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## Paving the road ahead - China-Africa co-operation in the infrastructure sector

China has launched a number of initiatives regarding infrastructural development globally, with a specific focus on scaling up infrastructure throughout the African continent. The BRICS New Development Bank and Chinese infrastructure initiatives such as the China-led Africa Growing Together Fund (AGTF) are expected to play a significant role ranging from financing to technology transfer. In January 2015, China and the Africa Union (AU) signed a memorandum of understanding (MoU) on infrastructural development. China and the AU have agreed to put collective effort into improving Africa's infrastructure including high speed railways, aviation, and road highways. Against this background, the Second Forum on China-Africa Cooperation (FOCAC) Summit will be a platform accelerating the co-operation between China and African states at multiple levels in the infrastructure sector. Prior to the Summit, we should scrutinise Sino-African co-operation in infrastructure both in the past and present in order to map out the future relationship and determine what opportunities and challenges lie in the future. This policy brief offers an overview of Chinese engagement in Africa, with a specific focus on East Africa. In recent years, the East African region in particular has been one of the most prominent beneficiaries of this development, with mega projects including Kenya's Port Lamu, the Southern Sudan-Ethiopia Transport (LAPSET) corridor and the construction of a Standard Gauge Railway in Kenya. The brief examines the transport sector and its potential to connect African countries by reducing the costs of moving people and goods, and integrating markets.

### Historic projects and their ramifications

The Chinese built Tazara railway and Angola-Benguela show considerable political economic effort from the Chinese government, and capture lessons learned for future engagement.

#### Tazara railway

Regarding Chinese engagement in Africa's infrastructure sector, no other project stands out more than the TAZARA railway (see map below), also known as the Tanzam or Great Uhuru railway, connecting Tanzania's port of Dar es Salaam with landlocked Zambia's town of New Kapiri Mposhi in the Central Province. The importance of TAZARA is twofold: firstly, the socio-

economic impact of the TAZARA railway is a legacy in itself. The railway provided landlocked Zambia an opportunity to export from its Copperbelt region to ocean ports, without having to utilise the white-minority controlled route leading through Rhodesia (now Zimbabwe) and South Africa. Furthermore, in more than 40 years of operation, the railway has employed more than one million people and provided along-the-line residents' opportunities to trade in local produce, thus increasing income levels. Secondly, by providing financial support (this was, at the time, China's largest foreign-aid project) China positioned itself not only as a supporter of newly independent African countries, but also as an alternative trade and investment partner to traditional European powers. Despite the symbolic status of TAZARA, questions have remained

regarding the management of the railway, such as the upgrading of infrastructure and equipment and the training of professionals who can run the system.

## Angola-Benguela

Another historically important Chinese infrastructure project is the railway link between the port of Lobito and landlocked Luau in eastern Angola, commonly known as the Benguela railway. The Corridor of Lobito consists of the Port of Lobito, the Benguela Railway, the International Airport of Catumbela and the Lobito Oil Refinery. The Benguela railway is one of the important components of the Lobito Corridor, making possible the export of mineral products from Zambia and the Democratic Republic of Congo (DRC), and providing the shortest and cheapest route from these landlocked countries to external markets.

After the civil war ended in 2002, talks between Angola and Zambia revived the idea of a rehabilitated Benguela and the idea was to link Benguela with the TANZAM. After several months of negotiations, and approaching diverse donors, China came on board as the main financier. The Benguela railway was rehabilitated by China Railway Construction Corporation at a cost of US\$ 1.83 billion, as 'infrastructure for oil' deal, and completed in August 2014.

Even though the railway has been completed, other connecting routes such as roads and the port of Lobito have not been re-connected and synchronised. Main roads are still under construction and the port of Lobito is at present only an import harbour. The harbour is expected to function only after the completion of another railway connection to Zambia. On-going rehabilitation and modernisation of the railway offers the potential for a wide range of business opportunities, with the Southern African Development Community (SADC) acknowledging it as a top regional priority. A comprehensive approach by the three governments is required, including joint planning, implementation, co-ordination and monitoring of corridor infrastructure projects.

## New developments in Africa's infrastructure sectors: the case of East Africa

While the above-mentioned projects serve as a reminder of what is possible in terms of Africa's infrastructure development, the current situation of infrastructure development across the continent far outstretches these historical projects. Advances in technology, access to larger volumes of financing, and ultimately the drive of foreign companies to invest in Africa has sparked a new series of events in Africa's infrastructure development. Chinese companies, both state and privately-owned, have rapidly penetrated the infrastructure sector (see Box 1), ranging from telecommunications, transport, construction, power plants, to waste disposal and port refurbishment.

