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The Hunan Model: China's Zone for the China–Africa Future

LAUREN JOHNSTON

African perspectives
Global insights

Abstract

From the mid-1990s onward, for almost two decades, China's relationship with Africa was characterised by sky-high growth rates in a handful of oil-exporting countries, including Angola and Sudan. Under this 'Angola model', China exchanged financing for and construction of large-scale infrastructure for resources. Under China's Belt and Road Initiative, since 2013, ties have selectively been diversified. Wider availability of finance means that China is now the continent's leading infrastructure services provider, and that some African countries are precariously exposed to external debt. This paper finds that an emerging 'Hunan model', named after the central-south Chinese province, builds upon Hunan's comparative strengths in agriculture, construction machinery, and mining and metallurgy, as well as its recent role in poverty eradication in China. This may be used to take China-Africa economic ties to a next phase. Via a study of the policies and priorities forging it, this paper explores the notion of a Hunan model. Having outlined this proposed Hunan model, the paper offers policy conclusions on how African countries can make the most of such a model for their own development.

Introduction: From an Angola to a Hunan model

*'This is the tenth time I have come to Hunan, and every time I come to Hunan, there are new surprises. Mauritius's sugar exports are booming and are expected to grow significantly this year. We hope that products such as pineapple and tuna will enter the Chinese market through Hunan. There is an old saying in China: 'A hundred things are better than a hundred things to see.' Chinese entrepreneurs are welcome to visit Mauritius more and jointly strengthen economic and trade cooperation between Mauritius and China.'*¹

Hans Nibshan Seesaghur, China Chief Representative at the Mauritius Economic Development Board Representative Office, Shanghai (July 2022)

Early in the 2000s China's Export-Import Bank (China Exim) signed a \$2-billion loan with Angola to support its post-war reconstruction.² For China Exim, collateral for the deal was access to Angola's oil. China's then fast-growing and energy-intensive economy had become a net importer of oil in the early 1990s. Since 2004, the year of the first loan, Chinese policy banks have lent some \$60 billion to Angola based primarily on a repayment trajectory in the form of commodities, ie, oil exports to China.³ Replicated across many other resource-rich countries, this framework of Chinese development finance is known as the 'Angola model'.⁴

While it has been formative in transforming the aggregate economic scale of China-Africa economic relations, the Angola model has mostly failed resource-poor Africa. For example, in recent decades, when the continent's resource-poor economies were systematically under-exporting to China, its resource-rich economies were over-exporting to China.⁵ On average, resource-poor economies were also disproportionately cut off from some of China's fundamental development policies for Africa, such as its 'least developed country' trade policies.⁶

In 2006, South African president Thabo Mbeki warned: 'If Africa continues to just export raw materials to China while importing Chinese manufactured goods, the African continent could be condemned to underdevelopment.'⁷ In 2011, South African president Jacob Zuma asked an audience: 'How do we trade with China in a way that benefits us as well?'⁸ While

1 *"Listen! What 14 African Envoys in China Want to Say to Hunan People", Hunan Daily, July 29, 2022.*

2 Claudio Silva, "How Angola's Honeymoon with China Came to an End", *The Africa Report*, May 10, 2022.

3 Frederico Luís Cambóias Roxo, "Assessing the Angola Model Finance: The Case of Angola" (MA thesis, University Institute of Lisbon, 2022).

4 Łukasz Jureńczyk, "Analysing China's 'Angola Model': A Pattern for Chinese Involvement in Africa?", *The Strategic Review for Southern Africa* 42, no. 2 (2020): 43-61.

5 Lauren Johnston, Stephen L Morgan and Yuesheng Wang, "The Gravity of China's African Export Promise", *The World Economy* 38, no. 6 (2015): 913-934.

6 Johnston, Morgan and Wang, "The Gravity of China's", 913-934.

7 Brigitte Weldlich, "The Chinese Charm Offensive", *The Namibian*, February 25, 2007.

8 Cited in Johnston, Morgan and Wang, "The Gravity of China's", 914.

addressing a seminar in South Africa to mark the 10th anniversary of the Forum on China and Africa Cooperation (FOCAC) in 2010, then Chinese vice-president Xi Jinping said China would ‘enlarge the scale of China–Africa trade and optimise the trade structure’, while promising that China would seek opportunities to increase its imports.⁹ China’s inaugural official white paper (of the same year) on economic ties between China and Africa formally recognised the need to optimise the level and composition of trade.¹⁰ The 10th anniversary of the launch of China’s flagship Belt and Road Initiative (BRI) falls in 2023, and now-President Xi will visit South Africa for a multilateral event in August. The steady emergence of a new model of China–Africa economic relations, via China’s Hunan province, may be on Xi’s agenda for discussions this year.

While addressing a seminar in South Africa to mark the 10th anniversary of FOCAC in 2010, then Chinese vice-president Xi Jinping said China would ‘enlarge the scale of China–Africa trade and optimise the trade structure’, while promising that China would seek opportunities to increase its imports

In recent years, moreover, the COVID-19 pandemic has ravaged global supply chains and stalled economic activity. Economic growth and turnover that otherwise could have generated funds to repay accumulated sovereign debts to China and other creditors have been frozen. Policies flowing from a recognition of the importance of climate change are increasingly reshaping energy markets and calling into question the scale of the ‘Angola model’ trajectory going forward. They are also bringing uncertainty to agricultural supply and markets.¹¹ Food supply in Africa is under pressure thanks to rapid population growth. In the wake of COVID-19’s impact, Yao Guimei, director of the South African Research Centre, expressed a fear in mid-2022 that ‘low growth, high debt and underdevelopment in Africa’s economic and social fields have become the new normal’.¹²

In April 2023 the World Bank predicted overall annual growth for the continent of 3.2%, down from 3.1% in 2022, and just above the sub-Saharan predicted population growth rate of 2.5%.¹³ In 2018, during his second five-year term as general secretary of the Chinese

9 Cited in Johnston, Morgan and Wang, “The Gravity of China’s”, 914. At the China and SADC Business Forum in June 2011, Chinese Vice-Premier Wang Qishan said China would increase imports from SADC member states to strengthen mutually beneficial trade, Embassy of the People’s Republic of China in Namibia, June 4, 2011.

10 People’s Republic of China, State Council Information Office, “White Paper: China-Africa Economic and Trade Cooperation” (PRC SCIO, Beijing, 2010).

11 World Bank, “Putting Africans at the Heart of Food Security and Climate Change”, October 17, 2022.

12 “A New Chapter of China-Africa Economic and Trade Cooperation Has Been Drawn Up”, *International Business Daily*, August 2, 2022.

13 International Monetary Fund, “Transcript of the April 2023 African Development Press Briefing”, April 14, 2023; Dan Ikpoyi and Chinedu Asadu, “Fueled by Rapid Growth in Africa, Global Population Hits 8 Billion”, *Christian Science Monitor*, November 15, 2022.

Communist Party, Xi proposed a China-Africa economic and trade exhibition.¹⁴ The inaugural expo took place in 2019 in Changsha, Hunan province, and is formally known as the China–Africa Economic and Trade Exhibition (CAETE). Changsha has since become the biennial event’s permanent home. Visitors to the event can find African products, brands and dedicated showcases, which in the past included a coffee, nut and cocoa exhibition area and others displaying African exports and potential exports. Multiple match-making opportunities and events are also held to bring together potential business partners in China and Africa. However, some African participants interviewed for this study claimed that there was a scale mismatch in representation, with most African firms being small and medium-sized enterprises (SMEs) and many Chinese firms being conglomerate-level state-owned enterprises.

In 2018 Xi proposed a China-Africa economic and trade exhibition. The inaugural expo took place in 2019 in Changsha, Hunan province, and is formally known as the China–Africa Economic and Trade Exhibition

Speaking via video at the 2021 FOCAC, hosted by Senegal, Xi delivered a keynote titled ‘Together in the same boat, carry forward the past and usher in the future, and join hands to build a China–Africa community with a shared future in the New Era.’¹⁵ In the speech Xi said that, in line with the inaugural three-year plan of the 2035 Vision for China–Africa Cooperation, China would cooperate closely with African countries to jointly implement the ‘nine programmes’ (Table 1).¹⁶ These programmes embody the implementation-focused Dakar Action Plan (202–2024)¹⁷ and act as a guide to the official China-Africa trajectory.

