Kenya's New Lunatic Express: The Standard Gauge Railway

IAN TAYLOR

Abstract: The Belt and Road Initiative (BRI) aims to integrate Africa into an ambitious Chinese-constructed infrastructure network that seeks to link the economies of participating countries to that of China's. However, serious concerns about its cost for the host countries, the legacy and sustainability—alongside the social and environmental costs—of its projects have raised questions as to its value and long-term future. The Standard Gauge Railway (SGR), linking Mombasa to Nairobi and beyond has been portrayed as a centre piece of the BRI in East Africa. Both the Chinese and Kenyan governments have represented the SGR as an example par excellence of Sino-African cooperation and the ubiquitous "win-win" partnerships that this is said to engender. However, serious issues with the SGR in terms of its cost, viability and practicality has meant that it is increasingly being seen within Kenya as an expensive white elephant beset with numerous intractable problems.

Introduction

In the late nineteenth century, the United Kingdom began building the Kenya-Uganda Railway, connecting Mombasa to Lake Victoria. Its expense and the various hazards encountered in its construction provoked a British parliamentarian, Henry Labouchère, to write a satirical poem about the railway:

> What it will cost no words can express,
> What is its object no brain can suppose,
> Where it will start from no one can guess,
> Where it is going to nobody knows.
>
> What is the use of it none can conjecture,
> What it will carry there's none can define,
> And in spite of George Curzon's superior lecture,
> It clearly is naught but a lunatic line.[1]

By looking at the latest incarnation of the Mombasa to Nairobi rail line and the problems that have beset this venture, this article seeks to make the case that history is apparently repeating itself in Kenya, only this time under the rubric of the Belt and Road Initiative (BRI). The BRI, unveiled by President Xi Jinping in 2013, is an enormous project to finance and construct predominately infrastructure schemes across c. eighty-seven countries, of which twenty are African. It is China's current global development strategy and seeks to construct an elaborate web of trade routes (and facilities to support this), all to be integrated within a China-centred trading network.[2] Thus far, more than one trillion dollars in

Ian Taylor is Professor in International Relations, University of St Andrews and also holds professorial positions at Renmin University of China, the University of Stellenbosch, and the University of Addis Ababa. The author of eleven 11 academic books, editor of another thirteen, plus numerous articles. Co-editor of the *Journal of Modern African Studies*, he has visited and/or conducted research in forty-five African countries.

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infrastructure spending has been mentioned by the Chinese as constituting the overall plan.[3] The strategy was originally announced during visits by Xi Jinping to Indonesia and Kazakhstan in 2013. The "Belt" element denotes the overland trade routes i.e. the Silk Road Economic Belt; while the "road" indicates the sea lanes of the 21st Century Maritime Silk Road.

In terms of Africa, the BRI—which was initially very much focused on East Africa—has now extended to include countries in Central and West Africa, including an ambitious scheme to link up ports on the Atlantic to ports on the Indian Ocean seaboard. The BRI can be seen to be a major contemporary element in a wider expansion of Chinese involvement in Africa, something which accelerated after 2000 and which has garnered a large literature.[4]

As the BRI is so colossal (if it comes to fruition, it will encompass c. 4.4 billion people with a cumulative gross domestic product (GDP) of around $21 trillion), it makes sense to narrow down the focus so as to try and capture some of the unfolding dynamics.[5] For the purpose of this analysis, Kenya has been selected as a case study of an African country that has actively sought to be embedded in the BRI.[6] Indeed, it is no exaggeration to say that "Kenya is a core part of both the Maritime Silk Road and the Belt."[7] Thus far, much of Kenya's involvement in the BRI has been centred around the Standard Gauge Railway (SGR), which not only showcases Chinese investment in Africa under the ambit of the BRI, but has also been portrayed by the Kenyan government as a flagship project of *Kenya Vision 2030*, which is an ambitious policy aiming to transform Kenya into a middle income country by 2030.[8] The significance of the SGR can be seen in that it is the biggest infrastructure project in Kenya since independence. According to Kenya Railways, the SGR was originally commissioned as a result of the governments of Kenya, Rwanda, South Sudan and Uganda being "committed to providing high capacity, cost effective railway transport within the Northern Corridor."[9] This plan was to be realised through a high capacity, high-speed SGR for both freight and passenger services, to connect Mombasa port in Kenya to Kampala, Kigali and Juba. Each country had the role of acquiring and developing the section of the railway line within their own borders. In October 2009, the governments of Kenya and Uganda signed a memorandum of understanding to build a SGR from Mombasa to Kampala and a tripartite treaty was signed in August 2013 by Kenya, Uganda and Rwanda to fast-track the construction of the rail lines to their respective capitals.

Kenya, for its part, was tasked with developing the Mombasa-Malaba route. This was to be constructed in two phases: Phase 1, the Mombasa-Nairobi route, work on which began in December 2014 and became operational in 2017; and Phase 2, the Nairobi-Malaba route. This itself was divided into three different sub-phases: Phase 2A: Nairobi to Naivasha; Phase 2B: Naivasha to Kisumu (which included the construction of a new port at Kisumu on Lake Victoria); and Phase 2C, from Kisumu to Malaba.

The SGR aims to impose a uniform layout in East Africa through which transport across the borders of the four countries involved will be ostensibly increased, while transportation and production costs are reduced. Ideally, the SGR will reduce the journey time for passenger trains from Mombasa to Nairobi from over ten hours to four hours; freight trains will aim to complete the trip in under eight hours. The SGR (also known as the "Madaraka Express") opened on 31 May 2017 and operates two different categories of passenger trains: the Intercity and the County Trains. The Intercity Train is an express that travels between Nairobi and Mombasa at a maximum speed of 120km/h, with a capacity of twelve hundred passengers. The County Train stops at intermediate stations along the route (Mariakani, Maisenyi, Voi, Mtito Andei, Kibwezi, Emali and Athi River), has the same seat capacity as the Intercity, but takes about five hours and thirty minutes to complete the journey.