The main projects that stand out are the LAPSSET project, which consists of three major transport infrastructure components, railway, highway and pipeline and the standard gauge railway (SGR) connecting Mombasa and Nairobi.

## LAPSSET Project

The LAPSSET project was originally conceived in the late 1970s; however it is not until recently (2007) that the project took off. Since the project involves various stakeholders, including respective governments and their agencies, bureaucratic hurdles have delayed the project; also a lack of funds have been responsible for the stalling of the project.

The aim of the project is to connect major East African centres to remote connecting sub-regions. The project would open up the countries' largely underdeveloped northern regions and provide landlocked neighbouring South Sudan and Ethiopia with a range of rail lines, airports and road networks. As a result, the linkages will potentially decrease over-dependence on Kenya's port of Mombasa. The main infrastructure will consist of: a port at Manda Bay, Lamu; an SGR line to Juba (South Sudan) and Addis Ababa (Ethiopia); road networks; oil pipelines (Southern Sudan and Ethiopia); an oil refinery at Bargoni (Kenya); three airports - Lokichogio Airport, located in Turkana County in north-

### Box 1: Chinese enterprises and their projects in African infrastructure

All of the projects are done by the three most dominant Chinese companies who hold the largest percentage of all infrastructure projects across Africa.

#### China Communication Construction Company (CCCC)

- Nouakchott Port of Friendship (Mauritania) deep-sea port: completed
- Lamu Port (Kenya) deep-sea port: in progress

#### China Road and Bridge Corporation (CRBC)

- Nairobi Southern Bypass (Kenya) road construction: in progress
- Cabinda University (Angola) university construction: in progress
- No. 6 National Road Bamako-Sekou Project (Mali) road construction: in progress
- Bata Harbour (Equatorial Guinea) harbour expansion: in progress
- Loutete Cement Plant Project (Congo-Brazzaville): completed in 2004
- Addis Ababa Ring Road Project (Ethiopia): completed in 2004

#### Sinohydro

- Grand Poubara Dam (Gabon) dam construction: in progress
- Bui Hydropower Station (Ghana): completed in 2013
- Kuito Water Supply (Angola): completed in 2010
- Bougous Dam (Algeria) provide drinking water: completed in 2010

**Map 1: East African Regional infrastructure Projects**

Source: Africa Confidential, 2014

western Kenya, bordering South Sudan and Uganda; Isiolo Airport in central Kenya, and Manda Lamu Airport in the port city of Lamu - and three resort cities (Lamu, Isiolo and Lake Turkana). These main seven components will be constructed by various companies, including a consortium of companies led by China Communications Construction Company (CCCC). In 2013, CCCC was awarded a tender for the construction of three of the total 32 berths worth US\$ 484 million (Mwangasha, 2015). Once completed, Lamu port will have a greater volume capacity than the port of Mombasa, currently the major port of Kenya. The construction of the three berths was expected to be completed already in 2013. However, while large projects like this bear with them high costs, the project has from the outset been characterised by fluctuating estimates of final cost, ranging from US\$ 22 billion to US\$ 29 billion according to Lamu Port Southern Sudan Transport Development Authority in charge of the project management.

The project demonstrates potential as an infrastructure market, with 70 sub-construction projects, encouraging not only Chinese actors but also other investors. However, insufficient funding for the completion of the entire project is one of the biggest challenges facing the host countries. Even though Kenya has played a leading role in the project, it is important that co-operation is fostered among the various stakeholders since they will all benefit from the corridor.

#### Standard Gauge Railway (SGR) Mombasa-Nairobi

Another significant African railway development is the standard gauge railway connecting Mombasa and Nairobi (phase I), with the aim of connecting Kenya with neighbouring Uganda,

Rwanda and Burundi (phase II) (see map 1). The tender for the construction of phase I was awarded to China Roads and Bridges Corporation (CRBC) with China Exim Bank covering 90 per cent of total costs with the remaining 10 per cent being covered by the Kenyan government.

The railway is another flagship project under the Kenya Vision 2030 development agenda, aiming to integrate and interconnect transport operations across the borders, reduce travel costs and benefit Kenya and neighbouring countries economies in terms of direct and indirect job creation. Nevertheless, the project has been beset with certain difficulties. The project has been

under scrutiny due to allegations of CRBC not hiring local people to work on the project nor sourcing materials locally, thus denying the local businesses opportunity to cash in on the projects lucrative finances. Additionally, Kenyan engineers protested the contractor's decision to use Chinese design standards instead of British ones, which they are used to, thus resulting in protests which ultimately put the project on hold in March 2015. The various parties have managed to agree on the standard set, with construction resuming shortly after, resulting in the CRBC's May 2015 declaration of satisfaction with the progress despite the short pause (Mwende, 2015).