14 Yu Li, “Basic Facts About the 2nd China-Africa Economic and Trade Expo”, *CGTN*, September 26, 2021; Embassy of the People’s Republic of China in Namibia, “China to Increase Imports”. For an introduction to FOCAC, see Anshan Li et al., “FOCAC Twelve Years Later: Achievements, Challenges and the Way Forward” (Discussion Paper 74, Nordiska Afrikainstitutet, Uppsala, 2012).

15 Shujing Li and Lihan Tang, “Hunan Province’s High-Level Construction of a Pilot Zone for In-Depth Economic and Trade Cooperation Between China and Africa”, *People’s Daily*, December 1, 2022.

16 People’s Republic of China, Ministry of Foreign Affairs, “Xi Jinping Attends the Opening Ceremony of the Eighth Ministerial Conference of the Forum on China-Africa Cooperation and Delivers a Keynote Speech”, November 29, 2021; “Nine Programs to Further Strengthen Africa-China Practical Cooperation, African Experts, Scholars Say”, *Xinhuanet*, November 30, 2021.

17 Dakar being the host city of FOCAC 2021.

TABLE 1 'NINE PROGRAMMES' OF THE FIRST THREE-YEAR PLAN OF THE 2035 VISION FOR CHINA-AFRICA COOPERATION

Programme	China undertakes to:
1. Medical cooperation	<ul style="list-style-type: none"> • Provide vaccine doses to Africa, of which about 60% will be donated and the rest co-produced in Africa • Implement 10 medical/health projects and send 1 500 medical personnel and public health experts to Africa
2. Poverty reduction and agricultural development	<ul style="list-style-type: none"> • Establish 10 poverty reduction and agricultural projects and send 500 agricultural experts • Set up joint China-Africa centres for agrotechnology exchange, demonstration and training in China • Encourage Chinese institutions and companies to build demonstration villages in Africa • Support the Alliance of Chinese Companies in Africa for Corporate Social Responsibilities
3. Trade promotion	<ul style="list-style-type: none"> • Open 'green lanes' for agricultural exports, speed up inspection and quarantine procedures, and increase the range of products enjoying zero-tariff treatment for least developed countries (LDCs) with a goal of total imports of \$300 billion from Africa by 2024 • Provide \$10 billion in trade finance • Build a pioneering zone in China for in-depth China-Africa trade and economic cooperation and a China-Africa industrial park for BRI cooperation • Undertake 10 connectivity projects, form an expert group on economic cooperation with the African Continental Free Trade Area (AfCFTA) Secretariat, and continue to support AfCFTA's development
4. Investment promotion	<ul style="list-style-type: none"> • Encourage Chinese businesses to invest at least \$10 billion by 2024 and establish a platform for China-Africa private investment promotion • Undertake 10 industrialisation and employment promotion projects for Africa, provide credit facilities of \$10 billion to African financial institutions, support the development of African SMEs on a priority basis, and establish a China-Africa cross-border RMB centre • Exempt African LDCs from debt incurred through interest-free Chinese government loans due by the end of 2021
5. Digital innovation	<ul style="list-style-type: none"> • Undertake 10 digital economy projects, set up centres for China-Africa cooperation on satellite remote-sensing application, and support the development of joint laboratories, partner institutes, and scientific and technological innovation cooperation bases • Cooperate to expand Silk Road e-commerce cooperation, hold online shopping festivals featuring quality African products and tourism e-commerce promotion activities, and launch a campaign to market 100 African stores and 1 000 African products on e-commerce platforms
6. Green development	<ul style="list-style-type: none"> • Undertake 10 green development, environmental protection and climate action projects for Africa, support development of the 'Great Green Wall' and build centres of excellence on low-carbon development and climate change adaptation in Africa

7. Capacity building	<ul style="list-style-type: none"> • Build or upgrade 10 schools in Africa, invite 10 000 high-level African professionals to seminars and workshops and implement 'Future of Africa' (a project for China-Africa cooperation on vocational education) • Launch an 'employment through training' scheme for African students in China • Continue to work with African countries to set up Luban workshops, a Chinese-supported vocational training project, and encourage Chinese companies in Africa to create at least 800 000 local jobs
8. Cultural and people-to-people exchange	<ul style="list-style-type: none"> • Support all African countries with diplomatic ties with China to ensure approved destinations for Chinese tourist groups • Hold African film festivals in China and Chinese film festivals in Africa, as well as China-Africa youth and women's service forums
9. Peace and security	<ul style="list-style-type: none"> • Undertake 10 peace and security projects; continue to deliver military assistance to the AU, support African countries' efforts to independently maintain regional security and fight terrorism, and conduct joint exercises and on-site training between Chinese and African peacekeeping troops • Encourage cooperation in small arms and light weapons control

Source: People's Republic of China, Consulate-General in Lagos, "Africa Will Benefit from Nine Programs", December 6, 2021

Building on its role as the CAETE host, Hunan has since been called upon to support the realisation of the nine FOCAC programmes. Given the importance, for example, of rural development and, potentially, agricultural exports in realising some of those goals, particularly relating to poverty alleviation, this aligns with the province's past and present as a key trade hub. Its network of rivers and tributaries means that Hunan has been home to long-standing human settlements, akin to the Nile basin in Africa.¹⁸ Ceramics salvaged from the Indian Ocean have been identified as being from kilns in Changsha, the capital of Hunan, dating from the Tang Dynasty (618–907).¹⁹ Changsha itself was a Japanese foreign treaty port (1937–1945). Hunan is the home province not only of the father of China's 'super hybrid rice', Yuan Longping, but also of the current head of the UN Food and Agricultural Organization (FAO), Qu Dongyu.²⁰

According to Li Dianxun, a vice-governor of Hunan province, 'Hunan is becoming a new window for local economic and trade cooperation with Africa.'²¹ In addition to the province's broader plans around the Hunan Pilot Free Trade Zone, it has two Africa-specific national-level agendas – the China-Africa Economic and Trade Expo and the China-Africa Economic and Trade In-depth Cooperation Pilot Zone. The core goal is to construct a high-

18 David Cohen, "The Beginnings of Agriculture in China: A Multiregional View", *Current Anthropology* 52, no. 4 (2011): 273–293.

19 Cohen, "The Beginnings of Agriculture".

20 Robert Nield, *China's Foreign Places: The Foreign Presence in China in the Treaty Port Era 1840–1943* (Hong Kong: Hong Kong University Press, 2015); Guo-hui Ma and Long-ping Yuan, "Hybrid Rice Achievements, Development and Prospect in China", *Journal of Integrative Agriculture* 14, no. 2 (2015): 197–205; China International Development Cooperation Agency, "Address by CIDCA Chairman Luo Zhaohui at the International Forum on Hybrid Rice Assistance and Global Food Security", November 15, 2022; Food and Agriculture Organization, "Director-General Qu Dongyu: Biography", <https://www.fao.org/director-general/biography/en/>.

21 Lu Yi, "China (Hunan)-Africa Economic and Trade Cooperation Matchmaking Meeting held in Changsha, Signed 14 Projects on the Spot", *China News* (Hunan), July 28, 2022.

level open platform and to comprehensively implement the Nine Programmes with Africa. That in turn aims to deepen investment and trade and promote agricultural and medical cooperation and tourism, and so foster mutual prosperity.²²

More tangible policies and institutions in the Cooperation Pilot Zone include the China–Africa Cross-Border Renminbi (RMB) Centre and a China–Africa Economic and Trade Cooperation Promotion Innovation Demonstration Park. According to Tanzania’s ambassador to China, Mbelwa Kairuki, ‘The China-Africa Economic and Trade Cooperation Pilot Zone has set a new model for exploring cooperation opportunities between Chinese and African enterprises.’²³ It is also deepening connections between China and the AfCFTA and between Hunan and the BRI, which 52 African countries have formally endorsed.²⁴

Consistent with the view that ‘[the] Chinese, unlike others, did not just make pledges, they delivered’, these goals are being backed by resources.²⁵ Established China–Africa funding sources include the China Development Bank and China Exim, alongside the China–Africa Development Fund and the China–Africa Production Capacity Cooperation Fund. These have been brought into play to promote the diversification of investment entities in Africa. A China–Africa Agricultural Trade and Industry Development Fund is also under consideration to inject funds into an elevated African non-resources product chain.²⁶

In the wake of not only the COVID-19 pandemic but also the earlier era of rapid if inconsistent growth in China–Africa economic ties under the ‘Angola model’, this paper explores the emergence of what is here called the ‘Hunan model’ of China–Africa economic relations. What is CAETE, and what is happening in and planned for Changsha’s China–Africa deep economic and trade cooperation pioneer zone? Why Hunan province? What does China stand to gain? Analysis consisted mostly of desk research of Chinese documents, and hence this paper begins with a relatively static outlay of the agenda, starting with Hunan’s geography and political economy. It then elaborates the policy details and arrangements of the zone and other China–Africa economic activities and agendas in Hunan. Policy priorities for Africa in that context are also detailed. It is hoped that this will help to foster greater intra-African and Africa–China dialogue and transparency among policymakers, entrepreneurs and scholars on opportunities and risks in this next phase of ties between China and African nations.

