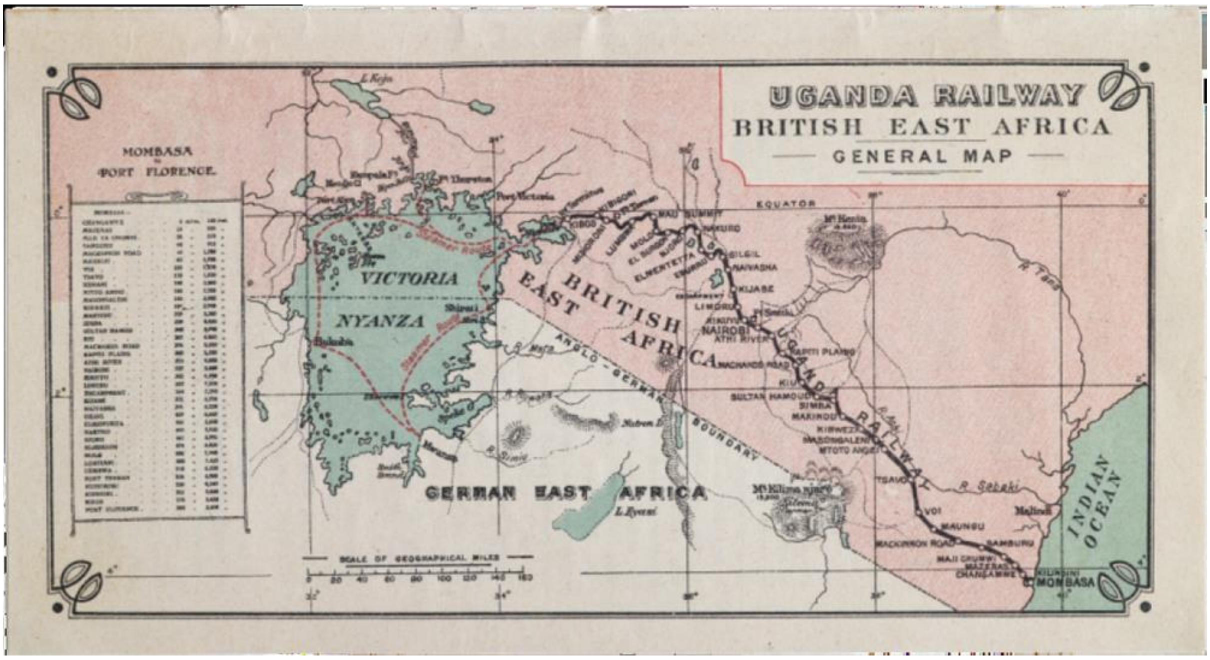

Figure 1 Original map showing the Uganda Kenya Railway

This map shows the route of the Uganda-Kenya Line as it traversed the transit territory, which would later come to be known as Kenya. The railway was strategically built by British East Africa to stop German expansion.

Source: Patowary 2019

3 Analysis

3.1 The Evolution of Railway in East Africa

3.1.1 The Lunatic Express

"It is not uncommon for a country to create a railway, but it is uncommon for a railway to create a country."

-Charles Elliot, Commissioner of British East Africa 1900-1904 (Patowary 2019)

Of all the organizations in Kenya, the Kenyan railway is the oldest (Jedwab et al. 2013, 50). This fact emphasises Kenya's industrial heritage that came about with the advent of rail, and the significant and undeniable impact it has had on the creation and historic growth of the country. Thus, the history of Kenya is inextricably linked to the history of the railway (Mnjama 1994, p81). As this study is primarily focused on the developing effects of railway infrastructure facilitated by external states with their supranational interests, it is essential to look back to Kenya's past and acknowledge the effects that the colonial railway had on not only the economic landscape of the country and also on the social and political aspects of the nation.

The legacy of the colonial railway in Kenya has, to a large extent, guided the decision-making progress of the current SGR, with aspirations of abandoning vestiges of Kenya's colonial past and heralding in a new era of African leadership pioneering infrastructural development.

In 1895, The Scramble for Africa saw European powers compete for resources and land on the African continent, setting up colonies to secure these newly acquired assets. The Uganda Line began construction in 1896 against this backdrop and was initially devised to suppress rising German power in the region, with commercial interests only second in mind. The Berlin Conference of 1884 to 1885, in which vast territories of Africa were carved up and distributed to European powers, dictated that Zanzibar's mainland was split up into northern and southern regions. The northern region, which was the area of land between Uganda and the Indian ocean would be administered by Great Britain and the Southern region (present-day Tanzania) would be administered by Germany (Whang 2018, 718). To ensure effective management of this new territory, a charter was granted by the British government to create the Imperial British East Africa Company (IBEAC). It was the IBEAC who advocated for the creation of the railway to facilitate self-sufficiency within the region. The line began at the coastal port of Mombasa and ended on the shores of Lake Victoria in Uganda. The line spanned a distance of 931km and cost a total of GBP 5.5m (Whang 2018, 718). The necessary equipment and labour required for the construction of the Ugandan line was brought in by the British from India. Over 2500 workers died - 4 for every mile of track that was laid (Taylor 2020, 31). In addition, the great expense, the unknown terrain, and doubts of the viability of the railway by the British government meant that the construction was fraught with resistance. The line attracted the nickname "The Lunatic Express" as a result of the exorbitantly high costs of construction. However, as time progressed, the railway proved its value with Sir Winston Churchill claiming it was a "political railway that achieved commercial value." The railway line is thus the ultimate symbol of colonialism and tangibly portrays the effects that colonialism had on development in Africa. These colonial railways were based on commercial exploitation, constructed inland from the ports to best serve, secure, and maintain the interests of the British colonial powers.

From its inception, Kenya was merely a transit territory to Uganda's vast resources and trade (Jedwab et al 2013, 7), however, as the years progressed this soon changed. The railway created vibrant economic activity along the line, and cities such as Nairobi, which was the last piece of level ground before the escarpment, flourished, as this became a pivotal pit-stop along the route. This locational advantage ensured that Nairobi became the dominant control centre of the railway and subsequently saw an influx of traders, accountants, inn-keepers, and workers. Soon the population grew, lured by the prospect of wealth at the hands of the railway line.

<u>A rail built on political control, resource extraction and civilising</u>

The Uganda line was built for three distinct reasons. The first was the aspiration of military domination on the continent and was therefore geopolitically motivated. The strategic objective was to prevent German and French expansion across the continent and encroachment on the territory of British East Africa; in particular, control of the Great Lakes region. Lake Victoria is the main source of the Nile River, thus controlling the transport infrastructure for precious resources from this crucial point would secure control of the entire region that relied on the Nile. In addition, the ability to disrupt the flow of the Nile would have calamitous effects on the agricultural economy and significantly compromise the political stability of the entire region as far as Egypt, of which Britain had recently gained control (Whang 2018, 718). This, therefore, had the potential to disrupt trade in the Suez Canal.

The second reason for building the line was trade-oriented. This railway line would drastically reduce the cost of trade as well as ensure the safety of European merchants in the transport of the vast wealth reserves of Uganda. This included the trade of ivory, mining resources and cash crops such as coffee, sisal, wheat, and cotton.

Thirdly, the railway line was regarded as an integral part of the Colonial power's humanitarian and civilizing missions in Africa to spread the Christian faith as well contribute to the end of the slave trade. Yet, many feel that its humanitarian ambitions were insincere, used to justify its cost.

Limited socio-economic benefit

The problem with the colonial railroads in Africa is that they did not directly serve the African people. The focus of the railroads was inherently Eurocentric. To best recoup the investments made on the railway, The British commissioner of the protectorate felt that only industrial level agriculture would be able to develop Kenya and generate the returns required (Taylor 2020, 31). Thus, large scale white settlement of fertile farmlands in the Highlands regions was encouraged. The substantial decrease in transport costs was attractive and had a profound effect on the settlement of British farmers who formed cities from where their vast coffee plantations could be managed. This stimulated an increase in urban production and in turn encouraged the migration of unskilled African labour to inhabit the economic areas around the railway line. Beyond its geopolitical desires, the focus of the colonial railroads built at the time was therefore extractive; facilitating the export of raw minerals and resources, and not concerned with connecting adjacent countries (Due 1979, 375) or providing true economic integration of the indigenous African people. It served the colonial administration above all.

Ultimately the railroad served its colonial powers, but its spillover effects resulted in long term urban development for Kenya as new cities grew and completion of additional lines was followed by rapid socio-economic change. Nairobi became the thriving financial hub of East Africa and Mombasa was consequently transformed into a modern port city that served as the gateway to East Africa.

Death by Gauge

The Uganda line was built as a metre gauge which is a narrow-gauge railway. Narrow-gauge railway lines were cheaper to build and easier to navigate the unpredictable sharp curves and hilly terrain (Hilton 2006). However, it was later decided that this gauge width was sub-optimal and across the Western hemisphere was mostly converted by 1900. However, the Sub- Saharan countries in Africa did not have the privilege and capital, so were therefore stuck with a gauge that was ill-suited to the heavy mineral traffic for which it was built. In the long term, this presented numerous challenges for the region in terms of gauge compatibility and the ability to truly integrate the continent. Post-independence, African governments lacked the finances to upgrade and update the railways, which left them under-utilized with the inability to realize the full potential of rail. Thus, the inefficiencies of this railway line became a deciding factor when wanting to replace it with the new Standard Gauge Railway. As leading scholars in transport infrastructure maintain “the less efficient the old network is relative to the new one, the larger this impact will be. (Jedwals, Kerby and Morandi 2013). However, this remains to be seen, given the low utilisation figures of the SGR.

Impact

The colonial railway had numerous direct and indirect impacts on the region. Perhaps the most profound are the socio-cultural aspects woven into the fabric of Kenyan society that can still be felt more than 100 years on. The resistance that the Nandi and Masaai people displayed to the railway at its time of construction highlights how the colonial railway disrupted the organic development of the region in its exclusionary policies towards the African natives before independence. The railway guided the assimilation of settlements of the different races within Kenya at the time. The skilled Indian artisans and craftsmen who built the railway that decided to stay behind after the construction was complete, were amongst the first Indian diaspora on the African continent. These Indians went on to become an integral part of the economic community within the East African region as traders and business owners.

In addition, it created the administrative system that was integral to the formation of the government of Kenya and set the tone for the future of intra-regional politics. The establishment of the East African Community along with Kenyan dominance in the region was brought about by rail. The management of the rail necessitated the formation of the Kenya Railway Authorities. Lastly, it facilitated the function of European economic enterprise and colonisation of the rest of the East African region (Njuguna et al 2018, 30).

The end of an era

Post-independence, the Kenya-Uganda line fell into a state of disrepair due to acute maladministration and a severe lack of maintenance. It found itself out of touch with modern times, with journeys from Nairobi to Mombasa taking a painstakingly slow 15 hours at a high speed of 20-30km/h. In recent times, the Lunatic Express earned its nickname more for its erratic unreliable schedules and long delays due to frequent breakdowns. In the 2000s, the Kenya-Uganda line had been reduced to one passenger train that travelled only three times a week. In 2017 the Kenya-Uganda line ended, replaced by the new SGR which runs parallel to the old line.

At inception, many believed that it was a railway line to nowhere, yet the Kenya-Uganda Line operated for an impressive 116 years and was largely responsible for building the economic and socio-cultural geography of Kenya. However, as African leaders wish to abandon their colonial pasts, the cheaper option of repairing the old line was cast aside in favour of the debt-laden SGR in an attempt to write a new African narrative as masters of their own destiny.

As railroads have long term effects on urban and developmental patterns (Jedwab et al, 2017), it can be said that the Kenya-Uganda Line went one step further as Kenya was born out of the economic activities of the line.

3.1.2 Chinese Built Railway in East Africa- TAZARA

The Tanzanian-Zambian Railway, more commonly known as TAZARA in its early years was seen as China's success story in large scale infrastructural development on the African continent. It was the first Chinese megaproject of its time and paved the way for future Sino-African engagement.

Railway and road have always been at odds with each other - in constant competition. Moreover, the two often represent stark ideological opposites. Railway has always been seen as more socialist as it is often state-funded, large-scale and government managed and controlled whilst road in the form of highways is the perfect example of free-market capitalism in which private individuals have the flexibility and control of their own economic enterprise, free from government control (Arenas 2020). As Jamie Monson notes, it would be too coincidental that the great Tanzam highway was constructed alongside the TAZARA Railway by the U.S Government. However, in the thriving economies that TAZARA created along its route, this conventional assumption was challenged and emphasised the symbolic importance of TAZARA as the Great Uhuru Railway.

Motivation and Financing of TAZARA

The 1860km TAZARA line began at the Indian Ocean port of Dar es Salaam in Tanzania and ended at Kapiri Mposhi, the gateway to the copper belt, in Zambia. Named "The Great Uhuru Railway", TAZARA truly represented freedom from colonialism and the chance for Zambia and Tanzania to be the masters of their economic futures.

The Tanzania Zambia Railway presented three key advantages for the two countries. The first of these was geopolitical. Zambia is a landlocked country with vast copper deposits, making up 82-89% of its total exports (AFRODAD 2016). Therefore, the Zambian economy was heavily reliant on this natural resource, with the only way of exporting the mineral to global markets being through hostile terrains of South Africa and Rhodesia. Zambia was heavily dependent on the Southern railway routes established by the neighbouring colonial neighbours and after independence, it became clear that the white minority regimes of South Africa, the Portuguese in Mozambique and Rhodesia were intent on not following the liberation patterns of the rest of Africa (Yu 1971, 1103). In the quest for new economic linkages and the need to establish routes that served indigenous needs rather than foreign ones, the railway was aggressively pursued. TAZARA would reduce the dependence on the Southern routes for the export of its copper and provide an alternative that symbolized political and economic freedom.

Secondly, It sought to provide a link for newly independent states in central and southern African regions which would ultimately reduce the financial control that South Africa had on the region.