Route of the SGR

Source: ALG Newsletter, 2017

Originally, the African Development Bank agreed in 2011 to provide a $39.8 million loan to help finance the rehabilitation of the pre-existing Kenya-Uganda railway, which linked Mombasa to Nairobi and Lake Victoria. Construction of that railway had begun in 1896, with the line reaching Nairobi in 1899. Its route was completed in 1901, when it was extended to Lake Victoria. It was this project that transformed Mombasa into a modern port and the gateway to East Africa. Nearly 37,000 labourers and skilled artisans from India were contracted to build the line, laying the foundations for East Africa's sizeable Indian diaspora. Construction of the line was bedevilled by half the workforce being infected with malaria and attacks by man-eating lions, which halted construction.[10] Overall, around 2,500 workers died in the construction of the railway, approximately four for each mile of track and its cost came to £5.5 million (c. $842.5 million in today's money).[11] Detractors argued that the line was pointless and overly expensive, lunatic even.[12] However, it did play a major role in opening up Kenya and the wider East Africa to British imperialist interests and, in particular, immigration by British settlers. Indeed, the railway was so expensive that Charles Eliot, then British Commissioner of the Protectorate, felt that only industrial-level agriculture introduced and managed by British settlers could develop Kenya and create sufficient capital to finance the colonial administration and recoup the investment made on the railway. Large-scale White settlement of the Highlands was thus encouraged.[13] As a result, Kenya became one of the United Kingdom's last settler colonies.

Despite its seminal role in modern Kenyan history, the Kenya-Uganda Railway fell victim to maladministration and an acute lack of maintenance after independence. Although Kenya Railways Corporation owned the line, the railway itself became privately managed by Rift Valley Railways, a consortium of Kenyan, Ugandan and Egyptian companies, with technical expertise provided by a Brazilian company which took over the concession in 2005. Numerous derailments and the slow pace of the rail engines along the line (fifteen hours from Nairobi to Mombasa) made the trip unattractive. Thus, by the 2000s the line had been reduced to one passenger train, running three times a week at a top speed of 20-30km/h.

Debate as to whether Kenya needed a new railway—or simply the refurbishment of the existing line—was contentious. Kariuki Kimiti, a retired Kenyan railway engineer and consultant, noted that he had sought to persuade Nairobi to refurbish the old meter gauge railway at an estimated cost of about KSh100 billion (c. $980 million). An additional KSh100 billion would have been required to lease five thousand wagons and two hundred locomotives for a period of four years.[14] Hamdan Harub Bakheit, a Kenyan railways expert also asserted that an upgrading of the metre gauge railway, rather than a completely new railway, would have saved c. thirty percent of the cost as landowners would not need to have been compensated.[15] And given the projected freight volumes and axle loads, renovation of the metre gauge would have been sufficient and could have been completely paid for by a railway development levy on imports.[16] The levy is in operation now to help service the debt owed on the SGR and consists of a 1.5 percent tax on any goods imported into Kenya.[17] Thus to repay a Chinese loan, Kenya has had to increase the cost of doing business in the country, making Kenya less attractive to investors.

A feasibility study on upgrading the existing rail networks in Kenya, Tanzania, Uganda estimated that "investment of approximately $1.2 billion by the concessionaires and owners of the four railway systems" in East Africa would have been required.[18] Note, this was for the *entire* rail system in East Africa. In contrast, it was estimated that the capital costs for converting the network to standard gauge would range from $4 billion to $29 billion, "depending on whether the existing lines were converted or new lines built and whether the existing alignment or a new alignment is built."[19]

Table 1: Comparison of Development Costs for EAC Active Network ($M) (low estimate)

	Metre gauge: existing routes	Standard gauge: existing routes	Standard gauge: new routes
Fixed infrastructure	750	3,700	13,000
Rolling stock	490	400	400
Profit loss during construction	0	180	70
Total	1,240	4,280	13,470

Comparison of Development Costs for EAC Active Network ($M) (high estimate)

	Metre gauge: existing routes	Standard gauge: existing routes	Standard gauge: new routes
Fixed infrastructure	1,600	8,700	27,800
Rolling stock	1,200	900	900
Profit loss during construction	100	620	250
Total	2,900	10,220	28,950

Source: adapted from Canadian Pacific Consulting Services, 2009

Curiously, the Kenyan government opted for the most expensive option available. This decision by Nairobi came on top of a World Bank Africa Transport Unit report that compared the projected investment costs per kilometre to the anticipated freight volumes and subsequent likely revenue generation. The report stated that freight traffic within the entire East African Community (EAC) rail network could, by 2030, reach 14.4 million tons annually but that to be viable, the SGR would necessitate a volume of 55.2 million tons annually.[20] Thus, "There is no economic or financial case for standard gauge in East African Community area at this time. A refurbished metre gauge would appear to be the most appropriate option in economic and financial terms."[21] Ignoring such reports, the end result is that Kenya will be now paying $5.6 million per kilometre for the track alone, "close to three times the international standard and four times the original estimate."[22]

Of note, a second feasibility study for the SGR was carried out by China Road and Bridge Corporation (CRBC). According to Kenya's parliament, "A Memorandum of Understanding (MOU) was signed between the GoK [Government of Kenya] and CRBC in August, 2009 wherein CRBC offered to carry out the feasibility study and preliminary designs of the Mombasa-Nairobi section at no cost to the Government of Kenya, *provided that the report could only be used by GoK/KRC and CRBC*."[23] One commentator who has had access to this report however notes that:

> The CRBC feasibility study has a chapter titled economic evaluation, though it is unlike any investment appraisal I have come across. It asserts that the project has "high profitability" and "financial accumulation ability", but there are no cash flow projections to back this up. It presents Net Present Value (NPV) of three different configurations of US$ 2.0, 2.4 and 2.6 billion as evidence of viability, leaving one at a loss to understand how this justifies borrowing US$3.2 billion for the project. NPV is the current value of the future earnings of a project and should be higher than the cost of the project.[24]

In May 2014, however, during a trip to Kenya Premier Li Keqiang oversaw a $3.8 billion contract for the SGR between CRBC and Nairobi. Of this sum, 85 percent of the capital came from the Exim Bank, with the Kenyan government providing the balance. The loan, whose interest is 3.6 percentage points above the six-month London Inter-Bank Offered Rate (Libor) average, is to be repaid in fifteen years.[25] Kenya's Transport Cabinet Secretary, Michael Kamau, later admitted to the Parliamentary Public Investment Committee that that procurement laws were ignored in negotiations with the Chinese and that Kenya had had to work under the conditions set by the Chinese and as a result, procurement of the tender was not subject to the regulations established by the Public Procurement and Disposal Act.[26] Consequently, "the bidding was opaque; and the law was stretched, even skewed to allow CRBC to get the tender."[27] It was noted that:

> The procurement for the construction of the SGR and the supply and installation of the rolling stock marked an interesting turn in the manner in which some major infrastructure projects are procured in Kenya. SGR marked the introduction of what is now commonly referred to as "government-to-government procurement," where… projects financed through concessional loans and grants from foreign governments [are] exempt from Kenyan procurement law.[28]

Viability in Question

According to reports, the first feasibility study done on the railway (noted above), before Kenya approached China for funding, found that the SGR would not be financially viable unless Kenya grew its import bill at more than twice its projected pace; that all imports into

Kenya utilised the railway; that enough cargo to fill the train existed; and that all the regional partners built similar lines simultaneously. "And, even after this, there would still be doubts on its bankability."[29] The 2009 report, *East African Railways Master Plan Study*, conducted by Canadian Pacific Consulting Services, concluded that the advantage of replacing the existing metre gauge by a brand new standard gauge would be negligible and that converting the rail system in East Africa (as now envisioned by the SGR project) would be deeply problematic:

> Under the most optimistic scenarios, the current rail networks of the EAC will generate revenues less than 1000 M USD annually by year 2030. Conversion of the trunk lines is forecasted to cost at least $20 B USD. Operating savings (if any) would be insignificant. Given the ratio of capital costs to revenues, it is clear to see that the conversion is cost prohibitive.[30]

Yet, as note, conversion to standard gauge is central to the whole regional project.

Predictably, since its launch the SGR has been chronically under-utilised and has been running at a loss. Indeed, it made a KSh9.89 billion (c. $9.78 million) loss in its first year of operation, according to Kenya's Transport and Infrastructure Cabinet Secretary, James Macharia. This averaged a monthly loss of KSh750.7 million (c. $7.35 million) in the 2017/18 financial year "largely as a result of low cargo business."[31] The fact is, until and unless the SGR connection to Uganda is accomplished, the only export commodities that may utilise the line from Nairobi to Mombasa are tea, coffee, hides and skins and animal and vegetable oils. None of these are high value and as will be seen, Uganda is now seemingly ambivalent about the SGR project. Additionally, the SGR was designed to have an annual running capacity of c. 22 million tonnes.[32] However, the *Financial Standard* in Nairobi, an investigative newspaper, calculated all of the imports and exports from Kenya, utilising figures from the Kenya National Bureau of Statistics' *Economic Survey 2019*. Assuming that the majority of this freight passed through Mombasa and was thus suitable for carriage on the SGR, the *Financial Standard* gauged whether the heavy investment in the SGR made economic sense. It found that the total freight (both exports and imports) came to less than 15 million tonnes in a year.[33] Note the abovementioned annual capacity of 22 million tonnes.

In fact, in 2018 only 5.039 million tonnes were transported from Mombasa to Nairobi on the SGR: an underutilisation rate of minus 77 percent, while in March 2020 it was announced that in the nine months to September of 2019, the SGR had only transported 3.25 million tonnes of cargo.[34] However, this under-utilisation (to be discussed below) is undoubtedly more given that two different reports issued by the Kenya National Bureau of Statistics (KNBS) have reported different figures for the SGR's revenues. An initial revenue report admitted that the SGR had garnered KShs10 billion (c. $90 million) against its running costs of KSh12 billion. Yet in May 2019, in its *Leading Economic Indicators* report, KNBS revised the figure down by 44 percent. The difference was explained in the tonnage and revenues from the freight side of the SGR. The initial report had indicated that the aforementioned 5.039 million tonnes of cargo had been transported on the SGR railway between January and December 2018; the May report later stated that actually the figure was only 2.898 million tonnes. Note that in 2018 Mombasa's port processed 25.5 million tonnes of imports and 4.1 million tonnes of exports, meaning less than ten percent of freight in and out of Mombasa is utilising the SGR.[35]

Exemplifying the under-utilisation of Mombasa by the SGR is the fact that six cranes installed by CRBC as part of the operations and maintenance contract to handle cargo on the SGR have never worked since they were brought to Kenya at a cost of KSh2 billion (c. $20 million) in 2017.[36] The rail-mounted cranes apparently malfunctioned before breaking down and then being abandoned by CRBC. As a result, SGR operations at the port depend on old rubber-tired gantry cranes and those owned by the Kenya Ports Authority "with little or no explanation on why the multi-billion-shillings investment is sitting idle."[37] That Mombasa can seemingly do without the six cranes, specifically installed to handle SGR traffic, speaks volumes.