22 Yi, “China (Hunan)-Africa Economic”.

23 Yi, “China (Hunan)-Africa Economic”.

24 Xuewu Gu et al, *China’s Engagement in Africa: Activities, Effects and Trends* (London: Centre for Global Studies, 2022).

25 Anver Versi, “What Is China’s Game in Africa?”, *New Africa*, August 8, 2017.

26 Huang Tingting, Zhou Yuegui and Deng Mengfei, “China-Africa Economic and Trade Cooperation: Hunan Takes the Lead in Experimentation”, *Hunan Daily*, April 3, 2022.

Hunan: The basics

'Hunan connects east and west, connects north and south, connects rivers and seas.'²⁷

Geography and population

Hunan province is situated in south-central China in the middle reaches of the Yangtze River watershed (Figure 1). The name 'Hu-Nan' translates to 'south of the lake', referring to Dongting Lake in the province's northeast. Covering 2 691km², Dongting is China's second-largest freshwater lake and is fed by the Yangtze-bound Xiang River, Hunan's largest.²⁸

Figure 1 Hunan province sectors



Source: <https://en.wikipedia.org/wiki/Hunan>

Hunan covers an area of 212 000 km², placing it between Senegal and Uganda in terms of geographic size. Some 30% of the province is mountainous, with most situated at an altitude of 100–800m. The topography is characterised by wide areas of low hills, basins and

27 Huang Tingting and Hong Xiaoyi, "After the New Epidemic Prevention and Control Optimization Measures, the Hunan Business Group Went to Africa for the First Time", *Huasheng Online*, December 9, 2022.

28 Just as the province to Hunan and Dongting Lake Plain's north is Hubei province, meaning 'north of the lake'.

valleys. There are just under 5 million ha of grain with an annual grain output target of at least 60 billion catties annually, where one cattie is equal to some 7 700 grains, alongside a targeted minimum pig supply of at least 57 million.²⁹ In line with the national food security imperative, the agriculture sector has grown rapidly most recently, with 9.2% year-on-year growth in 2021. The province is landlocked, which means its economy today is less developed and internationalised than China's powerhouse coastal provinces.³⁰

There are just under 5 million ha of grain, alongside a targeted minimum pig supply of at least 57 million

About 70 million people live in Hunan, which means its population is bigger than that of all but five African countries: Nigeria, Ethiopia, Egypt, Tanzania and the Democratic Republic of Congo (DRC). With a population density of some 314 people per square kilometre,³¹ only Mauritius (623), Rwanda (551), Burundi (463) and Comoros (467) have higher population densities than Hunan.³²

Official records suggest human activity has been evident in the area from about 50 000–100 000 years ago.³³ Paddy ruins discovered in a cave-rich area in Daoxian county are the world's oldest, dating back 15 000 years. During the Qing Dynasty (17th to 20th centuries), Changsha prospered thanks to its waterways, making it home to China's main rice and freshwater-fish markets. Amid geo-economic tensions between China and large-scale agricultural exporters such as the US and Australia and alongside climatic and supply chain uncertainty thanks to the pandemic, China's own agricultural productivity potential, led by provinces such as Hunan, has been prioritised.

In the 20th century Hunan also had an important political economy role. The 1903 Treaty of Shanghai between China's Qing dynasty and Japan opened Changsha to foreign trade. The terms, however, favoured foreign – Western and Japanese – interests. As a result, Hunan native Mao Zedong and others founded the Xinmin Institute in Changsha in 1918, and set up a branch of the Changsha Socialist Youth League and Changsha Communist Group in 1920. The Chinese Communist Party held its first national conference in 1921, with a Hunan branch founded earlier that year.

29 Tingting and Xiaoyi, "After the New Epidemic Prevention".

30 Yulan Liu et al., "Cooperation Between Hunan and Africa Against the Background of 'One Belt and One Road'", *Modern Business Magazine*, March 16, 2023.

31 People's Republic of China, Hunan Provincial Government, *2020 Hunan Fact Book: Geography and Population* (Changsha: Provincial Government of Hunan, 2020).

32 World Bank, "Population Density (people per sq. km of land area)", <https://data.worldbank.org/indicator/EN.POP.DNST>.

33 People's Republic of China, Hunan Provincial Government, "About Hunan: History of Hunan", <http://www.enghunan.gov.cn/hneng/AboutHunan/HistoryCulture/HistoryHunan/index.html>.

Economy

Soon after China's outbound turn toward 'reform and opening' from late 1978, part of Hunan's role was signalled by four of its higher education institutes being approved as national universities of the State Council. These were Xiangtan University,³⁴ Hunan University, Central South Institute of Mining and Metallurgy (now the Central South University) and the Changsha Institute of Technology (now the National University of Defence Technology). That selection also points to Hunan's mining and technological importance, alongside its centrality to China's agricultural productivity.

Hunan's gross state product in 2021 was the ninth-biggest in China at RMB³⁵ 4.61 billion (about \$725 billion), showing a year-on-year increase of 7.7% (or 5.7% at constant prices).³⁶ Hunan's tertiary, manufacturing and primary sectors comprise 50%, 40% and 10% of state product respectively. It is one of China's mineral-rich provinces and has many related mining industries. The province's exploitable mineral deposits include cadmium, coal, gold, lithium, manganese, tin, uranium and zinc. In 2007, China's State Council designated three Hunan cities – Changsha, Zhuzhou and Xiangtan – as comprehensive experimental zones for constructing a resource-saving and environment-friendly society.

The importance of Hunan's agricultural sector to the 1980s' era of opening and reform meant that it played a pioneering role in agricultural pricing reforms. Today, Hunan's rice and pork outputs are at or near the top of the country's provincial output rankings. Vegetables, tea, fruit and Chinese medicinal products are also major provincial outputs. Hunan has sophisticated upstream and downstream agro-industries in areas such as cultivation, harvesting and processing technology, and has established five provincial-level innovation teams. These teams are tasked with using modern agricultural technology to improve rice, live pigs, cotton, vegetable and citrus crop productivity.³⁷

To further modernise the agriculture sector and to preserve if not elevate agricultural productivity, the Hunan Intelligent Agricultural Machinery Innovation Research and Development Centre was founded in 2021. Among its main functions are securing grain supply and supply of other key agricultural products and promoting advanced agriculture-related manufacturing. The Intelligent Agriculture Centre promotes research and development, manufacturing of agricultural machinery and equipment, government-enterprise communication and cooperation with schools and farms. It is also aimed at deepening integration of agricultural machinery and agronomy and strengthening related industrial chains. Hunan's Yuelu Mountain Laboratory focuses on seeds and seed-related innovation, and relevant training for farmers. The Zoomlion Yuanjiang Smart Agriculture

34 A university in the hometown of Mao Zedong with established mathematics and science expertise.

35 Currency code for the Chinese renminbi.

36 People's Republic of China, State Council Information Office, "Hunan Holds a Press Conference on Economic and Social Development in 2021", January 24, 2022; Wang Yizheng and Liu Fangming, "A Press Conference, Seeing a New Hunan that 'Takes the Lead'", Rednet (Hunan), August 6, 2022.

37 Hong Kong Trade Development Council, "Hunan: Fertile Lands for Agricultural Production", February 14, 2023.

Demonstration Base concentrates on collecting data and uses algorithms to support farmer decision-making around breeding, slaughtering and processing.³⁸

In September 2020 Xi made a speech that points to the course of Hunan's trajectory. He proposed Hunan follow a 'Three Highlands and Four New Missions' strategy. The three 'highlands' are:

- shaping a national advanced manufacturing industry;
- nurturing competitive innovative technology; and
- expanding opening-up reforms.