Lastly, Tanzania's fertile and mineral-rich South-Western region would be opened up for export to the rest of the world. A railway linking landlocked Zambia to the ports of the Indian Ocean came with the hope that the economies of both nations would be strengthened and that ties between Zambia and Tanzania would be reinforced. This pan-African thinking was seen as being beneficial to the entire continent. Zambia was landlocked and yearned to reorientate its economic linkages to bolster its own political and economic independence, whilst this aligned with Tanzania's commitment to a free Africa (Yu 1971, 1103)

However, securing finance for the mammoth infrastructural project proved difficult. The decision to pursue a railway came after the wave of independence that dominated the African continent during the 1960s. Tanzania gained independence in December 1961 and Zambia became independent in October 1964. The railway was previously considered by the colonial administrations, however, was deemed to be economically unviable. Yet post-independence, Zambia persisted in its determination to build the railway and together with Tanzania implored financial institutions such as the World Bank and The United Nations to consider financing the construction of the railway. Upon the international institutions' own independent assessments, it was decided that the potential for trade was too small for both countries to ever be able to pay back the debt and was once again rejected due to a lack of economic feasibility. Julius Nyerere, the sitting President of Tanzania at the time, had requested aid for the construction of the railway from the United States, yet this was also denied. In addition, both Germany and the United Kingdom were unable to lend the required amounts. With the latter struggling with their own balance of payments crisis, extending large scale financial aid in such a risky environment was completely out of the question (Wei 2015, 48). The two African countries had no choice but to look toward the socialist block for help. The Soviet Union's focus during the Cold War was primarily on military aid and not on developmental aid; this was, therefore, a request that deviated too much from the Soviet Union's strategy for Africa of proxy wars and was thus declined (Wei 2015,49).

The next step was to look towards China, which at the time was a fellow developing country itself. Funding a railway of this magnitude would place a substantial financial burden on China and they would not enter into this agreement flippantly, but this opportunity came at a time when China was looking to position itself as a leader of the Third World and challenge the "imperialism, colonialism and hegemonism of the United States and the Soviet Union" (Arenas 2020). The Mali Joint Communique from January 1964 outlined the eight principles that governed the Chinese stance on technological and economic foreign aid. It pledged China's support to African states in the reconstruction of their economies as well as political support in their liberation struggles. Chairman Mao Zedong had on numerous occasions expressed his support for African independence movements and the construction of the railway presented an opportunity to showcase China as a world power (Monson 2009). This appealed to President Nyerere who engaged in talks with China for financial assistance. After numerous high-level discussions, a treaty of friendship was signed in the hope of strengthening trust and cooperation, as well as an economic trade and technology package agreement. China also agreed to dispatch a team of experts to survey the intended railway sites and conduct a feasibility report. After four months of assessments of the proposed routes in Tanzania, the report was presented to Mao Zendong who insisted that the railway must be built.

President Kenneth Kaunda of Zambia did not engage the Chinese as readily as Nyerere did and had still not accepted China's offers of financial assistance. Instead, Kaunda's hopes were pinned on Western backing in the form of the U.S. Furthermore, he intended on pitting Western nations and China against each other to finance the railway. Zambia's stubbornness did not last for long as hostilities from its neighbours Rhodesia and the Portuguese heightened, which further threatened Zambia's rail access to the ocean as well as the US's prolonged indecisiveness about the railway proposal. (Southern Rhodesia Crisis- Ian Smith Wei 55). The US argued that the railway would take too long to build and would thus not be the solution to the current Southern Rhodesian political crisis. They also believed that China would not be able to sustain the enormous funding required for the construction. Instead, the US offered to build the TanZam Highway which would be far more cost-efficient. Both Tanzania and Zambia accepted the construction of the highway but still set their sights on the railway becoming a reality. It soon became apparent that Zambia was running out of choices for financiers, and in June 1967, on a state visit to China, President Kaunda announced that China would be funding the railway line.

China formally cemented its commitment to the construction of TAZARA in a formal railway agreement signed by the three nations in Peking on the 5th of September in 1967. China agreed to a favourable interest-free loan of USD 406 million with a 5-year grace period beginning in 1968 (Arenas 2020). The repayments spanned over 30 years and were to be split equally between Zambia and Tanzania. The terms specified that the repayment amounts were to be made in third party currency or Zambian and Tanzanian exports (Yu 1971, 1109). After some delays, it was agreed that repayments were to start in 1983, but due to immense economic difficulties suffered by both Zambia and Tanzania during the 1980s, China agreed to reschedule the loan agreement for repayment to commence in 1993 (Mellor 1992, 266).

Chinese Construction

Construction of the railway began in 1970 and was completed 5 years later, ahead of schedule. As with any infrastructural project of this magnitude, the procurement of the three aspects of construction, namely material, labour and equipment, was of tantamount importance.

Between 30 000 to 50 000 Chinese railway workers made their way to Zambia and Tanzania between the years 1968 to 1986 (Monson 2009). As with the Indian workers on the Uganda-Kenyan line, the influx of Chinese labourers and their interactions with the local people is one of the long-lasting legacies of TAZARA. Zambia and Tanzania suffered from a severe shortage of skilled labour. When recruiting locally, the emphasis was more on strength and physical capability than engineering or surveying skillsets. At the time, Tanzania had a mere 39 civil engineers, 3 electrical engineers, 7 telecommunication engineers, 23 general surveyors, only 2 geologists and no hydraulic, soil mechanic engineers or soil scientists (Yu 1971, 1114). Most of Tanzania's skills requirements came in the form of skilled expatriates on a rental basis. Thus, skills transfer became a significant point of focus for the newly independent nations who had economies to build from scratch as the colonial powers left very little behind on which the future leaders could build their countries. A key feature of the relationship between the Chinese and Zambian labourers saw them working and living side-by-side; echoing China's 8 principles of African development assistance which emphasised equality in dealings. Knowledge transfer happened through teaching by example. Although the project was criticised for being labour intensive and not as technologically progressive as Western examples of railway construction at the time, this was due to the "low availability of capital and the high availability of labour" (Monson 2009, 8). This labour-intensive approach meant that there was plenty of work opportunity for the uneducated youth of Tanzania and Zambia who had little work experience. Not only did the process of construction of the railway stimulate knowledge transfers, but it had a modernizing effect on the local labourers who worked on it. Unemployment was rife at the time, and the railway provided a chance for rural workers to earn a wage and build the discipline necessary with permanent occupations. Working on TAZARA became a "nation-building" endeavour with national recruitment drives that spanned the entire distance of the country, seeking inclusivity for those eligible to be a part of the legacy of TAZARA.

Socio-Cultural Impact of TAZARA

It can be said that TAZARA's greatest success came from the socio-cultural impacts that the railway had on the local communities. Whilst the colonial trains were known for their exclusion of the indigenous African people, TAZARA became 'the people's railway' as many Tanzanians and Zambians built their lives and earned their livelihoods along the railway. This sense of ownership came from two waves of resettlement along the railway line. The first was a government-mandated resettlement programme where whole villages were moved alongside the railway with planned housing designs, layouts and economies. Around 5 million (Scott 1998) Tanzanians were resettled along the railway corridors. From the government's view, the construction of the railway was happening "faster than the country's ability to generate the wealth that it will carry" (Monson 2009, 71), thus the need to stimulate economic development along the TAZARA corridors became of tantamount importance. Nyerere had conceived ideas of his own rural development plans in the form of 'Ujamaa,' (familyhood). This rural villagisation was based on family-based village-level agricultural production, which he cited as his own form of African Socialism. The two ideas aligned serendipitously and between 1973 to 1976 Operation *Kando Kando ya reli* (Operation alongside the railway) resulted in one of the largest forced relocation plans in East African history where families were reallocated agricultural plots near TAZARA's railway stations. In effect, this was an attempt to modernize and systematize rural villages that were disorganized, inefficient, ungovernable, and not sufficiently linked to state control in a political and economic sense. In fact, the control that the state wished to exercise through the roll-out of 'Ujamaa' could be likened to the same modernizing ideologies advocated by colonialism such as "mechanization, scientific agriculture and bureaucratic centralization." (Scott 1998,223). In the decades to come, as production of goods increased and populations around the railway grew, a second wave of settlement and migration occurred spontaneously to integrate with the new political and economic realities of the African states.

In addition to the need for the stimulation of economic development along the railway, the villages were the first line of defence in the protection of the train. This was once again mandated by the government and certain villagers were armed and trained, as the railway was prone to sabotage by hostile neighbours with competing routes, as seen with the Chambeshi and Lusemfwa bridge attacks, which left Zambia without rail transport for 3 months (Monson 2009, 82). TAZARA was particularly susceptible to sabotage as it was of strategic value and any damage to the line would leave Zambia dependent on the Southern Rhodesian line once again. Thus, the security provided by the villagers at little cost to the state was invaluable and further ignited the sense of ownership and duty the locals had towards 'their railway'.

In time, the Ordinary Train or Passenger train of TAZARA played an integral role in the daily lives of its commuters and traders who earned their livelihoods on the train or used it to travel between its stations. Various agricultural produce was available at each station of the train and a thriving economy ensued. Many were able to sustain multiple income streams as a result of TAZARA's economy. The informal nature of the ordinary train allowed for small-scale enterprises to flourish as people across "varied eco-systems, economic opportunities and concentrations of settlements" were connected.

Chinese construction created a piece of transport infrastructure that instilled a deep sense of ownership for the Zambians and Tanzanians who lived alongside it and relied upon it for their livelihoods. Before the railway was built, ordinary Tanzanians and Zambians knew very little about the Chinese and their culture but through the various engagements during the construction of TAZARA, a mutual understanding was established. It was this understanding and Chinese influence which set the foundations for future Sino-African relations.

It is now understandable why the tangible connectivity and sense of Pan-Africanism that was borne out of the daily small-scale activities of the train, was one of the reasons it was hailed as a triumph, and China's first prestige project in Africa.

(Mis) Management

As so often happens with large-scale infrastructure, Tazara suffered from severe mismanagement from the very beginning and experienced its fair share of political and economic difficulties. As the management of the rail was shared jointly by Tanzania and Zambia, it was subject to disagreements rendering it inefficient as a management system. Both countries prioritized "use over maintenance" which saw an increase in equipment loss and breakdowns (Wei 2015, 60). The harsh economic climate of the 80's compounded the problem, as neither country was able to pay the agreed monthly amount of TZShs 15 million that would be used to purchase fuel and spare parts due to a critical shortage of foreign reserves (Mellor 1992, 266). The price of copper fell drastically, placing Zambia's economy in a precarious position. Without sufficient money being put back into the railway for maintenance, it became increasingly difficult to efficiently meet targets and schedules. TAZARA's debt began to spiral out of control as the returns from the railway were not able to service the loan. From the mid to late '80s, China joined international donors to assist in TAZARA's recovery with aid packages to the value of USD 150 million (Arenas 2020). However, this was not to last as towards the end of the decade, the railway once again began experiencing financial difficulties and was on the brink of economic failure. A report conducted in 1990 by the Swedish Aid Agency (SIDA) condemned TAZARA's poor management and found that only 39 locomotives were still in operation, relative to the 128 locomotives at its start in 1976. 50 locomotives had been scrapped and 39 had been awaiting repairs; some for years. The damage to the thousands of sleepers and more than 100 wagons was extensive due to the number of accidents over the years (Mellor 1992, 267).

As the political situation in Southern Africa improved towards the early '90s, more transport networks opened up to Zambia, which created increased competition for TAZARA as goods were transported on these lines instead.

Tazara lessons from the past

At the time of its construction, Tazara was the greatest 'single item foreign aid project in the history of the People's republic of China' (Sun 2017). Built at a time when China too was a developing nation, keen to make its mark on the world stage, develop diplomatic allies and tentatively test out early versions of its 'going out' strategy. When no one else would help fund the line due to a critical lack of financial viability, China stepped in to assist. This gesture has had a lasting impression on African governments and indeed paved the way for the future of Sino-African infrastructural cooperation.

The greatest triumph of Tazara was that although it was constructed and financed by the Chinese government, the local Africans who lived along the line felt a sense of ownership and pride towards 'their' railway through the role the railway played in their everyday lives. Although this was achieved through the forced villagisation of ujamaa, in the long term it paid off for the small scale activities of the local people.

Mistakes were made, but it is the responsibility of policymakers and governments to ensure that history does not repeat itself. Tazara's greatest problems after construction were the acute lack of maintenance, gross mismanagement and inefficient operation. A lack of investment by the respective African governments meant that the line fell into disrepair and mounting debt. China has since learned from this mistake and has insisted on its own management of the railway lines built as seen in both the SGR and the Ethiopia-Djibouti line. The personnel managing Tazara post-construction did not receive adequate training to take over, China now insists on a handover period of a minimum of two years before the host nation takes over. The inability of the host governments to adequately manage and maintain the Tazara line was attributed to China's poor quality in building the line and tarnished China's reputation. China will not take make that mistake again. Building Tazara in the narrow Cape Gauge meant that it could not link up the southern and central networks with East Africa due to the difference in gauge. This has certainly guided the future Chinese standard that we see in current rail construction today.

The loan granted for the construction of Tazara was interest-free and on favourable terms, it was later renegotiated as both Zambia and Tanzania did not have sufficient revenue from the low freight volumes Tazara carried. Even with the renegotiated terms, the African governments were still not able to finance the loans as they suffered from a host of economic factors and were just not in a financial position to feasibly incur the debt repayments and maintain the line. Perhaps the greatest lesson to come out of Tazara is the importance of independent feasibility studies based on mathematical forecasting and not on the political whims of African presidents wishing to create lasting post-independence legacies.

Every year since 2016, talk of the refurbishment of the line to the tune of $1.2 Billion surfaces and then disappears again. Given Zambia's increasingly high levels of debt and Tanzania's ambitions to build its own SGR, it is highly unlikely that this will ever materialize. 45 years on, the Tazara line is still going, albeit on its last legs. But then again, people have been saying that for the last 20 years.