It was thus no surprise that at the end of May 2019, it was announced by the Kenya National Bureau of Statistics that the SGR generated sales of $57 million in 2018, against the annual operating cost of $120 million.[38] Increases in prices for usage of the SGR have subsequently been regularly announced due to the railway's under-performance. In November 2018 it was stated that cargo charges for the SGR would rise substantially from January 1, 2019. For transporting a 20-foot container from Mombasa to Nairobi, the charge would increase to KSh51,275 from KSh35,000, a 46.5 percent increase. Larger 40-foot containers would henceforth cost up to KSh71,785, up from the then charge of KSh40,000 (a 79.9 percent increase).[39] In late January, 2019 it was then announced that passenger fares for children on the SGR would increase by 100 percent.[40]

Compounding matters, regional politics also undermines the SGR's viability. After President John Magufuli of Tanzania attaining power in late 2015, Tanzania has increasingly flexed its muscles and has forged good relations with both Rwanda and Uganda. This has led to some adjustments regarding the routing of infrastructure projects, at the expense of Kenya. For instance, in April 2016, Uganda determined that a $4 billion oil pipeline would now not go through Kenya but would traverse Tanzania instead. Rwanda subsequently announced that its own SGR railway would route through Tanzania instead of Kenya. Then in June 2019 Uganda announced that it would spend $205 million in restoring the old railway line linking Kampala to Malaba on the Kenyan border, rather than pursue the planned SGR. This calls into question Phase 2C of the SGR within Kenya. As one report noted, "It is now uncertain whether Uganda's joint plan with Kenya and Rwanda, conceived six years ago, to build a standard gauge railway (SGR) that connects East Africa's land-locked nations to the Kenyan port of Mombasa, will come to fruition."[41] Certainly, this presents a major problem for Kenya as the cost-benefit estimate for the SGR will be now totally different. But in any case, the rationale behind the roll-out of a region-wide SGR was always suspect:

> Two-thirds of the cargo arriving in Dar port stays in Tanzania, most of the rest heads for DRC, Zambia, Burundi and Rwanda. Most Mombasa cargo stops at Nairobi…Thus, given the modest volume of freight destined for landlocked countries, the justification for an EAC-wide SGR cannot be based on facilitating cross-border trade, or its likely increase in volume in the foreseeable future. SGR apologists simply ignore the economics of the huge investments required to capture such little business.[42]

There is no doubt that Kenya's failure to secure an additional loan of $3.6 billion for Phase 2b from Naivasha to Kisumu from the Chinese lender has influenced events. In August 2018, Kenya and China Communications Construction Company (CCCC) agreed on construction of the route, with the plan being that the details would be finalised in early

September during President Kenyatta's visit to Beijing. Instead, the Chinese refused to accede to the request and asked that an entirely new feasibility study, covering the complete route from Mombasa to Kisumu be carried out. Some reports claim that Beijing's stance was in response to President Uhuru Kenyatta's request that half of the financing required for the project be a grant, rather than a loan, due to Kenya's spiralling debt.[43] However, the very serious concerns about the SGR's overall sustainability no doubt played a role. This then further raises questions about the SGR:

> The completion of the SGR line on the Kenyan side is critical to Uganda, Rwanda and South Sudan, which are closely monitoring the performance of both passenger and cargo business on the Mombasa-Nairobi phase that was launched in June 2017. While financing of the multibillion-dollar project has been a major issue amongst the participating countries, the question of the viability of the railway has sparked debate among economists, policy makers and analysts.[44]

In the absence of funding for the last phases of the SGR within Kenya, Nairobi now claims that it will upgrade the existing metre gauge railway from to Malaba. Why users of this route would load their freight onto the SGR in Mombasa, only then to have to unload it at the Naivasha Industrial Park, containing an inland container depot, and then transfer it by road to the final destinations is a mystery. What is apparent however is that despite the regional agreements to construct an integrated SGR, political considerations have derailed the overall scheme, raising serious doubts about its overall future:

> [Th]ere is little or no effective coordination of transport policy in the EAC. Dar es Salaam and Mombasa ports are being upgraded at considerable cost while new ports are planned with huge additional handling capacities. The decision to invest in SG railways was made in the absence of any plans on how to phase the transition from narrow to standard gauge.[45]

This predicament is compounded by other factors, to which we now turn.

Road vs. Rail

Apart from the viability issue, the fact is that any cargo from Mombasa to the capital has to terminate at an inland container depot located in Nairobi's Embakasi area, while the passenger terminus is at Syokimau, c. 20km outside of Nairobi. Both locations can take up to an hour or more to get into central Nairobi. Embakasi's location means that importers must spend between KSh15,000-20,000 just to transport by road their cargo from the depot to industries within Nairobi and its vicinities.[46] This is in addition to the costs highlighted above. Given that road hauliers charge between KSh60,000-80,000 to ferry a 20-foot container from Mombasa's port to the doorstep of the importer in Nairobi, it is no wonder that the SGR faces major competition.

Positive commentators claim that "While the SGR hasn't achieved financial viability, it has made considerable social and economic impact. That includes transferring people and goods faster between Mombasa and Nairobi; cutting environmental pollution and risks; reducing damage to transport infrastructure; and improving safety."[47] On the other hand:

> As SGR edges out trucks in long distance cargo transport, towns and market centres heavily reliant on trucks for business opportunities will be in danger of

> economic downfall as establishments such as hotels, bars, lodgings and garages collapse due to lack of customers. With their ruin, loss of livelihood for shop owners, mechanics, oil recyclers, and waiters will be imminent forcing them to migrate or change profession.[48]

Trucking companies that formerly transported goods between Mombasa and Nairobi are projected to incur $210 million in lost business while the Container Freight Station Association has estimated that their losses will more than $100 million and that 3,200 workers had already lost their jobs.[49]