The four 'new missions' are:

- realising integrated development;
- assuming new responsibilities in promoting the development of China's central region and Yangzi River Economic Belt;
- continuing to strive to write a new chapter for Hunan; and
- developing socialism with Chinese characteristics in the new era.³⁹

Of importance to these agendas are the province's agri-tech expertise and the fact that it is home to some of China's top construction and electronic vehicle manufacturing firms, including Sany Heavy Industry and BYD Changsha.

In July 2022 China's most powerful policy-making body, the National Development and Reform Commission, outlined how Hunan could – and should – promote trade and investment in line with the BRI.⁴⁰ It noted that Hunan's focus should be on 'promotion of investment that leads to trade and projects, and economics that promotes foreign trade',⁴¹ alongside 'strengthening [its] connectivity with international trade rules and systems'⁴² and 'effectively preventing various risks'.⁴³ It added that, 'by working hard to support policies, improve services, and prevent risks, and by making practical moves to continuously enhance the attractiveness of open development',⁴⁴ China (via Hunan, in this context) would 'enhance the driving forces of mutual benefit in cooperation'.⁴⁵

38 Zoomlion Group, "Hunan Intelligent Agricultural Machinery Innovation R&D Center Established in Zoomlion", Press Release, June 19, 2021.

39 Zachary Lundquist, "The Rise of Hunan", *China Today*, October 9, 2021.

40 People's Republic of China, National Development and Reform Commission, "Contribute to the High-Quality Development of the Joint Construction of the 'Belt and Road'", February 27, 2022; Lauren Johnston, "The Belt and Road Initiative: What Is In It for China?", *Asia & the Pacific Policy Studies* 6, no. 1 (2019): 40-58.

41 People's Republic of China, National Development and Reform Commission, "Contribute to the High-Quality".

42 People's Republic of China, National Development and Reform Commission, "Contribute to the High-Quality".

43 People's Republic of China, National Development and Reform Commission, "Contribute to the High-Quality".

44 People's Republic of China, National Development and Reform Commission, "Contribute to the High-Quality".

45 People's Republic of China, National Development and Reform Commission, "Contribute to the High-Quality".

Hunan's economic strengths and China–Africa economic ties

It was not made public why Hunan was selected to construct the China–Africa deep cooperation pioneer zone. The decision may simply be the result of campaigning by proactive senior government officials from Hunan at the provincial and national level, or a top-down strategic decision to foster the globalisation and economic interests of a province rich in primary and secondary industries. That those industries are broadly complementary to Africa's present phase of economic and demographic development could support more strategic assumptions. China's media, moreover, has since described a goal of the China–Africa Economic and Trade Exhibition as a focus on 'industries that are needed in Africa, and that Changsha urgently needs to go out to serve those industries'.⁴⁶ One African entrepreneur interviewed for this study said the strength of Hunan's state-owned enterprises in areas relevant to African development, including agriculture and construction, were also behind the push for it to take a lead in China–Africa economic affairs.

Table 1 lists the 'Nine Programmes' that are the priority objectives of China–Africa relations over the FOCAC period 2021–2024. A brief survey of Hunan's current role in China–Africa ties points to its potential ability to disproportionately accelerate China–Africa economic development. For example, leading Hunan companies in sectors such as infrastructure, mining, agriculture and new energy already have a footprint in Africa. These include Sany Heavy Industry, Zoomlion (construction machinery), Sunward Intelligent Equipment, Longping Hi-Tech Agriculture and BYD Changsha (electric cars).⁴⁷ BYD Changsha also seeks to secure sufficient supplies of lithium via African mining.⁴⁸

Of these listed companies, Sany Heavy Industry is the most prominent outside China. It is a global leader in heavy industry manufacturing, including for construction, mining and renewables.⁴⁹ Sany, moreover, has already participated in various major infrastructure construction projects in Africa, with the company website noting that the continent was the initial location used in its push for internationalisation.⁵⁰ Sany's exports from China to Africa, including concrete machinery, large tonnage cranes and small harbour machinery, exceed RMB 10 billion (\$1.5 billion) annually, but localisation in some manufacturing is intended over time.⁵¹ In keeping with its agenda of 'accessibility, affordability and availability', Sany also offers a rental service of, for example, large earthmoving equipment, that targets SMEs, as well as in-house financing via Sany Capital.⁵²

46 Li Dianman, Zhen Rong Thi and Xiong Jiabin, "The 3rd China-Africa Economic and Trade Expo Will Be Held in Changsha from June 15th to 18th, 2023", *Huasheng (Voice of China)* online, December 4, 2022.

47 Tingting and Xiaoyi, "After the New Epidemic Prevention".

48 Wei Xu, "China's BYD Snaps Up Six African Lithium Mines to Get Ten Years' Supply of EV Battery Materials", *Yicai Global*, June 1, 2022.

49 Sany, "SANY Global in Africa: SANY Southern Africa", February 23, 2023.

50 Sany, "Going to South Africa, Sany Heavy Industry Continues to Make Efforts in the African Market", May 30, 2016.

51 "Go to Africa: Sany Selling to Africa for More than RMB 10 Billion and Export Ranking First in the Industry", *Cision PR Newswire*, June 18, 2019.

52 Sany, "SANY Global in Africa".

Founded in 1999, Sunward Intelligent Equipment started in engineering equipment for aviation and today is a leading underground engineering equipment manufacturing enterprise in China. It primarily exports excavators, pile drivers, underground operation equipment, loaders and aerial work equipment.⁵³ A company representative notes that ‘construction machinery is the business card of Hunan’s manufacturing industry’, adding, ‘Now that the epidemic prevention measures are being lifted, there is a new deterministic and positive drive for companies to go overseas and earn foreign exchange.’⁵⁴

China has promised Africa it will invest in the construction of major infrastructure networks, including roads, rail and air infrastructure. As Hunan is a leader in related industries, this may add to its emerging relevance to broader China–Africa relations

The ‘cradle of electric locomotives in China’ is Zhuzhou City, Hunan. It was in Zhuzhou that China’s trains shifted from DC to AC, and then to fast-train technologies. CRRC Zhuzhou Electric Locomotive (CRRC), a leading related company, has extensive interests in Africa. Indeed, in late 2022 South Africa’s Transnet was suing CRRC for access to spare parts for its freight locomotives.⁵⁵ Under the BRI, China has promised Africa it will invest in the construction of major infrastructure networks, including roads, rail and air infrastructure. As Hunan is a leader in related industries, this may add to its emerging relevance to broader China–Africa relations.⁵⁶

Hunan is also home to consumer goods companies active in Africa, including consumer electronics enterprises such as Anke Innovation and Dongyi Electric, as is the Chinese parent company of Africa’s largest business-to-consumer e-commerce platform, Killimall.⁵⁷ Founded in Changsha in 2014, Killimall was the first Asian e-commerce platform to enter the African market, in this case via Kenya. Although it has not captured as great a market share as e-commerce sites such as Jumia, Killimall now distributes to many other markets, including Uganda and Nigeria. It positions itself as an ‘enabler of digital business in Africa’ via e-commerce transactions as well as payment, after-sales and big data services.⁵⁸ Whereas CRRC, for example, can support China’s BRI goals to support construction of the physical foundations of growth and development in and outside of China, Killimall is positioned well

53 Lundquist, “The Rise of Hunan”.

54 Tingting and Xiaoyi, “After the New Epidemic Prevention”.

55 Robert Preston, “Transnet Takes CRRC to Court Over Spare Parts”, *International Railway Journal*, August 18, 2022.

56 Johnston, “The Belt and Road Initiative”, 40–58.

57 “Killimall, Africa’s Largest B2C Export Platform: Amazon Cloud Technology Has Helped Me Do E-Commerce in Africa”, *LaiTimes*, July 4, 2022.