3.2 China's Belt and Road Initiative (BRI)

Introduction to the BRI

Revitalizing the ancient silk road was first conceived by Chinese university professor Wang Jisi in 2012. One year later, it transcended the realm of academia and subsequently became core to Xi Jinping's foreign policy strategy to cement China's dominance as a global superpower. The BRI is the most ambitious plan undertaken by any country to consolidate a fully globalised world order. It is undoubtedly the crowning glory of China's 'going global' strategy. This has been key to China's success in the last three decades, which has seen it move from an underdeveloped and inward-looking agrarian economy to the global power bloc it is today. Ultimately, the Belt and Road Initiative is an undertaking to further integrate, entrench and embed China into the greatest number of foreign markets and economies possible. The BRI has been touted as offering an opportunity for the diffusion of trade, ideas, development, and culture not only from a sino-centric world order but also allowing developing countries to realize new market potential through intra-regional trade.

The Belt and Road's 5 key objectives are unimpeded trade, financial integration, people-people connectivity, policy coordination and the facilitation of connectivity. The institutional frameworks, infrastructural projects and enabling mechanisms (Hu 2019, 2) are the three components that have enabled the BRI to penetrate global political and economic spheres and each component requires the collaboration of nation-states on an unprecedented scale.

Based on the principles of economic connectivity, cooperation, and mutual development, through land and sea corridors, the BRI is envisioned to connect China to Asia, Europe and Africa. It consists of The Silk Road Economic Belt and a 21st century Maritime Silk Road. The land corridor of the Economic Belt will link China to the heart of central Asia, Russia, the Baltics in Europe, the Arab states in the Persian Gulf and link up to the Mediterranean Sea, as well as connecting China to South East Asia (Chen 2018) via the Indian Ocean. The Maritime Silk Road will span from the Chinese coast to Europe through the South China Sea and the Indian Ocean as one complete route as well as from the coast of China to the South Pacific in the other direction. To achieve and facilitate these goals of global connectivity, the BRI has invested billions of dollars in the construction of the vast network of highways, railway, gas and oil pipelines, energy grids, Special Economic Zones, internet networks, strategic ports and shipping routes.

In order to understand the staggering scale of China's vision once complete, The BRI will impact some 4.4 billion people; or roughly 65% of the world's population. A third of global GDP will be attributed and facilitated by the initiative and will include almost a quarter of all goods and services transported across the world (Ehizulean et al 2018, 286).

BRI and Africa

It has now been firmly established that China is Africa's largest trading partner and that Africa is China's major source of import as well as its second-biggest market for development projects as well as its fourth-largest market for investment (Farooq et al 2018, 403). This primes Africa as fertile ground for BRI projects. It is interesting to note that Africa has less than a 3% share in global trade and a fragmented internal market that sees intra-African trade being lower than any other region in the world. Intra-African trade currently sits at 18% of overall exports which is abysmal when compared to Europe's 70% (Chatham House 2019). This shows much room for improvement and has been cited as one of the major focus areas in The African Union's Agenda 2063. The United Nation's 2030 Agenda for Sustainable development also focuses on the importance of addressing lagging infrastructure, lack of talent and capital shortage in the developing world, with Kenya's Vision 2030 echoing much of the same rhetoric. The Belt and Road represents a convergence of all the above developmental agendas and China has pledged a commitment to realizing these goals.

Although Africa was initially excluded from the original BRI plans, a leading World Bank economist noted that integrating the continent would align a series of joint visions and cement a long term mutually beneficial relationship between China and Africa. It has been posited that the BRI slots neatly into many low-income countries development aspirations (Brautigam 2019). Given Africa's great infrastructural deficit, it would only make logical sense that African governments are queuing up to meet their foreign developmental needs through the infrastructural financing that the BRI offers. The African Development Bank estimates an annual investment of USD 130 bn to USD 170 bn to cover the infrastructural shortfall in Africa (Brautigam 2019). Consequently, a handful of African states have clamoured to join the BRI with the hope of economic gains and developmental successes.

The East African countries included in the BRI are Djibouti, Uganda, Rwanda, Tanzania, Ethiopia and Kenya. Advocates for the Belt and Road have maintained that Africa will undoubtedly benefit from the creation of employment, transport infrastructure, lowered cost of goods and overall economic improvements. However, given the alarming levels of growing debt in developing countries, criticism of the BRI is mounting, particularly from the West. This coupled with a global pandemic that the world had not prepared for, could potentially paint a vastly different future for the BRI. (NB chinas one of two countries whose economy has grown in covid).

In 2015, China's National Development and Research Commission presented its plan of action for implementing the Belt and Road. These 5 areas listed "policy coordination, infrastructure connection, trade facilitation, financial integration and people to people exchanges" (Farooq et al, 2018 404).

China’s motivations for BRI

Whilst numerous writers are convinced of The BRI’s geopolitical strategy in the pursuit of superpower status, some maintain that the rationale is primarily economic. The environment that saw China reach unprecedented levels of growth in such a short space of time has substantially changed, thus for China to maintain its growth, a radical overhaul of the entire system is necessary. What is distinct about this overhaul is that it presents China not as a mere participant but rather as the creator of a newly globalized system.

Whilst the most obvious economic motivation for the BRI is for China to secure reliable and inexpensive access to diversified energy and resource sources for its voracious economy and new markets, the matter is a bit more complex. The decision to embark on the BRI comes at a time when China is coming down from an enormous investment boom that has left many industries with an over-capacity and an urgent need to find new markets (Ehizulean and Abdi, 2018, 289). Industries such as steel, agricultural fertilizer, solar panel production, coal and cement suffer from immense over-supply domestically; with this in addition to the large portion of the population who risk a shortage of work should they not venture beyond China’s borders. To keep domestic industries afloat, this next phase of China’s going out strategy makes financial sense. The vice-minister of Overseas Chinese Affairs of the State Council He Yafei, was quoted as saying “One country’s overcapacity can meet another country’s needs” (Macaes 2018). Although this is accurate, it hints at a limited appetite from China to develop competitive markets and remove reliance on Chinese-made goods.

The Chinese economy is at a transition point as it seeks new means of transferring its equipment, machinery, and technological capabilities elsewhere. The 2003 labour shortages in the Coastal cities of South-Eastern China saw wages increase to attract workers. Since then, wages for unskilled labour have been steadily increasing and reducing China’s competitive advantage in the manufacturing sector. This has led state economists to believe that China was well on its way towards “the Middle-Income trap” unless drastic action was taken. The “Middle-income trap” relates to circumstances where a country can no longer compete in commodities that are labour-intensive as wages become too high relative to other lower-income countries, and it cannot yet compete in activities that are higher value-added because there are still too many structural factors constraining it. (Macaes, 76). Therefore, China moving its manufacturing capacity, not only provides opportunities for developing countries, but it allows for China to move up on the value chain as well as have significantly more control and ownership of the various stages of the value chain. This strategy sees China taking advantage of globally fragmented production chains to serve its own interests.

As of 2018, China displaced the US to become the worlds largest trading economy, with 128 out of 190 countries counting China as their largest bilateral trading partner (Ghosh 2020). It would therefore come as no surprise that China is pushing for the Renminbi to gain further prominence in international markets with the hope of one day unseating the Dollar’s dominance. In 2016, the International Monetary Fund (IMF) granted special drawing rights to the Renminbi which formalized it as an official reserve currency. However, the momentum and position gained then as the world’s fifth most important currency has subsequently waned (Prasad 2020). The BRI thus presents as the perfect vehicle to stimulate and mobilize the internationalization of the Renminbi through financial transactions and cross border trade. Russia and Iran already bypass the Dollar and pay for their crude oil transactions in Chinese currency.

Chinese foreign exchange reserves are currently the highest in the world at USD 3.17 trillion (Bloomberg 2021). As a result of such substantial reserves, China is eagerly in search of new opportunities to invest in to deliver returns (Ehizuelen 2018, 287). The BRI provides numerous avenues for present and future investments.

Institutional Frameworks

The sheer scale of the BRI has meant that numerous institutional frameworks have had to be put in place to manage, facilitate and implement the various stages required in a project of this size. Foreign governments, financing arrangements, construction, labour and managing disputes all need the necessary institutional frameworks in place.

The first Belt and Road Forum for International Cooperation (BRF) took place in May 2017 and saw over 100 Heads of State in attendance. This forum consists of a series of round table discussions and meetings that communicate the visions and actions of building the Belt and Road as well as the progress achieved by the BRI to date. The Belt and Road has often been described as China’s “best known but least understood” foreign policy initiative, with conferences such as BRF attempting to enable a greater understanding of the BRI’s potential and motives. In addition, The BRF facilitates the signing of bilateral or multilateral cooperation agreements between various governments, stakeholders, and authorities for future developments. The second BRF was held in Beijing in April 2019, as BRI projects around the world started to become more entrenched and gain momentum. Not only were there several new nations present at the initiative’s forum, but there were also a few key absent, such as India that had decided to no longer be a part of the BRI, as global Chinese expansion had already triggered polarized opinions.

The Forum on China Africa Cooperation (FOCAC) is another platform that engages BRI developments and agreements. FOCAC is a more localised mechanism of economic, political, and cultural exchange and has paved the foundations for Sino-African relations. Through FOCAC, USD 60 bn was pledged in financial support to African countries in 2015 and in 2018 a further USD 60 bn was pledged in a combination of investment financing, concessional loans, grants and credit lines (Sun 2018).

Substantial consideration has also been granted to dispute mechanisms along the BRI. On the 1st of July 2018, 2 specialized courts were set up, each with its own dispute mandate. The Chinese Commercial International Court (CCIC) in X'ian will deal with disputes that span the economic belt of the BRI and the CCIC in Shenzhen will govern over disputes on the maritime routes. The BRI arbitration headquarters will sit in Beijing. To assist these courts, various dispute management centres will also be set up along the Belt and Road routes to ease volumes and management of disputes. (Mardell 2018). Even though the establishment of these courts show transparency in commercial activities along the BRI, there is growing concern over the independence of these courts (Deloitte Insights 2019).

<u>Financing</u>

Although, the usual Chinese state banks such as Bank of China, EXIM, China Construction Bank and the Industrial and Commercial Bank of China have, and continue to finance BRI projects across the globe, dedicated BRI banks have been specifically set up to service the Belt and Road. In 2015, the Asian Infrastructure Investment Bank, co-founded by 57 other countries was established with USD 100bn of authorised capital, alongside the Silk Road Fund with its initial USD 40bn of capital (Mukwaya et al 2018). In addition, China Development Bank with a net asset value of USD 2.4tn has financed over 900 projects along the BRI, with plans to invest a further USD 250 bn (Macaes 2018).

Challenges and Opportunities for African States

Challenges

The BRI is founded on the ancient Confucian values of "Tianxia" which relate to 'A community of shared destiny'. This shared destiny with its principles of interdependence will mean that some states are more reliant on China than China will be on them. The control of major global trade routes could result in a monopoly which could potentially leave African states vulnerable to the economic and political leverage that China will gain. This is a coercive tool to exercise might and further China's own interests should greater African agency not be employed. This makes it increasingly difficult for African countries to say no to China.

The number of infrastructural development projects in Africa is materializing faster than the economy is growing to support them. As a result, African states run the risk of becoming highly indebted to their Chinese benefactors and losing sovereign assets that are posted as collateral. The debt to GDP ratios is alarming with the IMF cautioning against further loans to highly indebted countries. As African states become more indebted, they lose agency and leverage and are destined to become 'price-takers' in global markets as opposed to 'price-setters'.

In addition, immense strain is put on regional nations as they compete for development infrastructure and the resultant trade. One study has found that the implementation of BRI projects in East Africa has resulted in pushing Uganda and Rwanda into stronger partnerships whilst resurrecting old tensions and suspicions between Tanzania and Kenya (Otele 2020). This will likely upset the traditional balance of power in the region.

As African states suffer from weak institutions and poor governance, developmental infrastructural investment is at great risk of corruption or nepotism. There is a frequent lack of transparency in negotiations. Already, numerous allegations have surfaced regarding corruption in Kenya's BRI projects. The fundamental problem with corruption is that it lines the pockets of a few and robs the indigenous people of any future growth or improvement, whilst saddling the economy with an undue debt burden. The financial risk is a challenge not only to the host nation but to the Chinese investment too.

Another major challenge for developing countries as they open themselves up through the vast transport networks of the BRI is the potential loss of traditional income streams as Chinese goods flood the market. Often Chinese firms negotiate zero or reduced tariff agreements for Chinese imports for materials in the countries where their infrastructural projects are taking place. This creates an environment where local firms don't stand a chance in competing. Industries such as mitumba have been decimated and have cost many Kenyans their livelihoods with the introduction of cheaper Chinese clothing.

Opportunities

Africa has always suffered from a shortage of development funds and as a result, consistently underperforms with the quality of its infrastructure. Since the advent of Belt and Road in 2013, Africa has realized enormous benefits in the form of development infrastructure such as new roads, railway, schools, hospitals, modernized ports, increased telecommunications, and technology transfers. Transport and Energy have been the chief industries where these funds have been focused. Over 6 000kms of new railway has been laid down on African soil and over 5 000kms of highways have been constructed at Chinese expense (Hu 2019, 4). This has undoubtedly enabled further facilitation of trade, with decreased cost and the free movement of the African people throughout the region. The BRI could see intra-regional trade flourish considerably. In a recent study, it was estimated that the total exports of countries in East Africa could increase by USD 192mn and welfare by USD 1 bn (Mukwaya and Mold, 2018).

The Chinese have followed a ‘ports, parks, city’ model of development and have attempted to replicate this on the African continent. The introduction of special economic zones linked to ports has seen developing countries acquire new production capacities which are promising for the host nation’s economic futures. New manufacturing skills and technology allow for a diversification of industries if enough local ownership is present. New information shows that China is leading the way with manufacturing investment in Africa with a total of 13%, this is ahead of France at 10% and the US at 7% (Githaiga 2019, 223). This also presents an opportunity for new jobs and knowledge transfers.