In late February 2019 the Kenyan Government admitted in a report by the *Joint Technical Committee on the Improvement of Efficiency and Cost-Effectiveness of Transportation of Cargo Using SGR* that the SGR cost twice as much to transport cargo by the SGR than by road and that there were serious implications for Kenya if usage of the rail line did not improve. A report detailing this information noted that:

> While it costs Sh50,000 ($500) to move a 20-foot (ft.) container from the SGR terminus in Miritini to the Inland Container Depot (ICD) in Nairobi, costs associated with the handling and storage of cargo at the port tend to push up this cost by more than 100 per cent, which in effect sees cargo owners part with a total of Sh142,000 ($1,420). This is in comparison to road transport where cargo owners would pay truckers Sh65,000 to have a similar 20-foot container moved from Mombasa to Nairobi…The difference between road and rail for 20-foot and 40-foot containers amount to Sh77,000 ($770) (118 per cent increase) and Sh127,000 ($1,270) (149 per cent increase), respectively.[50]

However, the report goes on to state that:

> A report by the Auditor General's office cited that KPA was under an obligation to feed sufficient cargo to the Chinese-built railway project. Failure to provide the requisite cargo would mean Kenya has gone against a critical clause in the loan agreement of guaranteeing specified "minimum volumes required for consignment." The report indicated that KPA's assets, which include the Mombasa port, could be taken over if the SGR does not generate enough cash to pay off the debts. "The China Exim Bank would become a principle in (over) KPA if Kenya Railways Corporation (KRC) defaults in its obligations and China Exim Bank exercise power over the escrow account security."[51]

The alleged collateralisation of Mombasa is something which we now turn to.

Hambantota 2.0?

In 2017, Sri Lanka formally handed over the port of Hambantota to a Chinese company on a 99-year lease in return for $1.1 billion investment from China Merchants Port Holdings Company. In December 2017, Colombo agreed to grant tax concessions to a joint venture led by China to operate the port and handed over the port to two state-controlled bodies run through the aforementioned corporation.[52] It should be pointed out that debt owed to China is only a small percentage of Sri Lanka's total debt and the deal was not the collateralisation of debt owed to China. More importantly, and relevant to the discussion of the SGR, however, is that the construction of Hambantota port and the overall project (just like the SGR) was not an economically prudent choice. "In fact, there were serious concerns about the necessity of constructing an additional international port in Sri Lanka, particularly one financed through borrowing at commercial rates, and whether such a port would be able to generate enough revenue to break even."[53]

Hambantota port failed to produce sufficient income to repay the loans from China Exim Bank when the payments became outstanding. The wider context is that Sri Lanka rented Hambantota port to China Merchants Port Holdings because of a continuing balance of payment crisis, while external debt servicing (to a variety of lenders) have increased. With the country confronting a critical scarcity of foreign reserves, compounded by debt servicing requirements, Colombo sought to acquire foreign currency inflows. Leasing out the port was a way Sri Lanka could bolster its foreign reserves and thus service some of its debt.

The potential relevance for the SGR in Kenya is two-fold. Firstly, just as with Hambantota, allegations of collateralising a port (in this case, Mombasa) have been made. Secondly, as with Sri Lanka, overall debt accrued by Kenya to various lenders (including China) now threaten the country's economic future. With regard to the first issue, in December 2018 it was reported that Nairobi had utilised Mombasa port as a means to secure the loan from China Exim Bank to build the SGR. This was said to have left "the cash-flush Kenya Ports Authority (KPA) exposed to seizure by the Chinese in the event of a default."[54] As per the report, a leaked document by the Auditor-General's office purportedly showed that the Kenyan government had renounced Mombasa port's sovereign immunity in 2013 as a security for the Chinese loan. In addition, the leaked document stated that the contract was governed by Chinese law and that any arbitration would not take place in a (neutral) third-party location, which is generally standard practice, but at the China International Economic and Trade Arbitration Commission in Beijing.

The Auditor-General himself, Edward Ouko, refused to confirm or deny the authenticity of the "leaked" document, which claimed that China Exim Bank had secured the right to step in as principal shareholder of the KPA in any event of a loan default, establishing an escrow account for the KPA's income and then employing the revenue to cover any repayment shortage. In turn, President Kenyatta, dismissed the allegations as "pure propaganda."[55] To date, no conclusive proof ether way has been presented, although in February 2019 it was announced that the National Assembly's Public Investments Committee would launch an investigation into the circumstances under which the port of Mombasa was allegedly used as collateral. Committee chairman Abdullswamad Nassir was quoted as saying that "We want to know how the agreement was signed and on what basis and how much has already been paid…We want to assure Kenyans that we are on top of this matter."[56]

It is certainly true that China Exim Bank uses sovereign guarantees as a term to secure loans. This is common practice by other bilateral and multilateral financial institutions. In negotiations it is likely that Nairobi used the projected revenue of Mombasa port (as part of the SGR) as a/the key source of income. Revenue generated by the SGR and the concomitant expansion of activities at Mombasa would have been forecasted as the main channel for repayment of the loans. The sovereign guarantee clause would only be exercised if Kenya proved unable to repay the debt, at which point discussions to resolve the problem would commence. Realistically, the Chinese would be unlikely to collateralise the port for two key reasons. The first is financial: taking over a loss-making enterprise such as the Mombasa port would make no sense. Secondly, the political fall-out of "the Chinese" taking ownership of Mombasa would extremely serious and unattractive to the Chinese side.