58 “Killimall, Africa’s Largest B2C”; Jane Zhang, “How an ex-Huawei Employee Built Killimall, Africa’s Biggest Ecommerce Platform”, *South China Morning Post*, August 13, 2019.

in e-commerce technologies and hence can support the BRI goals of ‘unimpeded trade’ and ‘elevated monetary circulation’.⁵⁹

In the food industry, Hunan’s Jinzai Foods plans to source raw materials from Africa, operate a raw material processing hub in Kenya and invite local businessmen to visit its own factories in Hunan. Of its hub in Kenya, Jinzai says it is fostering development of a seafood value-added processing chain in Kenya, promoting China-Africa fishery and aquatic products cooperation toward achieving a ‘dual upgrade’ of both industry and trade in Kenya.⁶⁰ At present, the company notes, Kenya struggles to fully participate in global seafood value chains. The company is active in upgrading the training of quality inspectors at Kenya’s Ministry of Fisheries, and, with its expertise in seafood-based snacks, Jinzai also sees potential for its base in Kenya to offer fish supplies.⁶¹

Rice is a staple food in many African countries, and support can be in the form of the sale of technology such as drones and monitoring technologies – one of Hunan’s competitive strengths

Since Hunan is one of the nation’s rice bowls and a hub for its late-20th century agricultural revolution, it has already been playing a key role in China’s agricultural demonstration projects in Africa. Indeed, agricultural experts from the Hunan Academy of Agricultural Sciences have been visiting and living in various African countries for decades, focusing on cultivating optimal high-yielding hybrid rice strains to maximise local production.⁶² Rice is a staple food in many African countries, and support can be in the form of the sale of technology such as drones and monitoring technologies – one of Hunan’s competitive strengths. This, for example, allows farmers to know exactly when and how much water is needed for their crops.⁶³

Any ambition to strengthen agricultural exchanges and cooperation between China and Africa also supports the joint objective to support Africa’s realisation of the ‘zero hunger’ goal in the 2030 Agenda for Sustainable Development.⁶⁴ In November 2018, the FAO and China’s

59 Lauren Johnston, “The Belt and Road Initiative as Ten Policy Commandments: Review of Xi’s Launch Speeches and the Washington Consensus” (Working Paper, University of Sydney China Studies Centre, May 2022).

60 “Jointly Building the China-Africa Fishery Industrial Park, Jinzai Foods Deepens the Globalization Strategy of Hunan Brine Snacks”, *Sina News*, May 27, 2022.

61 Public News Beijing Report, “Deepening the Layout of the Global Industrial Chain, Jinzai Food Was Commended by the Chinese Embassy in Mount Kenya”, 163.com, 27 December 2022.

62 People’s Republic of China, Ministry of Foreign Affairs, “The Seeds: The China-Africa Friendship on Madagascar’s New Bank Note”, August 26, 2022.

63 Yang Kunyi and Feng Qingyin, “China, Africa Sign Rice Industry Initiative”, *Global Times*, June 28, 2019.

64 Li Jun, “Helping Africa to Solve Grain Challenges”, *China Today*, November 7, 2019; Zhang Liying, “China-Africa Rice Cooperation Project: Joining Hands to Eliminate Hunger”, *China.org.cn.*, July 19, 2019.

Ministry of Agriculture and Rural Affairs jointly held a Ministerial Forum on Global South-South Cooperation in Agriculture in Changsha. The forum adopted what is known as the ‘Changsha Declaration’. This declaration promotes China-Africa agricultural collaboration in a broader South-South context. It also notes that the FAO, the International Fund for Agricultural Development and the World Food Programme recognise China’s success in transitioning from an aid recipient to a major contributor to South-South cooperation.⁶⁵

For years, as Chinese state media has noted, agricultural development and food production in Africa was constrained owing to insufficient infrastructure, lack of animal breeding capacity and inadequate agricultural mechanisation.⁶⁶ More recently, natural disasters and the global pandemic have worsened the already-problematic food security situation on the continent.⁶⁷ A flurry of overseas investment promotional actions was expected to follow China’s re-opening in 2023.⁶⁸ Speaking at the China-Community of Latin American and Caribbean States Forum for Agricultural Ministers in March 2021, FAO’s Qu⁶⁹ highlighted a contemporary agricultural and food security tipping point:⁷⁰

Building green and inclusive agri-food systems is one of the most powerful ways to recover from the current crisis by better production, better nutrition, a better environment and a better life ... Now we have to act. We need to transform our agri-food systems to provide food security and better nutrition for all, be economically sustainable, inclusive, and have a positive effect on the climate and the environment.

The next section explores elements of a prospective Hunan model of China-Africa relations in this broader contemporary context.

Hunan model for China–Africa cooperation: Two core national platforms

Within China, Hunan has been tasked with two national-level Africa-related economic and trade cooperation platforms: CAETE and the China-Africa Economic and Trade Deep Cooperation Zone.⁷¹ CAETE is something of a biennial China-Africa marketplace, hosted

65 FAO, “South-South and Triangular Cooperation: FAO and China Set a New Milestone for Global South-South Cooperation in Agriculture”, <https://www.fao.org/partnerships/south-south-cooperation/news/news-article/en/c/1171287/>.

66 Embassy of the People’s Republic of China in South Africa, “Ma Kai Talks About Several Prominent Issues in Current Economic Life”, March 2004.

67 Jun, “Helping Africa to Solve”.

68 Tingting and Xiaoyi, “After the New Epidemic Prevention”.

69 FAO, “Director-General Qu Dongyu”.

70 FAO, “Director-General Qu Dongyu: A Statement by FAO Director-General Qu Dongyu”, <http://www.fao.org/director-general/speeches/detail/en/c/1377353/>.

71 Tang Lihan and Luo Shuai, “Xiang’ and Africa to Seek Common Development: The Signing Ceremony of the ‘Hunan +’ Côte d’Ivoire Project Held in Chang”, *people.com.cn*, February 16, 2022; Zhao Yuhui et al., “Economic and Trade Cooperation with Africa from the Perspective of Provinces-World Exhibition Network”, Silver Standard Group, November 18, 2022.

permanently by Changsha, where new business partnerships can be forged with speed and logistical ease. The venue for the biennial exhibition is the Changsha International Convention and Exhibition Centre. The China–Africa Economic and Trade Cooperation Promotion Innovation Demonstration Park (Hunan Gaoqiao Grand Market) hosts a parallel CAETE exhibition.

Within China, Hunan has been tasked with two national-level Africa-related economic and trade cooperation platforms: CAETE and the China–Africa Economic and Trade Deep Cooperation Zone

The Demonstration Park, itself located in the Hunan Free Trade Pilot Zone, is home to Hunan province’s pilot zone for bilateral cooperation and a broader permanent exhibition platform. The goal of the Hunan Free Trade Pilot Zone is to ‘explore new scenarios applied in the integrated development of domestic and foreign trade, and build new forms of trade, consumption, and logistics’.⁷² This pioneering zone for China–Africa cooperation has four main aims:⁷³

- to create a new window for local cooperation with Africa;
- to focus on key links and explore new paths for sustainable development;
- to expand bilateral trade and build a new platform for business distribution; and
- to deepen interconnection and expand new channels for international logistics.

Hunan and China intend for these zones to elevate domestic and international economic activity in inland regions and provide a demonstration area for the integrated development of domestic and foreign trade in central and western China, and so advance the BRI.⁷⁴ This will also position Hunan to support the realisation of the ‘Nine Programmes’, and in so doing support plans for the AfCFTA. The latter can be achieved by, for example, undertaking infrastructural connectivity projects in Africa and forming an expert group on economic cooperation with the AfCFTA Secretariat.⁷⁵ (The next section explores these twin national Africa-related agendas.)

72 Hunan Provincial Government, “Hunan Approved as National Pilot Area for Domestic, Foreign Trade Integration”, Press Release, January 13, 2023.

73 Yuhui, “Economic and Trade Cooperation with Africa from the Perspective of Provinces-World Exhibition Network”, shifair.com, May 11, 2023; Johnston, “The Belt and Road Initiative”, 40.

74 Hunan Provincial Government, “Hunan Approved as National”.

75 Hunan Provincial Government, “Hunan Approved as National”.

China–Africa Economic and Trade Exhibition

CAETE is a biennial event co-hosted by the Trade Development Bureau, the Chinese Ministry of Commerce and three provincial entities in Hunan – the Office of Foreign Affairs Commission, the Hunan Sub-council of the China Council for the Promotion of International Trade and the Government of Changsha City.⁷⁶ Xi proposed CAETE at the 2018 Beijing FOCAC Summit as a venue for promoting deeper economic and trade cooperation between China and Africa. As well as being a biennial chance to showcase tradeable goods and services, CAETE offers a – hybrid online and offline – forum that also includes discussion and business match-making activities.⁷⁷ So far two CAETEs have been held, in 2019 and 2021 (Table 2), with the third due in June 2023.