Another crucial component to the BRI is the ‘People to People exchanges”. This is indicative of China’s soft power influence and is evident in the cultural, education, health science and technology, tourism and non-governmental spheres. Alongside the infrastructural projects, these spin-off areas of interest could promote an increase in private Chinese investments. Whilst these areas of connectivity offer an opportunity for substantial economic gain, they also promote continued friendship and mutual understanding in the Sino-African relationship.

BRI in Kenya

Kenya holds a position of geographic importance in the BRI and has been identified as a key pivot point in the maritime route. Although Kenya is not rich in minerals, nor one of China's biggest trade partners, the greater port of Mombasa and Lamu provide crucial links for expanding trade routes within the African interior. The total value of BRI projects in Kenya is $5.9bn (Yoeli 2021). Some have pegged Kenya's prime positioning along the BRI down to China's oil supply. One of Kenya's landlocked neighbours is Sudan which provides a substantial amount of China's crude oil supply. Due to Sudan's political instability and violence, Kenya offers a safe transit route for Sudanese oil to the Chinese tankers docked at Mombasa and Lamu Ports. However, there is much more to Kenya's strategic position along the BRI than simply securing natural resources for China's economy. Not only is Kenya viewed as a fairly stable base for business and investment in Africa, but East Africa's largest economy has its hopes set on developing to a middle-income status country by 2030. Thus, the BRI's infrastructure development goals align with Kenya's Vision 2030 with a special focus to build on 3 key areas of legislation, society, and economy.

China's first engagement in Kenya harks back to the 15th century when the famous navigator Zheng He arrived on the Malindi coast with a fleet of his ships. China recognized Kenya's independence in 1963 and there have been numerous diplomatic engagements between the two countries over the years. In 2013, President Uhuru Kenyatta made a presidential visit to China and signed a China-Kenya Comprehensive Cooperation Partnership as well as a range of economic deals that totalled USD 5 bn.

In 2014, 17 more infrastructure and development deals were signed, and the China African Development Bank was established. The Belt and Road projects that have ensued have been the Standard Gauge Railway, oil pipelines linking Kenyan ports to Sudanese and Ugandan oil, port modernization projects and highway construction. The SGR represents the flagship Belt and Road project in East Africa and is the single largest investment in Kenya since its independence (Nantulya 2019). In 2017, the same year that the Standard Gauge Railway was complete, China and Kenya signed a Comprehensive Strategic Partnership agreement.

Between 2007 and 2016, the overall quality of transport and trade infrastructure improved for all countries in the East African region except for Burundi. Kenya outperformed all countries in the region, ranking at 42 (Mukwaya et al 2018). This was undoubtedly attributed to the massive infrastructure push of the Belt and Road projects that are scattered across the Kenyan landscape.

The Kenyatta administration has seen government debt to GDP nearly double during their tenure, from 38.2% at his election to power, to north of 70% in 2020 (World Bank Data Reports 2021).

The future of Belt and Road - Beyond Covid 19

It has been seven years since the world first heard of the BRI, and the political and economic landscape has altered dramatically since then. The USD 1 Trillion that China promised as an investment into the Belt and Road was beyond ambitious and is commensurate to seven times more in real terms than what was invested into the Marshall Plan when rebuilding Europe post WW2. We are in unprecedented times with many industries forced to adapt or die. Since the global pandemic struck, the world has faced a completely unpredictable set of realities. This has had a significant impact on Belt and Road projects around the world as industries shut down and projects in the spirit of globalization have had to take a backseat as nation's have opted for more protectionist policies. Where does that leave the BRI?

Perhaps China is acknowledging that their ambitions were too lofty as there has been a steady retreat in BRI investment. This can be attributed to a combination of factors such as China's economic slowdown that has been perpetuated by pandemic lockdowns across the globe or its newly unveiled Dual Circulation Economy Policy which focuses on domestic consumption and 'internal circulation' in an attempt to limit its reliance on international markets (Yao 2020). The unsustainable debt burden placed upon various developing nations who have borrowed more than their economies can sustainably repay is another possible factor that can explain the slowdown in BRI investment. Alarmingly, the two biggest sources of financing for the BRI – China Development Bank and China Export-Import bank's investments have shrunk substantially from a high in 2016 of USD 75 bn to a mere USD 4 bn in 2020 (Fabricius 2021). Although a Deloitte Insights report on the BRI cited that these megaprojects have a long investment horizon which would take 10 - 15 years to yield returns, the host nations simply do not have the financial buffer to withstand such enormous debt burdens to their economies, especially given how the pandemic has battered developing economies. Key projects on the belt such as Sri Lanka's Hambantota Port, The Addis-Doraleh link in Ethiopia and Kenya's Standard Gauge Railway have all highlighted the debt burdens even before the pandemic struck. In 2019, The vice-premier of the BRI Portfolio, Han Zheng called for a shift in their approach and cited a need for 'high-quality development of the initiative'. This mobilized several government agencies to standardize the sources of funding and aggressively ramp up their due diligence efforts. (Deloitte Insights Report 2019). This has entailed working with international agencies as well as multinational corporations to assist in assessing sovereign, financial and geopolitical risks before embarking on loan agreements. In conjunction with this, there has been a definite shift from loans to government to instead granting loans to private enterprises. This move to share the economic burden of public-private partnerships is a bid to address Beijing's growing concerns about their overall debt exposure to Africa. This change in funding policy has severe consequences for Africa who has relied on the promise of Chinese infrastructure to catalyse deals such as the Africa Continental Free Trade area Agreement which came into effect on the 1st of

Jan 2021. For this agreement to be successfully realized, transport infrastructure has to be vastly improved to receive the expected influx of goods across the African continent (Fabricius 2021).

Perhaps the most prominent aspect of the BRI in recent years is its ability to evolve. As the world has adapted and migrated to more digital spaces, China has asserted that the Belt and Road can too transcend the physical realm of transport infrastructure. Since 2018, the Digital Silk Road has received over $79bn worth of project finance which has included satellite infrastructure, 5G networks and fibre optic cables (Deloitte Insights Report 2019). With increased reliance on the internet in a post-Covid world, undersea cables have been laid across the Belt and Road network for internet connectivity and the Beidou Navigation Satellite Network was completed in 2020. This will challenge the dominance of the American Global Positioning System as Beidou now has all 35 Satellites covering the entire world. Xi Jinping has also announced that the Digital Silk Road will include nanotechnology, Big Data, Artificial Intelligence, Cloud storage and Quantum computing. The development of the digital Silk Road sees China becoming a global leader in innovation and filing new technological patents.

In a nutshell, Belt and Road initiatives across the world have come under severe scrutiny due to debt concerns, environmental pollution, and corruption before the pandemic struck. Post-Covid 19, these problems have been further exacerbated, with the spotlight firmly on the cracks. Kenya has been particularly prone to backlash as the difficulty of an economic slowdown and outstanding loans highlight the fragility of Belt and Road in a developing country. All these factors have placed Kenya in a precarious position, highly at risk of debt distress. China has responded by pulling back the financing of these mega projects and stressing the importance of strategic partnerships with international organizations to better promote financial governance, better debt management and avoid risky investments. If African nations don't manage their debt effectively whilst still maintaining their agency, they run the risk of losing out on the opportunities that the belt and road could offer. In response to the changing economic landscape, China has evolved the Belt and Road to include a digital sphere. This aligns with the needs of the global population and sees China further entrenching itself as a leader in technological innovation.

3.3 Kenyan Politics

3.3.1 China in Kenya

Trade has always been central to Kenya and China's diplomatic ties, with these having developed as a result of trade partnerships in the 1950s. China's recognition of Kenya's independence in 1963 sought to further entrench this alignment, however, President Jomo Kenyatta remained uncertain of China's neo-colonial aspirations. This lack of trust, combined with Kenyatta's alignment with Western powers through military and economic ties meant that China's involvement in the Kenyan economy was largely subdued for several decades, despite ongoing diplomatic relations between the two nations (Chege 2006).

However, this alignment shifted under Moi's rule as a result of increased Western isolation due to reports of human rights violations. As Moi found himself more and more alienated from Western aid, Eastern relations and partnerships gained traction. Unlike existing Western development partners, China's 'no-strings' policy ensured that Moi would not be beholden to an external agency as a result of internal political machinations.

These partnerships extended beyond trade to include infrastructural development, agriculture, technological advancement, education and oil exploration (Newcomb, 2020). As a result of such a diverse spectrum of engagement, China holds numerous investments in many of Kenya's key economic sectors.

China's financing of the SGR and associated BRI initiatives has been seen by many as a further embedding of the superpower to reinforce regional presence. This, however, has not been without its criticisms. Beyond the associated debt burden, the SGR funding has been used as leverage in state-based negotiation. No clearer example was made than China's threat to withdraw funding as a result of Uhuru Kenyatta's banning of Chinese fish as a result of the Kenyan market being flooded and killing the local fishing industry (Oruko 2019).

Internationally, Kenya has aligned itself with China's 'One China' policy; in essence in conflict with Western views around the independence of Taiwan. This has further demonstrated China's ability to wield soft power within the region.

Kenya has long looked to emulate China's path of development through industrialisation. However, unlike China, this path has largely been seen as to the detriment of the marginalized masses, with corruption having stripped much of the needed investment from the economy, whilst leaving the fiscus to repay the considerable debt burden.

3.4.2 Superpower Rivalry

Kenya's past has been stamped with the boot of superpower rivalry. From Great Britain's development of Kenya on the back of a railway intended to prevent German encroachment, to the Chinese-backed TAZARA railway pitted against the US-backed TanZam highway, superpower rivalry has been perpetual. Fast-forwarding 45 years and the Kenyan political landscape is no less convoluted; albeit China having gained a material ascendancy on the back of its investment into trade and infrastructure programmes.

Kenya's geographic location and regional political sway have long made it the lynchpin to wielding soft power across the region. The most recent regional engagements around the SGR have further demonstrated the proxy nature of superpower influence. On the back of a considerable loss of ground, the US set up its own development bank to fund African infrastructure projects. It has also looked to establish free trade agreements with Kenya to respond to China's progress (Swanson 2020). Uhuru Kenyatta has even gone so far as to explicitly state that Kenya seeks to build relations with both the US and China and is concerned with the return of 'Cold War' thinking where nations were forced to choose between the two nations (AFP 2020).

The IMF's most recent USD2.4bn loan to Kenya was granted in part to address the unsustainable debt burden Kenya is currently under, with COVID-related slowdowns further exacerbating the impact of this on the Kenyan economy (IMF, 2021). This can be seen as US-aligned agencies increasingly trying to reduce China's dominance within the region.

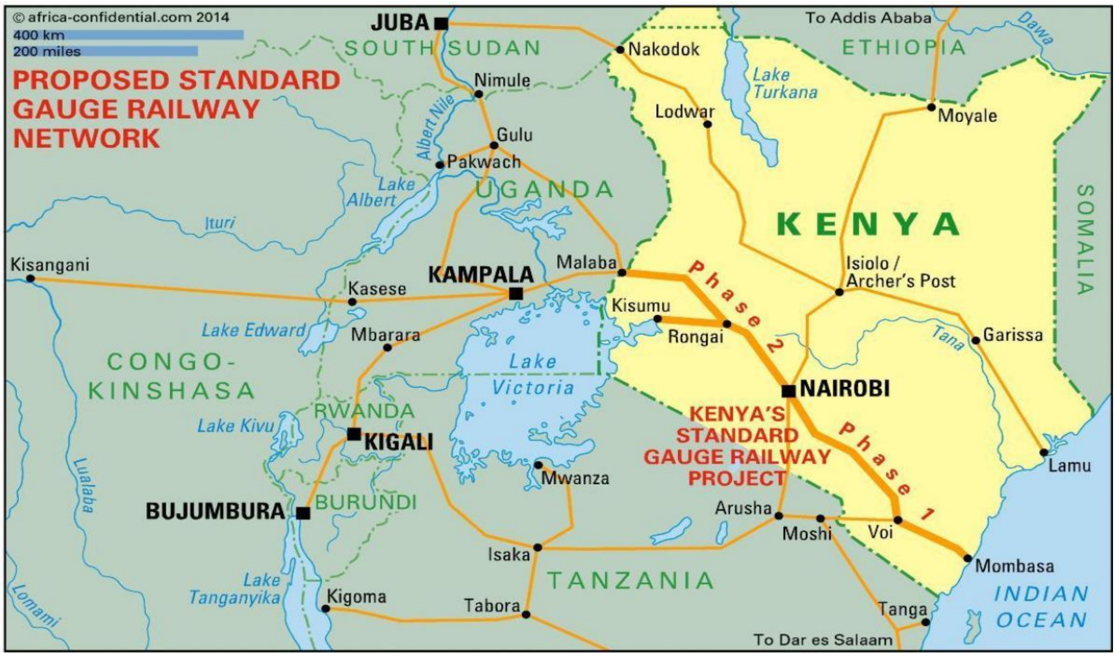

Figure 2 Proposed Phases of Kenya's SGR Network

Courtesy: Kenya Railways Corporation

4 The Standard Gauge Railway

<u>Introduction</u>

In Kenya's desire to relinquish relics of its colonial past and forge forward as masters of their own economic futures, the government devised the Standard Gauge Railway Master Plan that would integrate into the wider East African Railway Master Plan which seeks to revitalize the existing rail infrastructure to promote economic growth, regional integration and ensure that East African countries can competitively trade in global markets. 62 % of the world's railways are on standard gauge (Irandu 2017). Following an East African Summit in 2004 a railway plan was devised to link up the region. The East African Railway Master Plan was initially predicated on the adoption of standard gauge technology due to the limitations of the existing narrow-gauge railway, in the hope that it would mirror the high-speed rail networks of developed regions in the world.