Another issue relating to the project are the environmental impacts. According to project maps, the railway line will cross two national parks, the Tsavo National Park in southern Kenya, and the Nairobi National Park - the first one of its kind established in Kenya in 1946 and located just 7 km south of Nairobi. Kenya's game parks and abundant wildlife draw tourists from across the world; thus, ideally there should be no transport infrastructure in a national park. The Kenyan government and the representatives of the Kenyan Wildlife Service have managed to strike a deal with the Chinese contractors that would provide residents of Nairobi the much needed infrastructure without altering the 117 km<sup>2</sup> boundaries of the park, by walling off and elevating the rail line above ground so animals can safely pass underneath. Wildlife protection needs to be balanced with social development, in a country where 18 out of 46 million live in extreme poverty (under US\$ 1.25 per day) and where transportation infrastructure is limited to non-existent. Although at first reluctant, as it would increase construction costs, the Chinese contractors have agreed to this alteration of the railway route.

## **Opportunities and challenges for Africa's future infrastructure development with China**

Chinese engagement in Africa's infrastructure development has over the past 10 years increased significantly. With funding readily available from a number of sources, such as China Exim Bank and China Development Bank, Chinese companies are well equipped and in a strategic position to invest in Africa. Chinese companies have become competitive and can complete the projects within a relatively short time compared to other competitors. Owing to these companies' versatility in construction, ranging from civil construction to hydropower dams, railway lines and airports, as well as surplus domestic capacity, Chinese companies need to redirect so as to invest in Africa and are increasingly becoming the favoured choice of many African governments that see infrastructure development as key to Africa's sustainable development.

There are a number of issues, however, relating to their operations in Africa, including accusations of limited to no localised benefits, environmental degradation and quality issues regarding completed projects. These are issues that Chinese companies as well as African governments and local civil society should scrutinise if the projects in question are to benefit Africa in the long run.

Nevertheless, Chinese actors have also become familiar with the global standards by obtaining tenders from international and regional organisations. Chinese actors' approachability, availability of funds, improved conduct in terms of Chinese companies corporate social responsibility practices, as well as repeated commitment to Africa's development plans as outlined by FOCAC, warrant the conclusion that China can be a viable option for Africa's infrastructure development.

### **Concluding remarks**

The trans-national nature of the mega-projects discussed above, coupled with the multiple actors involved, entail that African governments require a holistic approach toward implementation. Lack of cross-boundary co-ordination can lead to problems. For example, at the time of writing in October 2015, Ethiopia has signed an agreement for an oil pipeline with Djibouti which could create problems by interfering with Ethiopia's commitment to the LAPSSSET Project which might no longer be seen as a priority. Considering South Sudan's ongoing political conflict, the fiscal burden could directly fall on Kenya. Such co-ordination is crucial when considering the unprecedented transformation of infrastructure development which such projects can bring about.

Additionally, issues of affordability within the national budget and other operational challenges should also be examined. Considering that a number of countries do not have effective

domestic connections, due to various issues such as persistent conflict lack of funding, and operational and management challenges, China's engagement in Africa's infrastructure development is significant. China's aspiration to contribute to the region's development should be combined with African countries' aspirations regarding development. African host governments need to be proactive in planning how these new infrastructure projects fit into the overall growth strategy of the country, they need to allocate funds to projects with high returns and be aware of how these projects can be utilised by local stakeholders.

### **Recommendations**

- In order to improve regional infrastructure, partnering with China can contribute to acquiring adequate capacity for longer term planning and investment. However, cooperation and collaboration among African countries is required in the first place. Also, African countries should ensure that projects are financially viable.
- Integrated project design which includes social responses is required. Governments need to be aware of the impact of projects on the micro-level. Indigenous people's livelihoods including loss of land, dislocation, and changes in traditional livelihood systems should be kept in mind from the beginning of the project.

**Nuša Tukić**

*Research Analyst  
Centre for Chinese Studies  
Stellenbosch University*



**Yeजू Kim**

*Research Fellow  
Centre for Chinese Studies  
Stellenbosch University*



### **Contact Us**

Centre for Chinese Studies  
Stellenbosch University  
Private Bag X1  
Matieland 7602  
South Africa

Tel: +27 21 808 2840  
Fax: +27 21 808 2841  
Email: [ccsinfo@sun.ac.za](mailto:ccsinfo@sun.ac.za)  
Web: [www.sun.ac.za/ccs](http://www.sun.ac.za/ccs)  
Twitter: [CCS\\_STELL](https://twitter.com/CCS_STELL)

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