No.	Dates	Theme	Showcase countries	Theme provinces
1st	27-29 June 2019	'Win-Win Cooperation for closer China-Africa Economic and Trade Partnership'	Not applicable	Not applicable
2nd	26-29 September 2021	'New Start, New Opportunities, New Accomplishment'	Algeria, Ethiopia, Kenya, Rwanda, Senegal and South Africa	Zhejiang, Jiangxi
3rd	15-18 June 2023	'Common Development for a Shared Future'	DRC, Madagascar, Morocco, Mozambique, Nigeria and Zambia	Hubei, Shandong

Sources: Yu Li, "Basic Facts About the 2nd China-Africa Economic and Trade Expo", *CGTN*, September 26, 2021; "Hunan China-Africa Innovation Park in Tech Transfer Deal in Angola", *China-Lusophone Brief*, August 24, 2021; UN Development Programme, Global Partnership for Effective Development Co-operation, "First China-Africa Economic and Trade Expo", Changsha City, June 27, 2019

The inaugural 2019 expo is said to have led to 84 cooperation deals to the value of \$20.8 billion, covering trade, investment, infrastructure, agriculture, manufacturing, aviation, tourism and the establishment of friendship cities.⁷⁸ The second forum, held in the middle of the COVID-19 pandemic, is reported to have led to deals to the value of \$15.93 billion.⁷⁹ Emphasising the multi-stakeholder focus of CAETE, at the inaugural expo the Joint Initiative on Strengthening South-South and Triangular Cooperation in China-Africa Rice Value Chain, proposed by seven entities (including the China National Hybrid Rice Research and Development Centre and the AU) was released. According to a representative of the Bill and Melinda Gates Foundation, also a partner in the joint initiative, the agreement will

76 Yu Jiangjiang, "Third China-Africa Economic and Trade Expo Slated for June Next Year", Hunan Provincial Government, December 5, 2022.

77 Li, "Basic Facts About".

78 Li, "Basic Facts About".

79 Li, "Basic Facts About".

see a review of China's technologies in the rice industry and experimental plans to localise China's agricultural technologies in Africa and so enhance food security.⁸⁰

China-Africa Economic and Trade Deep Cooperation Zone

Construction of the pilot zone for in-depth China-Africa economic and trade cooperation is a major initiative, implemented by Hunan, of Xi's proposal of 'establishing a long-term mechanism for economic and trade exchanges and cooperation with Africa'.⁸¹ The goal of the zone is to overcome bottlenecks in China-Africa economic and trade cooperation in terms of access, finance, logistics, talent and services.⁸²

The zone has three major goals to be achieved by 2025. First, it aims to exceed a trade level of RMB 100 billion (about \$14 billion) with Africa, implying an average annual trade growth rate of more than 30%

The zone has three major goals to be achieved by 2025. First, it aims to exceed a trade level of RMB 100 billion (about \$14 billion) with Africa, implying an average annual trade growth rate of more than 30%. The second is to serve the BRI strategy and take Hunan's industries in construction machinery, infrastructure, agriculture, and services and standards, among others, global. The third is to have built a demonstration frontier by 2025 for local Chinese cooperation with Africa.⁸³

The institutional structure for realising these goals follows a 'one core, three areas, and five functional clusters' model, which also has complementary functions and coordinated interaction.⁸⁴ The one core is the Gaoqiao Grand Market, the third-largest wholesale market in China, a parallel chamber of CAETE when it takes place biennially, and which focuses on promoting African products to Chinese buyers.⁸⁵ The market, located inside the broader Hunan Free Trade Pilot Zone in Changsha, has so far introduced more than 100 typically SME-scaled African branded products to China, including coffee, cocoa, and trade and industrial chains in products such as nuts and sesame.⁸⁶ That SME focus, however, may limit more immediate, larger-scale capacity to respond to new export opportunities to Africa.

80 Yang Kunyi and Feng Qingyin, "China, Africa Sign Rice Industry Initiative".

81 "Shen Yumou: What We Do Is of Great International Significance", *Phoenix Net Hunan*, January 1, 2021.

82 Tingting, Yuegui and Mengfei, "China-Africa Economic and Trade".

83 "Shen Yumou: What We Do".

84 Tingting, Yuegui and Mengfei, "China-Africa Economic and Trade".

85 "African Products Promoted in Grand Market in Hunan, China" *Xinhua Global Service*, September 29, 2021.

86 "Hunan Builds a High Level of China-Africa Deep Economic and Trade Cooperation Pioneer Zone", *International Business Daily*, December 28, 2021.

The three areas are

- the Changsha Free Trade Airport Zone;
- the Yueyang Chenglingji Comprehensive Bonded Zone; and
- the Changsha Jinxia Economic Development Zone.

The Changsha Free Trade Airport Zone has a focus on building a national airfreight distribution centre for Africa alongside a high value-added product processing centre. At the end of 2021, 14 companies trading with Africa had established a presence in the zone and had a trade value of \$12.2 million.⁸⁷ The Yueyang Chenglingji Comprehensive Bonded Zone was set up in 2014 as what was then closest thing to a free-trade port zone of the province and serves as a water transportation trade hub.⁸⁸ Factory buildings are under construction in the Yueyang China–Africa Industry and Trade Industrial Park and its warehouses are full of ‘imported wood’, waiting for the next step – picking up materials and processing them.⁸⁹ After it is fully completed and put into operation, the import and export trade volume of bulk commodities to Africa is forecast to exceed \$10 billion.⁹⁰

Finally, the Changsha Jinxia Economic Development Zone is a ‘multimodal land-port logistics hub relying on non-land Qatar Airways and Hunan–Guangdong non-rail-sea combined transport’.⁹¹ Thus far, however, the scale of the related supply chains seem to favour the Chinese firms involved rather than the much smaller African firms, especially given relative top-down government support at the Chinese end.

The five functional clusters are based on a national agenda to build world-class manufacturing and technology clusters in China.⁹² They are the:

- Changsha China–Africa Construction Machinery Industry Cluster;
- Xiangtan China–Africa Mining Machinery Industry Cluster;
- Shaoyang China–Africa Economic and Trade Industry Cluster;
- Liuyang China–Africa Economic and Trade Industry Cluster; and the
- Hunan Precious Metals Deep Processing Cluster.⁹³

In this context, Hunan will focus on introducing and deepening the activities of leading production-oriented and trade-oriented enterprises in the African market, as well as

87 Tingting, Yuegui and Mengfei, “China-Africa Economic and Trade”.

88 “Chenglingji Comprehensive Bonded Zone”, *China Daily*, March 18, 2019.

89 Tingting, Yuegui and Mengfei, “China-Africa Economic and Trade”.

90 Tingting, Yuegui and Mengfei, “China-Africa Economic and Trade”.

91 Tingting, Yuegui and Mengfei, “China-Africa Economic and Trade”.

92 “Dongmei Wu, Changsha Construction Machinery Industry Cluster Impact World Advanced”, *Hunan Industry News*, July 26, 2022.

93 “Dongmei Wu, Changsha Construction”.

fostering cross-border financial and logistics enterprises. Moreover, it aims to encourage the continent, led by key African countries, to support deep cooperation with Hunan across the entire mining and agricultural industry chain. This, in turn, will drive Hunan's equipment manufacturing, technical services and engineering construction to go global.⁹⁴

These clusters complement not only Hunan's industrial competitiveness but also areas of African economic endowment and development need, such as construction. Moreover, since 'the promotion of economic and trade cooperation with Africa is inseparable from the smooth flow of logistics channels',⁹⁵ Changsha Customs has "made every effort to build a 'three-dimensional' (air, rail and maritime) logistics system for Africa and to expand new logistics channels for Africa". Agreed air freight routes include the first cargo route connecting Africa and Hunan (opening in July 2022), between Changsha and Ethiopia's capital Addis Ababa.⁹⁶ In the second half of 2022, 56 flights carried a total of 4 029 tonnes of cargo via the route, which is operated by Ethiopian Airways.⁹⁷

Ethiopian Airways, meanwhile, also has an agreement with Alibaba's electronic World Trade Platform (eWTP) to deepen and implement eWTP's agenda of making global trade more inclusive and digitised.⁹⁸ During the COVID-19 pandemic, Addis Ababa was the eWTP base and Ethiopia Airlines the airline via which emergency protective equipment was donated and sold to Africa by China, reaching every country on the continent.⁹⁹ There are also regular flights from Hunan to Nairobi, Kenya and Luanda, Angola.¹⁰⁰

Compared to earlier sea–river shipping routes to Hunan the sea–rail model reduces shipping time between China and Africa by 15 days

These air freight routes are complemented by the Hunan–Guangdong–Africa rail–sea intermodal train, which transports goods from Hunan by rail to Nansha Port in Guangzhou and then on to some dozen seaports and along 20 roads and railways to landlocked Africa.¹⁰¹ Compared to earlier sea–river shipping routes to Hunan (and central and western China in general, alongside equivalent rail links to landlocked Africa), the sea–rail model

94 Chen Sinan, "Hunan Has Built a High-Level Pilot Zone for In-Depth Economic and Trade Cooperation Between China and Africa", *International Business Daily*, December 28, 2021.