Each country was to individually advance their own lines in the hope of creating an interconnected network of East African standard gauge rail. Mombasa Port is widely regarded as the Gateway to the Northern Corridor as it serves and facilitates the shipping requirements of the neighbouring landlocked countries which are Burundi, Rwanda, Uganda, South Sudan and the Democratic Republic of Congo (DRC). This was first decided upon in The 1985 Northern Corridor Transit Agreement (NCTA) (Zhao et al 2020) which has been extensively reviewed and reworked to best harmonize transport along this development corridor. In 2009, a Memorandum of Understanding (MOU) was signed between Uganda and Kenya to construct the SGR from Mombasa to Kampala. Later on, in 2013, a tri-partite agreement was signed between Uganda, Rwanda and Kenya to accelerate SGR construction to their respective capitals. The Kenyan SGR slotted into China's BRI's aspirations for the East African coast resulting in China's funding of Kenya's SGR construction which has had conflicting consequences for the regional network as the accumulated debt has spiralled out of control, leaving the other East African states who had initially agreed to the proposed plans hesitant to continue and risk ending up with Kenya's predicament.

Dubbed 'The Madaraka Express', The Standard Gauge Railway (SGR) began construction in December 2014 and was completed in May 2017, just two months before Kenya's presidential elections in which President Uhuru Kenyatta was seeking a second term (Wissenbach 2019, 280). China's Export Import Bank financed 90% of the SGR construction and the Government of Kenya funded the remaining 10%. Although the procurement process was clouded in secrecy, the construction contract was awarded to China Bridge and Construction Company (CRBC) which is a subsidiary of China Communications Construction Company.

The SGR line is split into two phases. Phase 1 begins in the port city of Mombasa and extends until the capital Nairobi, whilst the Nairobi to Malaba lines are Phase 2. This first phase has a route length of 480 km and the total span is 609 km. Phase 2 has been split up into 3 sub-sections. Phase 2A includes the Nairobi to Naivasha line, which is 120 km long, 2B refers to the Naivasha to Kisumu line and finally, 2C is the Kisumu to Malaba line. At present the Phase 1 Mombasa to Nairobi and Phase 2A Nairobi to Naivasha are complete, whilst Phases 2B and 2C have been stalled due to funding constraints and the financial viability of the project being questioned. The Single-track diesel-fueled SGR runs through eight counties namely Mombasa, Kilifi, Kwale, Taita-Taveta, Makueni, Kajiado, Machakos and Nairobi. It is both a freight and passenger train, with its cargo services able to travel at a high speed of 80km/h and its passenger services at a top speed of 120km/h. The passenger train has a capacity of 1200 passengers and operates two categories – The Intercity and the County Line. The County Line stops at the 8 stations along the route –beginning at Nairobi Terminus, Athi River, Emali, Mtito Endei, Voi, Miasenyi, Mariakani and finally Mombasa. At its opening, the fares for the passenger train were extremely reasonable at KSH 3000 (USD 28) for first-class and KSH 700 (USD 6.50) for economy class with an efficient online booking system. It has drastically cut transport times for commuters from well over 10 hours to a mere 4 hours via the Intercity and 5 and a half hours via the County Line, and cargo times taking about 8 hours. The freight train is designed with an axle load of 25 tonnes and it was expected to haul 22 million tonnes annually or 40% of Mombasa's cargo (Irandu 2017, 290).

The SGR has been a flagship of Kenya's Vision 2030 in which it hopes to transform into a newly industrialized middle-income country. This was pegged on the hope of achieving an optimistic growth rate of more than 10% each year and ensuring Kenya became a more globally competitive country. Kenya envisioned achieving this goal with a special focus on 3 pillars – economic, political and social. The economic element was largely anticipated to derive from investments in its transport infrastructure such as the SGR. However, Kenya's annual growth rate has suffered considerable setbacks with a stalled economy that is now mired in debt. It remains highly doubtful that the Kenyan people will realize the lofty aspirations as set out by the Kibaki regime in 2008.

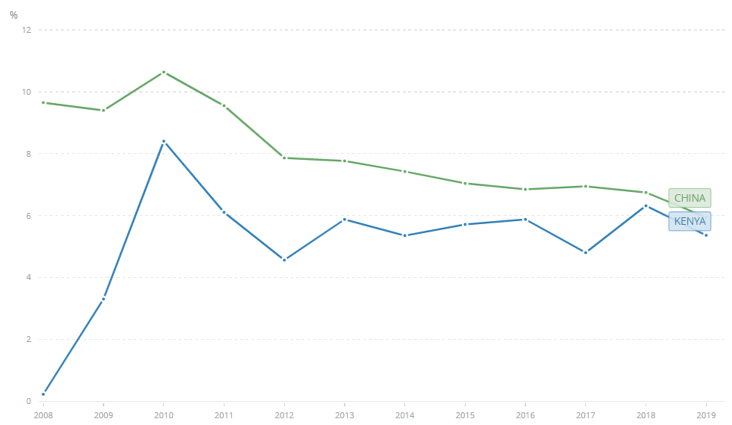

Figure 3 showing GDP growth rates of Kenya and China post the 2008 Financial Crisis to 2019

Source: World Bank 2021

For the most part, the SGR runs parallel to the colonial rail infrastructure. In the initial planning stages, before its construction, there was much discussion about the rehabilitation of the existing Nairobi-Uganda line. Extensive feasibility studies were conducted which concluded that the refurbishment of the entire East African Railway system for Uganda, Kenya and Tanzania would cost in the region of USD 1.2 Billion (Taylor 2020, 32). This was in stark contrast to the estimated USD 4 – 29 Billion it would cost to convert the East African system to Standard Gauge (Taylor 32, 2020). Interestingly, Kenya opted for the most expensive option and when construction was concluded, the cumulative cost for the Mombasa-Nairobi line alone was USD 3.8 Billion (Githaiga 2019, 224). This has resulted in one of the most extravagantly priced railway construction projects in the world costing USD 5.6 million per kilometre of track which is three times the international standard (Taylor 33, 2020). The bulk of the USD 3.8 billion loan was secured in 2014, with a grace period of 5 years and a repayment window of 15 years (Okoth 2019). In addition, Kenya managed to secure another $1.5 Billion to extend the SGR 120km from Nairobi to Naivasha (East African 2020). There has been much debate about the rationale for the 2A line from Nairobi to Naivasha, with many critics voicing their opinions that the decision was based on political lines of ethnic allegiances. In particular, to favour the political elites from the Kikuyu and the Kalenjin tribes. However, each route was independently subject to Environmental and Social Impact assessments which confirmed that the Naivasha route was indeed the best one. (Githaiga 2019, 225). The failure to secure the financing for the extension of the line to Malaba has serious implications for the region as a whole as this was the major justification upon which the SGR was predicated from the very beginning. Until the line is linked up to Malaba, only low-value export goods such as coffee, tea, livestock skins and vegetable oils have been on the Nairobi to Mombasa line The SGR will be unsustainable without the high valued natural resources from the African hinterland.

Management of SGR

The SGR's operations have been managed by the Chinese firm AfriStar Limited which was established in May 2017. Afristar is a subsidiary of China Bridge and Construction Company who is a major shareholder, along with a handful of unknown local politicians and significant government officials. This lack of transparency has come under harsh criticism from the public and Afristar has been mired in controversy of late. The initial agreement between the government of Kenya and China was that the operations of the SGR would be handed over after 10 years, yet the transport Ministry maintains that the relationship was going to be subject to a review after 5 years and that the separation was mutual. However, the handover has been pushed up to 5 years with Kenya Railway Corporation (KRA) taking over control of all operations due to severe mismanagement, corruption, discrimination and poor economic performance of the SGR. This decision comes with the recommendations of Kenya's Solicitor General that the relationship be terminated. Kenya Railways has already begun managing ticket sales, fuelling and security of the rail and will take over operating functions fully in May 2022 (SCMP 2021). This is expected to save the government of Kenya more than USD 10 million every month which it pays to AfriStar for operating costs. Given Kenya's extensive history with railway, it is appropriate that Kenya begins managing its own railway line on its own terms.

Feasibility of the SGR

In a case of a definite conflict of interest, a feasibility study was carried out by the CRBC between 2011-2012 at no cost to the Kenyan government. However, this magnanimous gesture came with one iron-clad conditionality – if the feasibility study comes back as economically viable, then the Kenyan government would award the construction contract exclusively to the CRBC in a closed bidding process (Wissenbach and Wang 2019). It comes as no surprise that the findings of the CRBC study were in favour of the SGR. This was in stark contrast to a World Bank report that projected the likely revenue generation from SGR in East Africa up to the year 2030 would simply not be enough to fund the construction of the SGR lines. The World Bank report insisted that there was no economic rationale for the SGR. Nevertheless, a memorandum of understanding was signed between the CRBC and the Kenyan ministry of transport and in 2012 the contract was officially awarded to the Chinese construction firm. It must be noted that in a leaked version of the original CRBC report, the economic evaluation chapter described the SGR as having the potential for 'high profitability', yet the Nett Present Value (NPV) is stated as being between USD 2- 2.6 Billion (Ndii 2018). This is immensely puzzling, as the estimated cost of the project which was at USD 3.2 Billion exceeds the NPV by a considerable margin. NPV relates to the present value of all future cash flows of the project and should always be greater than the cost of the project. The CRBC feasibility study was thus deeply flawed in their judgement of the SGR as economically viable. Such reckless action by a government to forge obstinately ahead despite warning can in the best case scenario be seen as a poorly selected vanity project or in the worst-case scenario, corruption with access to undisclosed concessional loans which were open to wholesale exploitation.

Promises of the SGR

On the 54th Madaraka Day, the 31st of May 2017, President Uhuru Kenyatta delivered a passionate speech inaugurating the eagerly awaited SGR. The excitement was tangible as the President began by stating he had delivered on the biggest promise he had made since his very first term in office- The modernization of the transport system and the journey towards becoming an “industrialized, prosperous and middle-income country”. The SGR is the crowning symbol of that promise. Kenyatta motivated that this was a triumphant achievement not just for Kenya alone, but for the entire African continent. He promised that the SGR would transform Kenya’s economy, making the “cost of goods cheaper and that the SGR has “employed tens of thousands of Kenyans”, “stimulated the economy and created wealth.” Adding to this, “large and vibrant towns will grow along its length as new factories and hotels and services businesses will employ hundreds of thousands of people”. He claimed that “farmers will earn more as their produce makes its way to buyers faster and cheaper” and the establishment of inland cargo depots will encourage more business. Congestion at the port of Mombasa would be eased as the port would become more efficient, making it easier to do business in Kenya. He went on to assert that “The Pan African dream of the free movement of African goods and their people” would, at last, be realized. The SGR represents one of the most significant transport projects for the continent as neighbouring states would be connected to world-class railway infrastructure in Uganda and Ethiopia. Kenyans were assured that the SGR would see them prosper alongside their neighbours in peace and prosperity. The SGR has the capacity “to power the Kenyan economy to new heights” and “Begin to reshape the story of Kenya for the next 100 years.” (Presidency GoK)

Once the fanfare dissipated, Kenyatta’s speech promising economic growth off the back of the SGR set the tone for standard SGR rhetoric that has been repeated and which the Kenyan people have grown accustomed to hearing. The speech thus provides the perfect starting point to assess the socio-economic benefits of the Chinese financed and constructed SGR for the average Kenyan.

Economic rationale

Job creation along the SGR was a driving force in this developing country that needs youth employment. The government mandated that 40% of the labour and materials had to be sourced locally which saw the creation of 46 000 jobs (Githaiga 2019) in various skilled and semi-skilled posts during the construction of the SGR. In addition, spin-off industries in tourism, services and hospitality would, in turn, be positively impacted.

The government policy of utilizing local firms would also stimulate the **growth of new industries**. With the correct training, This could have the potential to change the Kenyan import-based economy to an export-oriented one of finished goods. Cement, steel, and technologically-based industries could drastically alter Kenya's future as a provider of such commodities in the East African region and beyond.

Due to the set schedules, fixed overheads and predictable and systematised nature of rail, **Lowered Transport Costs** are a definite benefit to the average Kenyan citizen. Transport costs in Kenya are 45% of the total cost of goods (Githaiga 2019). On a microeconomic level, the decreased cost of goods would benefit the daily lives of average Kenyans and on a macroeconomic level would ensure Kenya's ability to price competitively in global markets. This in turn would lower the cost of doing business in Kenya, ultimately directing further foreign investment. It was estimated in 2017 that the SGR would lower the cost of business by 40% and the cost of transporting freight by up to 79% (Ndegwa 2019). Hundreds of millions of Shillings are spent each year on road maintenance costs, a reduction in this budget could have positive spillover effects for the taxpayer.

Improved transport infrastructure would see an **increase in trade** as both businesses and individuals would feel confident using a network of safe and reliable trains. The barriers to international trade would be significantly reduced due to the interconnectedness of the rail, along with various free trade agreements such as AfCTFA, resulting in a growth in volumes and business activity. In addition, port congestion has long been a mitigating factor for other nations to utilize competing routes in Ethiopia or Tanzania which serve the Doraleh port in Djibouti and the Port in Dar es Salaam respectively. Increased tax revenue could be realized as there is less reason for the diversion of cargo.

The above point would also ensure sustained **Growth of the financial sector**. As trade along the corridor flourishes, the demand for more financial services such as insurance, access to credit lines and forex would grow too. As more international companies do business in Kenya, the investment horizon would expand, offering further potential for growth. China cannot be thought of as one single giant entity, there are a host of independent Chinese actors in the form of local governments and private businesses that seek to invest in a multitude of industries in overseas markets. Having the security of state capital tied to a project such as the SGR presents a sense of investor confidence that can easily inspire further investment.