With regard to the "leak," one analysis poses an interesting take on the situation, given the timing of the disclosure:

> The loan agreement is five years old – why leak the terms now? It may be that Kenya is starting to see China as a threat and is looking for ways to ensure that, if it defaults, it won't have to hand over its assets. Publicly exposing the agreement's conditions could also be an attempt by Kenya to get the United States' attention and solicit better deals with the U.S. and its allies. Most African countries lack leverage on the world stage, but they know who the global rivals are—and, often, how to benefit from their rivalries.[57]

Kenya is indeed an important ally of the United States in Africa and is a key partner in Washington's anti-terror policies, particular vis-à-vis jihadist groups in neighbouring Somalia. Given that SGR itself is embroiled in perpetual controversy and many of its details shrouded in secrecy, speculation of this sort is to be expected. As are stories possibly placed in the Kenyan media seeking to delegitimise the SGR and the Chinese presence in the country.

While the "collateralisation" of Mombasa may be thus put to one side, it is true that an operations contract signed between the CRBC and Kenya Railways with regard to operations and maintenance fees is to the disadvantage of Nairobi. A special purpose operating company, Africa Star Railway Operations Company, was registered in Kenya in May 2017 to operate the SGR. CRBC is the majority shareholder of Africa Star; the other shareholders are unknown as details are unavailable at the Registrar of Companies in Nairobi. However, rumours that the local partners are important government officials in the Ministry of Transport and powerful politicians, would fit with Kenya's mode of malgovernance.[58] Under the arrangement, Kenya Railways must lend Africa Star KSh3.5 billion (c. $3.4 million) interest free and with a liberal grace period. Furthermore, Africa Star does not have to reimburse the loan in hard cash. Rather, a variable service payment structure is to be deployed to cancel out the debt. A special reserve account with KSh3 billion was established as part of the prerequisites to mitigate Africa Star's cash flow, set to increase to KSh4 billion (c. $3.9 million) from 2020. Furthermore, the contract placed punitive clauses compelling operations to begin by June 1, 2017. Delays in starting the line attracted a fine of KSh24.2 million (c. $230,000) a day.[59] Not only did the creation of Africa Star thus relieve CRBC from any liabilities, even if financial accountability can be laid at CRBC the company will not pay more than 10 percent of what it earns as quarterly fixed services fees.[60] Thus remarkably, Kenya became the lender to a Chinese company and bestowed on it starting capital, while nearly all the operational and maintenance risks have been laid at the door of Kenya Railways.

The BRI and Kenya's Debt

Serious questions have been raised with regard to the sustainability of the financing arrangements within the wider BRI for recipient nations and what Beijing's policies will be on debt sustainability.[61] The amount Kenya has received in loans from China between 2013-2017 are presented below (note that the data indicates quantities borrowed after 2000; they do not indicate current debt figures given repayments have been made on such loans):

Table 2: Chinese loans to Kenya, 2000-2017 ($ millions)

Loans	Kenya
2013	32
2014	3730
2015	2570
2016	1095
2017	64
TOTAL	9.8 billion

Source: China Africa Research Initiative 2019.

President Kenyatta's government has contracted a combination of semi-concessional and commercial debt from China, as well as from international markets to build infrastructure. Ironically, after Kenya was anointed as a lower middle-income economy, its access to favourable concessional loans from development lenders ended. China's role in Kenya's infrastructure development began in earnest after the building of the Thika Superhighway (2009-2012) at a cost of c. KSh32 billion (c. $314 million) during the last term of President Mwai Kibaki. As has been noted, the Exim Bank of China then agreed to fund 90 percent of the $3.6 billion (KSh363.60 billion), 485km Mombasa-Nairobi SGR.[62] This has rapidly increased Kenya's total debt stock.

Indeed, debt contracted from Beijing increased to $6.20 billion in December 2018, up from $5.30 billion in 2017. Kenya has, in fact, been taking on around $1 billion every year from China in the last few years. As of June 2017, the Kenya Institute for Public Policy Research and Analysis noted that China accounted for 66.2 percent of Kenya's total bilateral debt, up from 2.2 percent in 2007.[63] The stock of debt from China started rising steadily in 2011 and has grown over time due to continued bilateral engagements in infrastructural developments with Kenya. The share of commercial loans in external debt has risen from Ksh574 million in 2007 (representing 0.1 percent of Kenya's total external debt stock) to Ksh634 billion (c. $6.2 billion) in 2017 (representing 29.4 percent of total external debt). In the July-December 2018 period, Kenya's debt to China accounted for 22 percent of its total foreign debt. Notably, during this period, Nairobi paid KSh12.80 billion (c. $125 million) in interest, compared to only KSh2.63 billion of the principal sum, giving an indication of the lending rates. Critically, Kenya has faced increased debt service obligations after May 2019, as the original five-year grace period extended by the Exim Bank of China for the SGR ended then. The sustainability of BRI debt will be dependent in part on the output and usage of the BRI projects, which as has been mentioned, is in serious doubt.

It should be noted in discussion of Chinese loans to Africa and the so-called "Chinese debt trap" that Beijing's share of Africa's debt, while notable, is not the biggest. A report by the Jubilee Debt Campaign in 2018 found that on average, 20 percent of African government external debt is owed to China and 17 percent of African government external interest payments are made to China while 32 percent of African government external debt was owed to private lenders, and 35 percent to multilateral institutions such as the World Bank and IMF.[64] Reckless lending to Africa by the West, in particular the colossal sums that may be justifiably labelled illegitimate debt, have been far more detrimental to the continent than anything China has managed thus far.

However, whataboutism does not evade some troubling questions about the Kenya-China relationship as it is developing, nor the role of the SGR in pushing Kenya's debt exponentially upwards. The proportion of Kenya's debt owed to China has been steadily increasing; in 2016 15.41 percent of the total amount spent servicing Nairobi's external debt went to China, while in 2017 this rose to 18.53 percent.[65] In other words, China is increasingly becoming a major source of Kenyan debt. This is part of the story of President Kenyatta's reckless approach to taking on foreign debt: in late May, 2019 a pre-budget outlook report by Ernst and Young stated that Kenya's debt to GDP ratio was 55 percent; when President Kenyatta took office in 2013 the debt to GDP ratio was at 42 percent.[66] While there have been overblown accusations about the Chinese "debt diplomacy," taking on such levels of debt to one country, i.e. China, is problematic, whatever country that may be.[67]

Chinese Cold Feet?