95 Sinan, "Hunan Has Built a High-Level Pilot".

96 China Daily, "Changsha Cargo Flight Connects to Africa", Secretariat of the Chinese Follow-up Committee of the Forum on China-Africa Cooperation, July 28, 2022.

97 Guangming Network, "New Platform to Promote Hunan-Africa Trade to Move Forward in Strides", Guangming Network, December 23, 2022.

98 Lauren Johnston, "World Trade, E-Commerce, and COVID-19", *China Review* 21, no. 2 (2021): 65-86.

99 Lauren Johnston, "COVID-19 Pushes Forward Jack Ma's Plans for a World Trade Revolution", SOAS China Institute, July 2, 2020.

100 People's Government of Hunan Province, "CAETE Boosts China-Africa".

101 Sun Chao, "First China-Africa Rail-Sea Express Train Leaves Hunan", *People's Daily Online*, September 24, 2021.

reduces shipping time between China and Africa by 15 days.¹⁰² Chinese media notes that it can also shorten the 'logistics time to East Africa by 10 days and that to West Africa by 9 days, saving 3 per cent on transport cost'.¹⁰³ Since Kenya in particular is an important hub for Africa's connectivity to the BRI, these air and sea-rail routes also help to achieve the stated overall goals of the Hunan model.¹⁰⁴

In addition, authorities are working on a Hunan-Shanghai-Africa river-sea combined transport channel, a Hunan-Africa air cargo route and a truck-sea combined transport channel.¹⁰⁵ 'This is a new foreign trade channel of Hunan province and will become an important logistics route linking central and western China with African countries,' said Guo Ning, director of the Office of Port of Entry and Exit of Hunan province.¹⁰⁶ Hunan cities Zhuzhou and Hengyang are also import sub-centres of this new rail-maritime connectivity between central China and world markets.

Authorities are working on a Hunan–Shanghai–Africa river–sea combined transport channel, a Hunan–Africa air cargo route and a truck–sea combined transport channel

Shen Yumou, secretary of the Party Leadership Group, director of the Hunan Provincial Department of Commerce and director of the Work Office of the China (Hunan) Pilot Free Trade Zone, gave an example. In Zhuzhou, with the cooperation of Cosco Shipping and Greenroad, food aid successfully reached Kenya and South Sudan. This not only marks the opening of the trade channel but also heralds a future development direction. That is, at the macro and cross-country level, projects with Africa can be implemented by central enterprises, while specialised provincial-level organisations, for example local engineering contracting enterprises in Hunan, can be responsible for implementing such national projects together with central enterprises.¹⁰⁷

In China, Hunan has had the fastest rate of growth in ties with Africa in 2022.¹⁰⁸ While these ties do not exceed larger coastal provinces' economic relations with the continent, Hunan's ties and their rapid growth are nonetheless unique in terms of the implicit and explicit focus on industries and products in which Hunan has a comparative advantage.

102 Chao, "First China-Africa Rail-Sea".

103 Chao, "First China-Africa Rail-Sea".

104 Sinan, "Hunan Has Built"; Lauren Johnston and Joseph Onjala, "Why an Early Belt and Road Initiative East Africa Hub? Economic, Demographic and Security Factors", *Journal of Chinese Economic and Foreign Trade Studies*, Vol. 15 No. 2 (2022): 125-149.

105 People's Government of Hunan Province, "CAETE Boosts China-Africa".

106 Chao, "First China-Africa Rail-Sea".

107 "Shen Yumou: What We Do".

108 Liu et al, "Cooperation between Hunan".

These, moreover, may better underpin a model of development that also serves African development. Various policy-related clusters aiming to deepen economic ties between China and Africa are also part of the zone. These are elaborated on in the next section.

China–Africa Pilot Economic Cooperation Zone: Selected policy initiatives

‘The China-Africa Economic and Trade Cooperation Pilot Zone has set a new model for exploring cooperation opportunities between Chinese and African enterprises... Tanzania is willing to work closely with Hunan to make positive contributions to building a China–Africa community with a shared future.’¹⁰⁹

Mbelwa Kairuki, Ambassador of Tanzania to China, July 2022

Tanzania is willing to work closely with Hunan to make positive contributions to building a China–Africa community with a shared future

The China–Africa Pilot Economic Cooperation Zone seeks to resolve bottlenecks in China–Africa economic and trade cooperation. Examples of typical bottlenecks include market access, finance, logistics, talent and services such as marketing and law.¹¹⁰ A rising number of initiatives within the cooperation zone are aimed at overcoming such bottlenecks. Several such examples are outlined here, among which the cross-border RMB Centre is said to have particular importance.¹¹¹

China–Africa Cross-Border RMB Centre

One significant bottleneck in China’s own internationalisation is the fact that, despite its being the world’s second-largest economy, the renminbi (RMB) is little used globally thanks to its having a mostly closed capital account. This has no international monetary precedent.¹¹² Greater use of the RMB internationally could expose China’s economy to more financial volatility and uncertainty but would also reduce transaction costs and offer more independence for Chinese entrepreneurs abroad.

109 Li, “Basic Facts About”.

110 “Shen Yumou: What We Do”.

111 Tingting, Yuegui and Mengfei, “China-Africa Economic and Trade”.

112 Paola Subacchi and Helena Huang, “The Connecting Dots of China’s Renminbi Strategy: London and Hong Kong” (Briefing Paper, Chatham House, September 2012).

In the context of China–Africa economic relations, especially balanced China–Africa trade, and amid sovereign debt sustainability concerns, one issue is that ‘African countries have a large number of non-resource products but are short of foreign exchange’.¹¹³ Even Chinese companies that have market demand for their products in Africa, from a local production base or as exporters, can encounter challenges in returning payments received to China. In more extreme cases they are also unable to access foreign exchange from saved local currency earnings to buy inputs for continued local production.

For example, in the late 2010s some foreign assemblers and manufacturers in Ethiopia, among them firms from China and firms operating in Chinese industrial zones, experienced such challenges owing to scarce foreign exchange reserves in the country.¹¹⁴ As a result, the intended domestic consumers in Ethiopia of the final, locally produced products were unable to buy these products, despite their having sufficient local currency to do so. The actual process of exchanging foreign currency can be challenging, and it can be subject to exchange rate volatility and hence profit margin uncertainty. Since one of the aims of the BRI is to promote ‘unimpeded trade’, particularly for SMEs to participate in foreign trade, reducing exchange rate uncertainty and transaction costs is an important goal of the Hunan agenda.¹¹⁵ Some Chinese companies experiencing foreign exchange challenges in Ethiopia, for example, branched into exportable agricultural crops, such as coffee beans, in order to increase their access to foreign currency. This may also have added impetus to the broader ‘Hunan model’ concept.¹¹⁶

The China–Africa Cross-Border RMB Centre has two broad policy initiatives. The first relates to fostering a form of barter trade where barter compensates for the lack of exchange currency. The second is to foster greater and more commercial use of the RMB

Given these currency-related obstacles in economic ties between China and many African countries, the China–Africa Cross-Border RMB Centre has two broad policy initiatives. The first relates to fostering a form of barter trade where barter compensates for the lack of exchange currency. The second is to foster greater and more commercial use of the RMB in China–Africa economic relations.

113 “Shen Yumou: What We Do”.

114 Various manufacturers and assemblers, interviews by Lauren A Johnston, Addis Ababa and surrounds, September/October 2019; Millennium Challenge Corporation, *Ethiopia Constraints Analysis Report 2020* (Washington DC: Millennium Challenge Corporation, 2020).

115 Johnston, “The Belt and Road Initiative”, 40–58; “Renminbi’s ‘Cross-Border Stage’ Gets Bigger”, China Daily, January 31, 2023.