The 480km Mombasa - Nairobi SGR runs through 8 counties, stopping at 8 Stations whilst the 120km extra extension to Naivasha has 12 additional stations. This creates an opportunity for substantial transformation of the rural interior, creating a much-needed **economic boost to rural towns.**

Social Rationale

As was seen with TAZARA, Sino-African infrastructural megaprojects create opportunities where Chinese and Africans work alongside each other in the construction phase, ensuring critical **skills development and technology transfer**, coined as the term "technical cooperation" (Wissenbach 2017). In addition, there are more than 70 large Chinese firms that operate in Kenya and a report conducted by the World Bank stated that on average a Chinese business would hire 360 locals, which is significantly more than the 147 local employees who work for other foreign-invested businesses (Farooq et al 2018). With the various training academies that have been set up across the country, numerous student exchanges have taken place promoting cultural exchanges and creating an environment of friendship and understanding between two nations.

Another social benefit of the SGR is the safety and speed aspect with regard to a **reduction in accidents** on the roads. There is a reduced need for speeding as the SGR will get you there in half the time, as the Mombasa stretch is synonymous with traffic congestion and frequent accidents. The SGR thus provides passenger travel in comfort, with peace of mind, dignity and a truly world-class experience.

Ecological Rationale

Although the rail is not high-speed electric, the usage of rail over road ensures a dramatic decrease in carbon emissions from the transport sector, meeting the BRI's initiative to adopt greener, more sustainable technologies. Rail's lower carbon footprint is in line with the Kenyan government's commitment to cut its carbon emissions by 32% by the year 2030 in its adaptation and climate mitigation plans (Xinhua 2021).

5 Findings, Results and Discussion

In this chapter, I will discuss the findings based on the framework in my analysis, by addressing each aspect of the projected economic and social factors. As ecological considerations do impact the socio-economic status of individuals, I have included this in the discussion. The framework was set out by the socio-economic visions and objectives communicated by the Government of Kenya throughout the SGR's construction and the nearly four years of operation. The findings of this study will enable me to better answer my original research question -

How have Chinese infrastructural investments brought about socio-economic development in Kenya?

and the three supporting questions that I have endeavoured to investigate alongside it –

1. Was the SGR commercially viable?
2. Who emerges as the real winner in these infrastructural megaprojects?
3. What needs to accompany infrastructural development to ensure long term growth?

5.1 Economic Findings

<u>Job Creation</u>

Kenya's youth unemployment, in both the rural and urban areas, is on the rise. Kenyans aged between 20 – 24 years old have the highest rate of unemployment currently sitting at 14.2% in the 4th quarter of 2020. (Kenya Bureau of Statistics 2020). Thus, long term job opportunities are of critical importance. The findings below focused on jobs in the construction and transport sectors as these are the most directly impacted industries when dealing with transport infrastructural projects.

It was promised that the SGR would be a source of hundreds of thousands of jobs, destined to better Kenyan livelihoods. In 2016, the CRBC released a statement saying they had hired 19 858 local Kenyans and 2 000 management and specialist personnel. Of the Kenyan staff employed, 14 261 are general semi and unskilled labourers whilst 4690 are technical employees and 907 are management staff. A further 6430 were hired with CRBC's subcontractors, as well as over 2400 security personnel (Njau 2016). CRBC asserted that the procurement process for locals was transparent through job fairs at neighbouring communities to the SGR to promote community employment and engagement. Every two years CRBC would throw its Long Service 2018 Awards Ceremony in which it honoured its loyal employees, which Li Changgui, the manager of CBRC maintained 90% of its workforce in Kenya is local. CRBC have to a large extent worked hard to portray an image of a benevolent multinational that truly cared about its employees, however, over the years there have been several mounting criticisms towards CRBC and its treatment of its workers. On the 2nd August 2016, a construction site in Narok county was stormed by residents who were furious with the lack of jobs and failed promises. The residents were predominantly youth from the pastoralist Masaai tribes who have continuously been marginalized in Kenya's economy. Jobs such as drivers and plant operators were promised to them but failed to materialize. The work that CRBC did offer them was insignificant and severely underpaid. Another incident in Nakuru, only just the day before saw workers downing tools in protest of the poor pay, they were demanding $5 a day instead of a wage that was half of that (Kuo 2016). Beyond this, CRBC has come under heavy fire due to laying off workers without due process and importing greater numbers of Chinese workers than officially disclosed.

The graph below gives some indication of the number of Chinese labourers, brought in to work on the various infrastructural projects. This figure peaked the year after the first Nairobi to Mombasa line was completed.

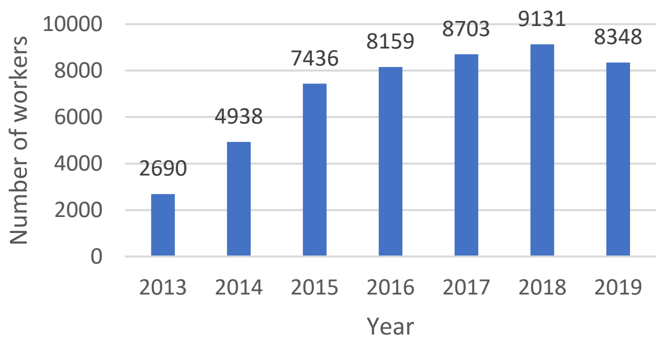

Figure 4: Number of Chinese workers in Kenya 2013-19

Source: Johns Hopkins University SAIS China-Africa Research Initiative.

The construction industry showed improved figures year on year from 2014 to 2016 with 2016 yielding 10.6% growth of 163 000 jobs (Githaiga 2019, 226). The growth in this sector can predominantly be attributed to government implemented Chinese construction projects. In 2019, The construction industry in Kenya contributed 5.6% to Kenya's GDP and employed nearly 222 000 people. Before the pandemic struck, the Government of Kenya was about to roll out 80 more infrastructure development projects under public-private partnership agreements (Construction Industry Report 2020). These have largely been stalled. Only time will tell if the construction industry with the impacts of the pandemic and China's pullback in financing infrastructural megaprojects will result in sustained employment. There were widespread reports of employment contracts being terminated after projects were completed further alluding to the temporary nature of unskilled and semi-skilled work. Although there were plenty of opportunities available for skilled labour, one can't help feeling that those individuals would have found work anyway, even without the SGR's aid.

Although much of the focus surrounding SGR was on the jobs created as a direct consequence of the railway construction, there has been significant job losses in industries that have been adversely affected by the SGR. As road is a direct competitor to rail, the truck transport industry in Mombasa has suffered heavy losses since the commencement of SGR freight services and the proceeding government directives. These directives were issued to ensure forced usage of the SGR for all cargo entering the port, which must proceed for processing to the newly developed clearing depots in Nairobi and Naivasha. The first directive in 2019 saw mass protests erupt as freight transporting services had to close down or move their businesses to Nairobi as no trucks were allowed to handle standard cargo from the Mombasa Port. This resulted in hundreds of truck drivers losing their jobs. The Kenya Transporters Association(KTA) who control 15 000 trucks, demanded that the government should steer clear of intervening in free-market enterprises, insisting that the SGR should compete with other modes of transport on an even playing field. Attempting to control the transport industry in this manner, infringes on their right to market access (Oirere 2020), simply so that they can generate enough funds to pay back the exorbitant USD 3.8 billion loan. One must weigh up the perceived benefits of direct job creation against the losses in industries that suffered the collateral damage of the SGR. It must be noted that these jobs that have been lost are largely from the semi-skilled to unskilled set, making it even harder to bounce back as there are fewer options available to this demographic.

Growth of new industries

To protect and aid the local manufacturing sector, the Kenyan government issued a Procurement policy for all materials. Under reassurances from the government and its policy directive, Local cement manufacturers Lafarge Bamburi Cement and ARM cement spent millions of dollars upgrading their factories to ensure their plants were able to sufficiently produce the 52.5 Grade cement required by the Chinese contractors as well as invest in the necessary logistical planning for deliveries (Global Cement 2015). The confusion arose when the Kenyan Association of Manufacturers was granted assurance that all the cement would be procured locally. This lack of communication and transparency was costly to the manufacturers and it was later discovered that the 40% local content requirement which gave local producers some confidence, was not captured in the original Engineering, Procurement and Construction (EPC) contract between CBRC and the government of Kenya (GoK). It was merely a gentleman's 'understanding', leaving local manufacturers out of pocket (Odit 2015). This created a loophole, as the Policy directive was non-binding. Thus, Chinese suppliers sought to import the cement from China instead as imports for the SGR were duty-free. This made it cheaper than sourcing the cement locally from Kenyan suppliers. The lack of transparency and confusion costed the industry instead of benefitting it, rendering local manufacturers the losers, under the guise that their products were inferior and did not meet the Chinese standard. This negligent behaviour from the government saw local firms being edged out of competitive procurement processes in favour of the Chinese who dominate full industry chain export. From the design of the project to financing, material procurement and equipment, construction, management and supervision, to operation and maintenance of the railway – The Chinese Banks, government and companies control the complete chain.

It is promising to note that once further investigations into the cement procurements became more publicly known, LaFarge Bamburi began to steadily supply the Chinese contractor with locally manufactured cement. More positively, the introduction of Chinese technology to local cement suppliers saw volcanic ash being added in the production of the cement, creating a much harder product perfect for rail construction, increasing the demand for the locally made cement.

Recently, Uhuru Kenyatta inaugurated the opening of a semiconductor chip factory in Nyeri. This is further evidence of a country striving to enter the world's markets as a producer of valuable finished products, able to compete with other countries such as Japan, South Korea, The US and Thailand who produce semiconductor chips (Kimanthi 2021). Although this was a collaboration with an American nanotechnology firm, the investment shows that despite everything, Kenya is still an increasingly attractive location for industrialization.

Lowered transport costs

The appeal of lower transport costs was eagerly anticipated by the Kenyan public as a benefit of the SGR for both passenger and cargo services with the latter resulting in an overall reduction in the cost of goods. Yet, upon deeper investigation, the reality appears to be in stark contrast to initial assumptions based on rail practice around the world.

Cheaper than road

Core to the feasibility of the SGR was the belief that the railway would be able to disrupt the existing trucking industry and organically drive price reduction on the back of lower logistics costs.

Several separate assessments cast aspersions on the SGR's feasibility relative to road. Firstly, a report of 'The joint technical committee on the improvement of efficiency and cost-effectiveness of transportation of Cargo using the SGR', found that it was more expensive to use rail than road. The cost of transporting 20ft container went up to KSH 51 275 and a 40Ft container at 71 785 (Taylor 2020)

The Inland Container Depot (ICD) in Nairobi is situated in the Embakasi area which is over 20km away from the centre of Nairobi and quite far from the various industries that import the goods. The government directive that insisted all cargo must utilize the SGR meant that once the cargo arrived at the depot centres, extra transport costs of KSH 15 000 – KSH 20 000 for the last leg of the journey had to be factored in, along with a 1.5% railway tariff to assist paying for the cost of the SGR. It would otherwise have cost a truck between KSH 60 000 – KSH 80 000 to have done the entire trip from the port to the importer's doorstep, all without the administrative and bureaucratic burden that has often been associated with clearance and processing of the SGR. There have been instances where goods have been withheld, overall making the process more cumbersome than road. Thus, transport via the SGR proved to be more expensive than road. As road was unduly pushed out of the picture, having the SGR as the only option meant that overall the transport costs increased not decreased.

Secondly, a feasibility assessment performed by CRBC suggested that the SGR would be profitable with a tariff of US$ 0.083 a ton per kilometre (Ndii 2018). The survey also estimated road haulage cost at US$ 0.10 to US$ 0.12 a ton per kilometre – suggesting a 20%-44% premium to rail. However, in reality, due to FX depreciation, road haulage costs came in between $0.05 and $0.07 a ton per kilometre – a 16% to 40% saving relative to the SGR's breakeven tariff (Ndii 2018).

Cheaper than rail

The 2012 Economic Survey suggested that railway freight revenue was $0.052 a ton per kilometre. This indicates that the existing cost of rail was roughly 60% cheaper than the break-even cost of the SGR (Ndii, 2018).

Some light at the end of the tunnel

Increasingly public opinion and civic action in Kenya is seeing change, albeit slow with the damage already having been done. The Kenya Transporters association challenged the Kenyan government directive allowing only SGR cargo. A five-judge bench ruled in favour of KTA and ordered that the directive be quelled and all manner of transport be allowed to carry cargo (Muyanga 2021). Building on this victory, AfriStar announced that on the 16th of February all SGR containers would see a massive reduction in costs. This comes as a relief to importers and traders as costs were continually climbing. How long this will last remains to be seen as the yo-yo'ing of prices does not instil confidence and won't make a dramatic impact on the price of goods as businesses try to recoup losses. This cost reduction will make it more challenging to meet its operating cost targets which are KSH 1.5 Billion monthly, against monthly average revenues of KSH 841 million (Taylor 2020).

Perhaps the decision to reduce cost comes from a government realizing that the SGR is a loss-making enterprise and it's better to garner the public favour through a reasonably priced service that will form part of government subsidised support anyway. This could also be seen in light of the handover from Afristar to Kenya Railways as the change in operator will come into effect fully by May 2022.

Upon engagement with locals through an online survey and various online discussions with commuters of the SGR, the passenger service was undoubtedly regarded as far more affordable and safer than other means of getting to the coast. This provided tangible benefit for the middle and upper-class segments of the population that would use it for leisure travel, although concern about the need to use a bus as the Mombasa station was too far away from the town was voiced (Respondents in Online Survey 2021).

<u>Increase in trade</u>

A key assumption around the viability of the SGR was that the completed project would result in a reduced cost of imports alongside greater export volumes. Although a COVID-related global slowdown makes a clear comparison difficult, Kenya's Foreign Trade Summary suggests that Total Exports have been largely stagnant in USD terms.