The future of the SGR as part of an integrated BRI project delivering modern rail networks to East Africa is, at present, in doubt. Aside from the very real viability issues and the debt questions, the project has of late seemed to have run out of steam. On May 8, 2019 Kenya's Transport and Infrastructure Minister James Macharia and his Ugandan counterpart, Monica Ntege, declared that any further phases of the SGR had been put on hold in favour of upgrading the existing metre gauge network. In other words, after taking on billions of dollars of debt, Kenya is now returning to the cheaper option, as advised back in 2009 in the original feasibility report on a putative East African rail network. Construction of Phase 2A, extending the SGR by 120 km from Nairobi to Naivasha in the Rift Valley is reportedly on course to finish soon and the line be opened in August 2019. However, the next stage, from Naivasha to Kisumu on the Lake Victoria is in serious doubt. The Mombasa-Nairobi line has already cost Kenya $3.2 billion and the Naivasha extension almost $1.5 billion. A further $3.7 billion loan to extend the SGR from Naivasha to Kisumu and the Ugandan border at Malaba was widely expected but has failed to materialise.[68]

Interestingly, after the failure of the talks in Beijing, the Ministry of Transport in Kenya and State House officials began claiming that the Naivasha-Kisumu SGR was not part of the Beijing talks, despite Kisumu having always been key to the project as this would open up Central Africa to usage of Mombasa via the SGR. As one report framed it, "some officials said in confidence that the two parties failed to agree on the conditions for the deal, with questions on viability cropping up."[69] The new claim that a metre gauge railway to Kisumu was now acceptable totally contradicts the report issued by the National Assembly which under the actual heading of "Justification for the Project," stated that the SGR's viability was based on "The railway [being able to] open up the East African region and tap into the transport market extending into eastern DRC and South Sudan."[70] This rationale now seems to have gone out of the window.

As has been noted, Uganda is now increasingly cautious about the SGR project, at least for the time being, with Monica Ntege stating that "We have to wait until Kenya has got somewhere, so that as we do the SGR on the Ugandan side we arrive in Malaba at the same time."[71] This now seems highly unlikely, exacerbated by the news in March 2020 that China's Exim Bank had rejected a Ugandan fresh application for a SGR loan on the grounds that the bank had "sought clarification on the connectivity of Uganda SGR and Kenya SGR since Kenya has slowed down on the progress."[72] This situation returns to the overall question of the financial viability of the SGR. Given that Kenya is primarily an importing country, the SGR makes economic sense only if its landlocked neighbours utilise the line to Mombasa and agree to build SGR lines in their countries and thus link them to Kenya's in an integrated fashion. With Uganda's role in the SGR in doubt and Kenya failing to secure funding for the extension to Kisamu and the Ugandan border, the rationale of the mega-project is moot, given that its freight targets will now be impossible to meet.

Conclusion

The SGR project as rolled out in Kenya has been beset by serious questions as to its viability, corruption allegations, claims that it has furthered Kenya's descent into greater debt, environmental concerns and a reluctance by regional neighbours to buy into the network, which was the whole point of the project from the start. As it stands, the SGR has minimal integration with any export and industrial zones in Kenya, meaning that utilisers of the rail must expend significant amounts on last-mile shipping and logistics. As a result, most import/export operators continue to use Kenya's road networks due to their greater flexibility and dependability.

During the initial stages of growth, investment opportunities as provided by the SGR may be relatively plentiful. This stage is comparatively short-lived however and after the early investment opportunities are expended, capital flows start to respond to the size of markets, economies of scale and comparative advantages, all of which are highly dependent upon integrated infrastructure. It is then that the difference between short-term economic indicators and the long-term needs of a sustainable development strategy becomes evident. Given the structural position of Kenya and the asymmetrical relationship(s) that characterise its political and economic external relationships, careful analysis is required. Samir Amin has demonstrated that a dependency on foreign capital investments causes structural distortions or disarticulation of the economy.[73] The result has been what Issa Shivji terms "structural disarticulation," where Africa exhibits a "disarticulation between the structure of production and the structure of consumption. What is produced is not consumed and what is consumed is not produced."[74]

The SGR exemplifies structural disarticulation writ large: for every 7.8 tonnes of cargo transported from Mombasa inland on the SGR, only 1.01 tonnes is railed back to the port for export. As one report asserted, this has "scuttl[ed] hopes that Kenya would benefit by using the line to export goods. This has fanned fears that the Chinese have turned the railway into a convenient tool to ship in cheap imports."[75] Indeed, long-term trends in the trade profile between China and Kenya, one grossly weighted in China's favour:

Table 3: Chinese imports from and exports to Kenya, 2010-2018 ($ millions unadjusted)

	Kenyan exports to China	Kenyan imports from China
2010	39.21	1786.30
2011	59.69	2368.78
2012	52.41	2788.76
2013	52.78	3217.48
2014	77.03	4930.57
2015	98.74	5914.32
2016	97.14	5587.65
2017	166.82	5034.65
2018	173.96	5197.70

Source: China-Africa Research Initiative 2019.

These imports have long been identified as being detrimental to Kenya's (and indeed Africa's) industrialisation.[76] Claude Ake has convincingly demonstrated that this disarticulation is a major feature of Africa's political economy and a key factor behind the continent's underdevelopment.[77] If the role of the SGR is to intensify such structural features, celebration of the railway needs greater investigation, to say the least.

In any case, China seems to have belatedly recognized that Kenya cannot afford the SGR, given its cost and non-viability, particularly when its neighbours are no longer enthusiastic. The SGR is not clearing its operation and debts servicing costs and the opaque nature of Africa Star raises very curious questions about who is going to benefit. Criticism can be levelled at both the Chinese and Kenyan sides. China, because its lending policies have encouraged elaborate infrastructure projects which are often over-priced and unnecessary. Kenya, because its elites are corrupt and do not care about the country's long-term development, has reached the point where "Corruption in the country has become a culture and it permeates all aspects of life."[78] Ignoring the original feasibility study and ploughing ahead regardless raises questions as to the motives of the policymakers in Nairobi.

In short, the SGR is a grossly capital-intensive enterprise that threatens to leave Kenya with a loss-making and expensive white elephant. As of February 2020, it was reported that for the SGR to break even, it had to generate an average of $15 million per month, but was only generating $8.4 million, far below the target.[79] This is unsurprising given that Kenya's own parliament has stated that "There has been a tendency on the part of the government officials to commission projects without budgetary provisions/finances" and it is clear that major decisions about the SGR were made dependent on matters other than economic rationality.[80] No doubt when the full history of the SGR is written, truth will come out with regard to the role of Kenya's decision-makers and who pocketed what. Undoubtedly, "in most places, the ethnic and neo-patrimonial political culture is behind the controversies [related to the SGR]…This is compounded by a deeply entrenched problem of corruption, rent-seeking, and nepotism."[81] Kenya's ruling elites are not motivated to support major investment decisions such as the SGR on the basis of technical or economic arguments but rather on what they can get out of the situation. Short-termism rules. What is certain however is that the SGR is going to leave ordinary Kenyan citizens—and their children and grandchildren—with a legacy that they could do without.

Postscript

At the time of writing, the coronavirus was likely to make matters much worse, with mass cancellation of ships docking at Mombasa and the suspension of the Madaraka Express passenger service express train between Nairobi and Mombasa.

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Notes

1 Quoted in Spicer 2010, p. 17.
2 Shichor 2018.
3 Perlez and Yufan Huang, 2017.
4 See Alden 2012; Alden and Large 2018; Arkebe Oqubay and Lin 2019; Cheng and Taylor 2017; Conteh-Morgan 2017; Shinn and Eisenman 2012; Sun 2017; Taylor 2006, 2009, and 2011.
5 Hui Lu et al. 2018.
6 Farooq et al. 2018; Lumumba-Kasongo 2019; Wissenbach 2019.
7 Githaiga and Wang Bing, 2019, p. 219.
8 For showcasing Chinese investment, see Wissenbach 2020; for transforming Kenya, see National Economic and Social Council of Kenya 2007.
9 Kenya Railways 2019, p. 2. The Northern Corridor is currently the most important transport channel in East Africa, acting as a gateway to landlocked Burundi, DRC, Rwanda, and South Sudan. The principal Northern Corridor transport network starts in Mombasa. The other transport route serving the Great Lakes region, the Central Corridor, begins at Dar es Salaam.
10 Patterson 1988.
11 Knowles 2016.
12 Miller 1971.
13 Ochieng and Maxon 1992, p. 113.
14 Kareithi 2019.
15 Kareithi 2019.
16 wa Ngugi 2014.
17 The Railway Development Levy was originally proposed to pay the land compensation costs for people evicted to make way for the SGR. Predictably, massive corruption has surrounded this process.
18 Canadian Pacific Consulting Services 2009, p. ii. The four systems being, namely, the Kenya Railways Corporation (KRC), Tanzania Zambia Railway Authority (TAZARA), Tanzania Railways Corporation (TRC), and Uganda Railways Corporation (URC).
19 Canadian Pacific Consulting Services 2009, p. iii.
20 World Bank 2013.
21 World Bank 2013, p. 4.
22 Harper 2017.
23 Republic of Kenya National Assembly 2014, p. 2; emphasis added.
24 Ndii 2018.
25 Mwiti 2018.
26 Njagih 2014.
27 Maalim 2014, pp. 42-43.
28 Olotch 2017.
29 Wafula 2019.
30 Canadian Pacific Consulting Services 2009, p. 20.
31 Mwiti 2018.
32 *Concrete Trends* 2017.
33 Omondi 2019.

34 Munda 2019a; Olingo 2020.
35 Kiruga 2019.
36 Olingo 2019a.
37 Olingo 2019a.
38 *Global Construction Review* 2019.
39 Otieno 2018.
40 Otieno 2019.
41 *East African*, June 9, 2019.
42 Sarokin 2017.
43 Andeso 2018.
44 Anyanzwa 2019.
45 Cooksey 2016, p. 5.
46 Otieno 2018.
47 Warutere 2018.
48 Thuita 2018.
49 Olingo 2018.
50 Kamau and Guguyu 2019.
51 Kamau and Guguyu 2019.
52 Schwarz 2017.
53 Moramudali 2019.
54 Omondi 2018.
55 *China Daily* 2018.
56 Quoted by Owino 2019.
57 Snyder 2019.
58 Snyder 2019.
59 Muli 2019.
60 Okoth 2019a.
61 See Carmody 2020.
62 Munda 2019b.
63 Chemnyongoi and Ochieng 2018, p. 8.
64 Jubilee Debt Campaign 2018.
65 Munda 2019b.
66 Owino 2019.
67 See Onjala 2018.
68 *Railway Gazette* 2019.
69 Okoth 2019b.
70 Republic of Kenya National Assembly 2014, p. 9.
71 *Railway Gazette* 2019.
72 Barigaba 2020.
73 Amin 1974, 1976.
74 Shivji 2009, p. 59.
75 Okoth 2019b.
76 See Kaplinsky 2008.
77 Ake 1981.
78 Osamba 2019, p. 36.
79 Otieno 2020.

80 Republic of Kenya National Assembly 2014, p. 85.
81 Wissenbach and Yuan Wang 2017, p. 4