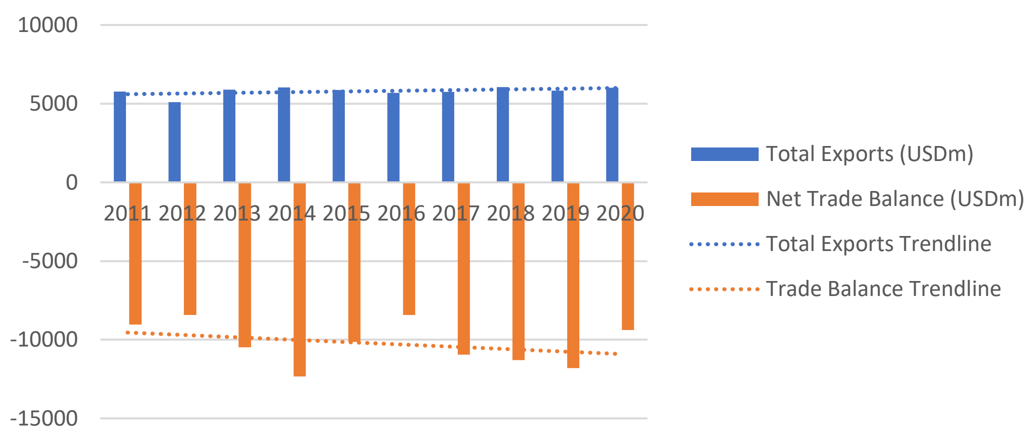

Figure 5: Kenyan Total Exports versus Net Trade Balance over time (Source: Central Bank of Kenya)

This is important, as one would anticipate increasing volumes on the back of currency depreciation. The relative stasis suggests that the capacity SGR has provided has not generated additional exports, but rather re-routed existing exports. Moreover, a growing Net Trade Balance suggest that Kenya has not been able to overcome the 'structural disarticulation' that so often plagues developing nations (Taylor 2020, 42).

The SGR's maximum capacity has been calculated at 8.7 million tonnes – less than the 22 million tonnes - 40% of the volumes envisioned and utilised in the SGR feasibility assessment (Githaiga 2019, 230).

This is critically important, as it, therefore, implies a capacity constraint relative to Mombasa's current freight volumes. At 8.7 million tonnes, roughly 90% of the SGR's capacity would be utilised in freighting Mombasa's transit cargo. Which would either necessitate building additional rail capacity or still depending on road freight to deliver the SGR's shortfall (Ndii 2018).

Growth of the Financial Sector

The utilisation of Chinese banks for funding the SGR has resulted in the majority of Financial Sector growth associated with the SGR occurring offshore. Moreover, the increase in foreign currency-denominated sovereign debt has impacted sovereign ratings and subsequently Kenyan banks' ratings. This has consequently driven up the cost of debt for these entities, reducing margins and associated growth. This, combined with the economic slowdown as a result of the increased debt burden has resulted in an economy that has seen a financial sector stalling even before COVID-19.

The anticipated increase in trade and subsequent lift in associated industries has also not been experienced, therefore limiting the degree of industry acquisition and growth activity experienced. Moreover, the depressed volumes have also resulted in far more muted insurance and freight underwriting growth out of the region – a key industry for the delivery of large diversified capital asset bases from which to build.

Economic Boost to rural towns

The SGR was largely expected to boost the rural economies of the small towns where its stations were situated. However, given the evidence from Mombasa, it seems to have done the converse. Since the government directive was instituted Mombasa county has lost KSH 17.4 Billion which is 8.4% of its yearly earnings and 2987 jobs (Warah 2019). Mombasa is heavily reliant on port activities for its economic survival, multiple spin-off industries in the services and hospitality sectors require the port activities and trucking industry to keep their businesses afloat. Thus, rerouting the cargo clearance to the more developed counties was a heavy blow to an already ailing economy.

In an informal online discussion with a commuter of the SGR, my attention was brought to the fact that the bus industry that has lost out to passenger business due to competitive rates and speed of the Passenger SGR has had a profound impact on the local towns that people would normally spend time frequenting the restaurants or staying the night. Without actual investment into the town itself, smaller towns are also prone to depopulation as the necessary infrastructure such as universities, hospitals and the allures of more modern convenient living is absent. What is seen instead is that younger populations move to the city, leaving the smaller towns to stagnate further. The poorest part of Kenya is the northeastern region of the Turkana district. The SGR does not run along this area, thus bringing no substantial benefit to the rural parts of Kenya. Although the proposed Lamu Port South Sudan (LAPPSET) had plans to run a railway through this region, it has been on hold due to feasibility and financial constraints.

Land disputes and compensation

The acquisition of land for the construction of the SGR was a particularly contentious issue from the very beginning. The limited community engagement from the government and unfair compensations mobilized civic rights groups and public condemnation of blatant land grabbing. The history of Land grabbing in Kenya is characterised by three distinct epochs. The first was the colonial period, followed by the post-independence era where political elites used land as a factor in the creation of wealth and power asymmetries. The last period is contextualized by land grabbing by foreign multinationals and politicians for infrastructural projects. Prior to and during the construction of the SGR, there was rampant involuntary displacement which created immense land insecurity and disrupted the livelihoods of thousands of Kenyan who were unfortunate enough to live in the way of the SGR. These people were forced to move to new areas that did not accommodate their land uses (Kariuki 2016).

The SGR provided ample opportunity for land cartels and greedy politicians at the Ministry of Lands and Provincial Administrations to fraudulently acquire lands destined for SGR for wrongful compensations. Multiple fraud charges have been brought against National Land Commission (NLC) executives. One NLC chairman was paid out KSH 109 million for land that was valued at KSH 34 million (Sunday and Kamau 2020). In addition to the nefarious actions of local government actors, this created price distortions in the property market which affects attracting future investment.

To facilitate the process of land grabbing, the government introduced the Land Value Index Amendment Act which allowed the NLC to take land before compensation. This is both unfair and unreasonable and had dire consequences for families that suffered massive delays in receiving compensations that were less than what they should have received.

Once again, it was the poorer communities that have been most adversely affected in the pursuit of development. The pastoral communities were particularly hardest hit as they often did not have the necessary paperwork to prove ownership on lands they have lived on for generations.

Social Rationale

There have been a plethora of skills development training programmes as a result of the Chinese presence in Kenya. China has demonstrated its commitment to the expansion of its 'soft power' through the diffusion of knowledge. China has the second-largest number of cultural institutes in the world. (Dahir 2019). Africa's first Confucius Institute was opened at The University of Nairobi. As both China and Kenya foresee a future that is inextricably linked for generations to come, the national school curriculum will start implementing mandarin as a subject. There are numerous success stories of Kenyans being able to gain a competitive advantage in the job market by learning mandarin. The number of international Kenyan students has risen substantially over the years, with many coming back encouraging the youth to seize the opportunities afforded to them through the Sino-Kenyan relationship.

There have also been numerous examples of technological transfers and innovations that have come about due to the everyday exchanges between Chinese and Kenyan individuals. A solar plant was launched in 2019 consisting of 206 272 solar panels that has put Kenya firmly on the 'green energy map. This comes off the back of a Solar technology transfer centre that was established in 2015. This technological transfer has been instrumental in Kenya's gradual transition to large scale renewable sources of energy.

China-Kenyan relations have largely been portrayed as rooted in mutual understanding and friendship, although there have been allegations of racial discrimination towards the local workers at CRBC's construction sites and not granting enough top roles to local Kenyans. This has tainted some Kenyan's perceptions of the Chinese. These sentiments were mirrored in the comments received – "They have taken the big roles and left the small jobs to Kenyans, which should be the other way round" one respondent replied. However, it must be added a few of the respondents acknowledged the government's corrupt behaviour in the project and thus remained neutral or positive in their views on the Chinese. Thus, perceptions of Chinese in Kenya were mixed and varied, dependent on individual experiences.

Respondents to the survey cited that the increased freedom of movement due to enhanced safety has been a tangible benefit realized through the train. Women and children can travel without worry due to the added security at each station.

The mobilization of civil rights groups and increased community engagement after the initial transparency from the beginning has been an interesting space to observe. There have been several successes where public outcry and opinion has resulted in tangible change and had positive effects on the sense of accountability and showcasing independence and public confidence in the courts. Even if these matters do get dismissed at the upper levels, the idea that public opinion matters and that there is recourse is a positive take away. Okiya Omtata, a human rights activist filed a lawsuit against the procurement of the 1st phase of the SGR which was later found by the courts to be illegal.

Ecological Rationale

There has been significant attention drawn to ecological aspects of the SGR, with civil, non-governmental and human rights groups such as OKOA Mombasa and The Wanjiku Agenda Kenya Foundation taking a stand against the government forging ahead without sufficient consultation with local communities and building a train that has not only saddled Kenyas with debt but has been detrimental to the environment as well. The greatest concerns by the Kenyan public related to the preservation of their wildlife as negative impacts to this could, in turn, affect the precious tourism industry upon which countless Kenyans rely in both the informal and formal subsectors of the industry. If the tourism industry suffers, the Kenyan economy suffers. The train passes through the Nairobi national park. This meant that the construction of bridges had to be undertaken with substantial disruption to the migratory patterns and land use of the animals. In the beginning phase of SGR construction, Save the elephants reported that 10 elephants died when they crashed into trains and that lions were driven out of the national park as bridges were being built (Githaiga 2019). The Kenya Wildlife services has also made public their observations that the diversion of livestock through underpasses in Tsavo National Park around Buchuma gate was causing critical soil degradation (Nyumba et al 2021). Overall the damage of the ecosystem has been of critical importance, multiple studies have shown adverse effects in both the construction and operation phases. Evidence has mounted alerting the public to the continued contamination of water sources, soil and air. There have been allegations against CRBC who have been dredging sand from the sea for their construction projects. In addition, oil spills in Thange and Athi River in Machakos County has meant that all agricultural uses of the river have had to be suspended.

Whilst usage of the train instead of road will reduce carbon emissions, there was an opportunity to build SGR as electric from the start. The fact that it was built as a diesel train has left many scratching their heads in disbelief, given Kenyatta's public commitments to reduced carbon emissions. Although the SGR is diesel, it allows for the addition of an electric line that would be connected to Kentraco's 400 Volt, 485 km Mombasa to Nairobi line. There was a USD 240 million deal signed with Kenya Electricity Transmission Company – Kentraco and China's Electric Power Equipment and Technology Company Limited (CET) in January 2018 (Kentraco media statement 2018). This deal was to ensure a reliable source of energy using geothermal power to convert the train to electric power by building 14 power stations along the SGR route which will cause further disruption to the environment. Just one year after operations of the SGR began, the government has begun embarking on upgrades to the train.

Broad-based socio-economic benefit

To evaluate the impact that the SGR has had at an individual level, a broad-based survey was generated and distributed through Kenyan social media platforms. The survey saw only 4% of recipients providing full responses. On engagement with individuals, the general sentiment was that although the SGR was considered a significant failure, many were too afraid to be seen as vocalising their displeasure.

According to the survey, the vast majority (81.8%) of those utilising the SGR had used it for pleasure relative to business at roughly 13.6%. Only 5% of respondents hadn't travelled on the SGR yet. (Respondent Survey – Appendices 8.2)

The respondents came from the full spectrum of economic activity – from transport to accounting. Interestingly, although the vast majority of respondents found it affordable (96%), only 14.3% indicated that they used it more than twice a month, with 71% suggesting that they either use it every other month or every other year.

Respondents' responses demonstrated a clear disconnect between personal benefit and the ultimate value of the SGR project. 95% of users found the SGR affordable, and 71.4% believed they had benefitted personally from the project, yet 76% believed that the increase in taxes and tariffs did not justify the project.

The perception that rail was an antiquated and unattractive method of transport was evaluated, with rail being the surprising winner (62%) relative to road (38%).

The Kenyan public remained divided around whether large-scale infrastructure projects like the SGR was key to Kenya's development, with 47% stating that they believed they were, while 24% stated they weren't, with 28% unsure.

For those that indicated that they were aware of the debt burden Kenya faces (86%), 67% of these individuals believed that the national debt was unjustified. Moreover, public perception of the degree of transparency was scathing, with 76% of respondents rating it a 2 or less out of 5, with 52% rating it a 1 or lower.

Lastly, and most telling, only 14% of respondents felt ownership of the SGR – a project touted as delivering broad-based economic benefit to the Kenyan public.

Through the survey, it was clear that although the majority of Kenyans surveyed had experienced some kind of economic or social benefit from utilising the SGR, the size of the financial burden imposed as a result of this dwarfed the individual benefit experienced.

5.2 Economic Drag

<u>Corruption</u>

The opaque nature of the dealings and the overly inflated costs have been the source of much criticism from the public and opposition parties who accuse Kenyatta's ruling Jubilee Party. The culture of neopatrimonialism and political elites in Kenya run deep. This represents a far more intricate and sophisticated web of rent-seeking behaviour, trickling down from national to local governments. As time progresses, further allegations of corruption implicating both Chinese and Kenyan actors are being revealed, giving the sense that this was a project doomed for failure from the start.

The procurement for the SGR was highly scrutinised due to the secretive and uncompetitive nature of the tendering process, this resulted in two Parliament Inquiries being launched– first by Transport, Housing and Public Works and second by the Public Investment Committee (PIC) These inquiries sought to investigate whether the countries procurement laws were obeyed in the awarding of the contract and finance from EXIM bank. As previously mentioned, the feasibility study and costings were done by the same company to which the contract was awarded and it was thus able to distort profitability projections and expediency. Tied lending principles meant that CRBC could dictate whatever costs as there was no competitive bidding, reduced risk for China as costs could be recouped in other ways should default occur. In the end, Kenya paid 3 times the international standard for a diesel train. In contrast, Tanzania paid half the price (USD 1.92 Billion) for their SGR, an electric train that is faster, cheaper and greener (Wafula 2017).

As this was a State – State contract, it was exempt from standard procurement laws. Once again showcasing how Big Man Politics will exploit the loopholes in a system to benefit their interests. GoK maintained that Kenya was bound by Chinese secrecy laws which protect its commercial interest, thus were unable to operate transparently from the beginning. Whilst this might be the case, a recent report by Tax Justice Network revealed that Kenya's financial sector is the second most secretive in Africa and among the top 30 most secretive in the world, thus being perfectly designed to hide corruption (Africommons 2020).

The culture of paying bribes to do business is standard practice and in 2017, the public prosecutor ordered the arrests of numerous state officials who instituted fraudulent compensation claims for land (Reuters 2017). Amongst those arrested was the managing director of Kenya Railways Corporation Atanas Maina, who curiously still holds the position.

Kenya's institutions are weak. Although they have come a long way from where they were in the electoral violence days, before the new constitution, one cannot deny that the judiciary is still hamstrung by the executive branch of government due to entrenched neo-patrimonial tendencies. In combination, certain ethnic groups are kept in power through the manipulation and exploitation of state coffers by political elites. Kenya's governance is therefore at the core of the SGR debate. It is unfortunate that through corruption, the 'optics of development' have themselves been corrupted. It has come to be expected that development will require some form of bargain between a government and its people (Van Staden 2020). Sacrifices must be made now to ensure prosperity in the future, but when it is a case of government personally enriching itself with commercial gains at the expense of its people, then development will never be realized.

Debt

The global stage is littered with emerging market nations who utilised foreign debt to deliver infrastructure with the hope that this would ultimately lead to sustainable economic development. And although not as critical as some of its neighbours, Kenya's economy groans under its metastasising debt burden. Its total loans outstanding to China, its greatest bilateral lender stood at USD 6.37 Billion at the end of 2019 (Mureithi 2020). The Naivasha SGR loan reached the end of its five-year grace period in January 2021, effectively increasing Kenya's SGR debt instalments to China by 130%. This increasing debt servicing cost, combined with a shrinking economy in 2020 means that roughly 50% of taxes will go to paying external debt costs.

Kenya's ministry of transport reported SGR's first year of operations resulted in USD 90. 3 million in losses. Total losses over its 3 years of operation have come in at USD 200 million. The report stated that even though the SGR generated revenues of USD 230 million, its operational costs were exceedingly high at USD 430 million (Mureithi 2020). Making this a wholly unsustainable endeavour.

The significant cash flow limitations as a result of interest repayments are only exacerbated in highly volatile post-COVID FX markets. Hard currency borrowings from the Chinese effectively reprice every time the US markets experience a risk-off sentiment. The Kenyan Shilling depreciated 8.7% relative to the US dollar in 2020. This, in effect, increased the cost of borrowing by nearly 9%. Moreover, this incrementally more expensive debt in local terms further weighs down on Kenya's ability to service its obligations, resulting in increased rating pressure, and subsequent capital flight. Kenya finds itself in its own debt vortex, stripping it of buffer to weather an unstable global economy.

However, unlike most DFI and IFI debt, Kenya finds itself having pledged several key sovereign assets as collateral for the infrastructure loans. Leaked loan agreements showed how the Kenyan government had pledged the Mombasa Port as security against the SGR debt (Odhiambo 2021). Notwithstanding the adamant rejection by both parties, this kind of debt agreement is not uncommon with development finance from China. Notwithstanding the low likelihood of a Chinese actor perfecting this security, it remains a fear in the Kenyan public's mind.

Ultimately, successful debt restructuring talks with both China and Western agencies are required to prevent the erosion of the economic development Kenya has experienced over the last 2 decades.

Regional Politics

The SGR has had profound implications for regional politics between the main members of the East African Community. As each was tasked with their own implementation of SGR lines for regional connectivity, timing was of paramount importance. However, due to the Machiavellian tendencies of African leaders wanting to further their own interests, the competition for economic gains has meant the sacrifice of regional cooperation.

As countries strategically pick sides during the various phases of implementation, resulting in stalled progress for neighbour states. Uganda in particular has been giving mixed signals regarding the SGR. Going back and forth, reneging on SGR bilateral agreements between Kenya, only to agree to them again, only to ally with Tanzania. This creates a sense of dis-unity and is ultimately aimed at preventing Kenya's hegemonic ambitions in the East African region. Uganda and Kenya have a long history of political tension regarding railway harking back to the colonial era. Uganda's ambivalence, often pitting Tanzania and Kenya up against each other, creates regional tensions. The enormous project planned for Bagamoyo Port in Tanzania has currently been put on hold due to rising debt concern. For now, this is a positive for Kenya's SGR as Bagamoyo's capacity would have dwarfed the Port of Mombasa and posed a substantial further threat to Kenya's SGR's financial viability.

The lack of unity amongst the East African states has resulted in too many competing interests and heightened paranoia and distrust amongst African neighbours. Until Kenya's SGR links up to the African interior, Kenya will continue to haemorrhage losses, a fact that its neighbours are well aware of and monitoring closely as power dynamics will ultimately begin to shift.

SGR and Covid

Covid 19 has had disastrous effects on the normal operations of the SGR as both freight and passenger services have been suspended for nearly 3 months owing to national lockdowns. This has had knock-on effects, resulting in bottlenecks and mass congestion at the depots and ports as containers have had to be rerouted or stored, creating costly administrative burdens for the Kenya Ports Authorities and Kenya Railways. Job losses have been substantial due to Covid. CBRC had to send 4013 Kenyans on unpaid leave and sent home nearly 500 Chinese expats working on the rail (East African 2020). The impacts of

Covid 19 will only exacerbate the debt burden, calling for cautioned and stringent fiscal decisions moving forward

The suspension of passenger services has left numerous irate commuters out of pocket as they have not been refunded the monies owed to them and there has been no indication of when it will be paid out.

Back to the Negotiating Table

42% of the financing for the Nairobi to Mombasa line was concessional export credit and 52% came from proprietary trading loans (Kuo 2016). Although people have criticized the commercial lending rates of the loan, we can turn to TAZARA to argue that even if the loan was completely interest-free as the nature of the TAZARA finance was, African countries have a host of unique mitigating factors such as neo-patrimonialism and low income based populations that make the repayments of such exorbitant loans incredibly difficult. That being said, the added spin-offs that often result in infrastructural projects such as the SGR, weighs heavily in China's favour. This should be a considering factor in the renegotiations of such loans. Along with the duty-free benefit that CBRC experienced, Chinese firms enjoyed the added export of USD 1 Billion worth of Chinese goods to Kenya. After China refused to finance the final phase of the SGR to Malaba, the Kenyan government decided to refurbish the existing colonial line. However, it remains to be seen how the challenge and inconvenience of hauling cargo ¾ of the way, only to offload at the final leg will be circumvented.

Covid-19 was a death blow to the SGR and Kenya, and although there are reports of increased activity at the ports and the implementation of double stacker trains to meet the demand, it will still not be enough to dig itself out of the hole. In the realization of this, Kenya has been approved for a loan agreement with the IMF to the value of USD 2.3 Billion. This is a 3-year agreement under the Extended Credit Facility (ECF) and Extended Fund Facility (EFF) aimed at supporting vulnerable countries to reduce their debt vulnerability aggravated by Covid 19 (IMF Press release 21/98 2021).

5.3 Discussion on Findings

Upon the evaluation of the findings of this study, I have been able to better assess and answer the questions I set out at the beginning of my investigation. I have endeavoured to answer my main research question – "How Chinese funded and constructed railway infrastructure brought about economic development in Kenya?" by exploring 3 sub-questions.

1. **Was the SGR a commercially viable investment project?**

Based on the evidence provided, all indicators point to the fact that this was commercially unviable from the beginning. Multiple reports before its construction and operational experience over the last 3 years reinforce this point. Hence, the justification for the SGR was not for the economic gains for the country but rather for a select few individuals and the Chinese counterparts. Ultimately, the viability of the project could not be justified to the extent direct and indirect benefit have not been able to outweigh the significant fiscal burden Kenya has lumbered itself with.

2. **Who emerges as the real winner in these infrastructural megaprojects?**

The findings demonstrated that for the most part the benefits associated with the SGR were not realized by the wider Kenyan people, it resulted in the opposite, ladening working Kenyans with greater tax burdens, displacement, higher costs of transport, goods and of doing business. The social benefit is relatively small for the Kenyan people when weighed up against the economic losses. In truth, the poorest in Kenya would never be able to afford the social benefit of the SGR at all. And given that nearly 40% of the population still live below the breadline, the SGR will only be a symbol of what spiralled them further into underdevelopment as the government is forced to divert funds to debt repayments that could have otherwise been to social development for society's most vulnerable.

On the opposite end of the spectrum, China benefits at numerous levels. A successful SGR infrastructural project further entrenches Sino-Africa relationships. A failed SGR infrastructural project results in China having effective control of the infrastructural asset through tariff application or destruction of free-market activity to drive volumes onto the infrastructure.

However, irrespective of the outcome of the SGR project, China is primarily able to maintain its own manufacturing and construction sectors through the creation of new growth markets. This means that in effect Kenya is paying for China's growth. Moreover, China gains a unique ability to integrate itself into every aspect of the supply chain under the auspices of FDI.

Adding to this, the Kenyan political elites at the top who have lined their pockets at the expense of their nation's future have also emerged as the winners.

3. What needs to accompany infrastructural development in order to ensure long term economic growth?

Good governance, transparency, independence and community participation is essential in matters of national importance. For the wider public to have largely been left in the dark on a matter that will affect multiple future generations has cast suspicion and distrust in development projects. Sustainability is essential for the guarantee of future economic growth, thus rigorous independent due diligence is necessary to establish the profitability of these projects. Without profitability, there is no sustainability. Long term economic growth from infrastructural development comes with an endogenous demand that has to be met. Currently, foreign-financed infrastructural projects are exogenous as they base projection from sources that are not familiar with Africa's unique set of developmental challenges. The infrastructure is being built before the economic demand is present to sustain it. This results in underdevelopment instead of the socio-economic development expected with the built infrastructure.

In the end, the evidence did not support my initial hypotheses as Increased Chinese-funded and constructed railway infrastructure does not guarantee an increase in social and economic development for the Kenyan people. Instead only a few at the top have ensured that through pollical manipulation that they are the primary benefactors.

6 Conclusion

The SGR project has proven that no amount of pontification and fanfare can make up for when infrastructure projects are unable to deliver the very economic benefit for which they were initially conceived.

China's role in the SGR is one of facilitation. It would be trite to assume that Chinese interests would not be considered as part of the project- just as Kenyan interests should be considered. Ultimately it is the responsibility of the Kenyan government to safeguard its economy and deliver sustainable and feasible infrastructure-led growth based on the economic demands of its people and not unrealistic targets set by outsiders. Most of all, Kenya needs protection from itself as new access to development investments have opened the floodgates to the neo-patrimonial predispositions that African politics cannot seem to escape.

Infrastructure is certainly a fundamental key to growth but to truly gauge the full weight of the socio economic impacts will take time. The normal returns on investments with the infrastructural mega projects can only be gauged after 10 or more years as the Chinese have alluded to in other Belt and Road megaprojects. But unless drastic measures are implemented, Kenya's economy may not be able to weather the storm to find this out. Ultimately, Kenya's SGR dream has become their nightmare as a result of approaching infrastructural investment as the panacea to growth, rather than an asset that must be carefully and rationally managed to prevent it from becoming a liability.

6.1 Suggestions for Further Research

Increased primary source engagement

The initially intended research mechanism was predicated on in-person interviews in Nairobi and Mombasa. Unfortunately, as a result of COVID-19, all travel was halted and in-person interviews were not possible. Moreover, given that the engagements coincided with sensitive negotiation periods between Kenya, the IMF, the US and China around both debt restructuring and trade agreements, Members of Parliament, individuals within AfriStar and Chinese representatives were unwilling or unable to engage on the topic.

Interviews with individuals that had established industry and trade on the back of the SGR was also constrained, as the SGR was suspended for a period on the back of rolling protests and vandalism due to anger around the lack of debt transparency and COVID lockdowns.

Engage lower LSM populations

The digital nature of the survey inherently excludes the poorest segments of the Kenyan population who do not own smart digital devices. The utilisation of physical survey collation to augment the digital survey would address this shortcoming, however, COVID-19 may make this difficult.

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8 Appendices

8.1 Respondent's Survey

Questions							
1. What is the usual purpose of your travel on the SGR? Business or Pleasure?	Not travelled yet	Pleasure	Business	Both			
2. What industry are you in?							
3. How far do you commute?							
4. Do you use the SGR for passenger or cargo services?	None	Passenger	Both	Cargo			
5. In a typical calendar year, how often do you use the SGR services?	Frequently (more than twice a week)	Sometimes (more than twice a month)	Hardly ever (every other year)	Rarely (every other month)	Never		
6. Do you find it affordable?	Yes	No					
7. Do you feel the SGR has benefitted you personally?	Yes	No					
8. If yes, then how?	Shorter commute	Safer transport	Faster transport of goods	Cheaper commute	More reliable transport of goods	My business has benefitted from the construction of SGR	Cheaper goods
9. Do you believe that projects like the SGR are the key to development for Kenya?	Yes	No	Not sure				
10. Are you aware of the debt burden Kenya faces as a result of the construction of the SGR?	Yes	No					
11. Do you feel that the extent of this national debt is justified?	Yes	No	Maybe				
12. Rate the scale of transparency in the construction of this megaproject. With 5 being absolute transparency and community engagement	1	2	3	4	5		

at every level and with 0 being no transparency and a project shrouded in secrecy.							
13. Are you proud of what Kenya has achieved with the SGR	Yes	No					
14. What is your attitude towards the Chinese involvement in the SGR							
15. As a Kenyan, do you feel ownership of the SGR?	Yes	No					
16. Do you feel that Kenyan sovereignty is a suitable compromise for socio-economic development?	Yes	No					
17. Do you feel that the increase in taxes is worth the prestige and overall benefit of the SGR?	Yes	No	Maybe				
18. In an effort to reduce the operating costs of the SGR, the Kenyan government is pushing Afristar for an earlier handover in 2022 for management of the railway. Do you agree or disagree with this action?	strongly agree	agree	neutral	disagree	strongly disagree		
19. Which mode of transport do you prefer	Road	Rail					

8.2. Graph

1. What is the usual purpose of your travel on the SGR? Business or Pleasure?

22 responses