116 Reports from persons interviewed for this study and collected by the author on an earlier assignment in Ethiopia.

In early 2022, Hunan announced that China's State Council had called on the Hunan Pilot Free Trade Zone and its Africa-focused cooperation zone to 'explore the development of barter trade between China and Africa'.¹¹⁷ 'Barter trade' here refers to where, for example,¹¹⁸

Hunan's agricultural machinery is exported to a certain country in Africa, and we get payment in that country's currency. We then use the payment to buy other products in that country and return them to China. After selling these African products, we get RMB.

'It looks like a barter trade between countries, but it is actually settled in [the] local currency of each country rather than foreign exchange.'¹¹⁹ According to Chen Xihe, head of the Hunan Provincial Non-Barter Trading Company, this represents 'an expansion of China-Africa trade under the current conditions'.¹²⁰ Visiting China for the inauguration of Brazil's former president Dilma Rousseff as president of the Shanghai-based New Development Bank, Brazil's current President Luiz Inácio Lula da Silva and his delegation, including Finance Minister Fernando Haddad, also emphasised a goal of expanded mechanisms that would allow trade operations to be settled without the intermediation of a third currency.¹²¹

Conceptually, the barter payment model being tested in Hunan between China and some African countries resembles the 'Angola model', in that it enables income-poor countries to access international markets without the need for sufficient foreign exchange. In the Angola case, the model was based on large-scale infrastructure loans collateralised by the supply of commodities that the infrastructure itself would help to unlock. In the Hunan case, the initial scale is, on average, significantly smaller and typically will apply to countries that do not have commodities that can readily be sold on international markets for foreign exchange. Ideally, that is the outcome, rather than the eventual emergence of more narrow Chinese-market-aligned supply chains. In terms of implementation, the idea has been trialled since July 2021, and involves Hunan officials in the pilot zone helping to facilitate Chinese enterprises to carry out 'one-to-one' barter trades, in this case 12 'trades' between China and four African countries. The products exported from Hunan without direct exchange of foreign currency include seeds, kitchen utensils, building materials and energy storage equipment, in exchange for African grapefruit, mica, spodumene (a mineral source of lithium) and wood.¹²²

In January 2022, the relevant official platform, the China-Africa Barter Trade Service Platform (CABTSP), was launched – the country's first business-to-business service platform

117 Yaling He, "Cooperation and Win-Win 'African Changsha' Is Wonderful, Changsha's Trade with Africa Welcomes 'Blowout'", *Morning Star Online*, November 29, 2022.

118 He, "Cooperation and Win-Win".

119 He, "Cooperation and Win-Win".

120 He, "Cooperation and Win-Win".

121 Mauro Ramos, "Lula Says That NBD Can Become the 'Bank of the Global South' and Criticizes Dollar Hegemony", *Brasil de Fato*, April 13, 2023.

122 People's Daily, "Contribute to the Promotion of High-Quality Development of China-Africa Economic and Trade Cooperation [in] Hunan: Serve the National Strategy and Demonstrate Local Responsibility", FOCAC, October 11, 2022 (in Chinese); Tingting, Yuegui and Mengfei, "China-Africa Economic and Trade".

for cross-border barter trade. In the first year, some two dozen countries engaged in the barter platform, including South Africa, Ghana, Madagascar, Nigeria, Ethiopia and Tanzania.¹²³ Said Chen Xihe, director of the barter trade initiative in Hunan, in 2022:¹²⁴

At present, there are nearly 200 registered customers on the CABTSP, and via the 'barter trade' method we are adopting a virtuous circle for local economic and social development in Africa. That is, this method of financing trade enables local consumer demand to be met while also preserving foreign exchange reserves and offering the chance to expand local exports, so the market has great prospects.

In January 2023 China's Ministry of Commerce and the People's Bank of China jointly issued the 'Notice on Further Supporting Foreign Economic and Trade Enterprises to Expand the Cross-border Use of Renminbi to Promote Trade and Investment Facilitation'.¹²⁵ China has traditionally imposed restrictions on foreign investors converting RMB-based profits made in China to foreign currency and taking these out of the country. Under this new initiative, investors are encouraged to use such RMB returns to not only reinvest domestically but also to expand the use of RMB in China's overseas economic and trade cooperation zones, and hence help to foster greater cross-border use of the RMB.

Indeed, one of the goals of the Hunan model is to focus on countries that have signed free trade agreements or international production capacity cooperation agreements with China, such as Mauritius, Tanzania and South Africa. It aims to take overseas economic and trade cooperation zones, special economic zones, industrial parks and ports as fulcrums to deepen bilateral economic and trade cooperation and international production capacity cooperation.¹²⁶ The potential for a China-East Africa Free Trade Area has also been raised, with Mauritius, South Africa and Kenya important countries in the context of China's RMB internationalisation plans on the continent.¹²⁷

The second, more specific and trade facilitation-oriented task of the Hunan Cross-Border RMB Centre is to serve as a frontier for accelerating the development of a 'state-owned supply chain financial platform, supported by Chinese banking giant ICBC and other financial institutions'.¹²⁸ It was reported in April 2022 that the centre had opened businesses in six African countries for public spot foreign exchange settlement and sales, and cooperated with 22 African countries to carry out cross-border RMB settlements.¹²⁹

123 Zhixiong Liu and Ziyi Qin, "Settlement of Barter Trade in Local Currency? Hunan Explores New Solutions for China-Africa Trade," Red Net, July 27, 2022.

124 Ganzhang Chen, "Hunan Launches Cross-Border RMB Centre for China-Africa, Opens Spot Foreign Exchange Settlement in 6 African Countries", *Sohu*, March 12, 2021.

125 "Renminbi's 'Cross-Border Stage'".

126 Guangming Daily, "Resilience of China-Africa Economic and Trade Exchanges Highlighted to Lead China-Africa Cooperation for Mutual Benefit", FOCAC, May 19, 2022.

127 Guangming Daily, "Resilience of China-Africa"; Lauren Johnston and Marc Lanteigne, "Here's Why China's Trade Deal with Mauritius Matters", World Economic Forum, February 15, 2021.

128 Tingting, Yuegui and Mengfei, "China-Africa Economic and Trade".

129 Tingting, Yuegui and Mengfei, "China-Africa Economic and Trade".

Chinese media reported that the centre had signed an agreement on the opening of RMB interbank current accounts with MISR Bank of Egypt. It is also promoting RMB account cooperation with banks in Nigeria, Cameroon, Ghana, South Africa, Malawi and elsewhere, as well as corporate spot foreign exchange settlement and business sales in the currencies South Africa, Nigeria, Ghana, Kenya, Botswana and Zambia.¹³⁰ In the first three-quarters of 2022, the export business of leading manufacturing enterprises to Africa was supported by the equivalent of more than RMB 1 billion (about \$145 million).¹³¹ A flagship transaction has been the June 2022 KES¹³² 2.42 million (about \$17 million) foreign exchange transaction between a Hunan branch of ICBC and a Kenyan subsidiary of Standard Bank South Africa (itself 20% owned by ICBC).¹³³

The logistical mechanics of this example of a ‘closed loop of capital circulation between China and Africa’ involved ICBC Hunan and the China-Africa Cross-Border RMB Centre selecting Changsha Feituo Information Technology Co – parent company of East Africa’s Killimall e-commerce platform – to carry out the pilot cross-border business in more limited currencies in Africa.¹³⁴ An advantage here is not only Killimall’s Hunan-based parent company, but also that Kenya has a relatively open capital account and Killimall has a physical presence in Kenya, Nigeria and Uganda while it generates sales across several African countries.¹³⁵ An early focus on Kenya also complements the Hunan model’s BRI-related goals, with Kenya being an early BRI Africa hub and fostering monetary circulation being one of the BRI’s five economic policy pillars.¹³⁶ As these tests evolve, it would be ideal if there were transparency regarding the market structure and market access across firms, industries and countries.

China-Africa Economic and Trade Cooperation Promotion Innovation Demonstration Park

Li Xinqiu, deputy director of the Hunan Province Department of Commerce, describes the China-Africa Economic and Trade Cooperation Promotion Innovation Demonstration Park as a ‘national platform in Hunan that focuses on building an African centre for the distribution and processing of products and the flow of people for cooperation with Africa’.¹³⁷ ‘Not large in size’,¹³⁸ the demonstration park hosts the permanent exhibition of CAETE, the China-Africa Live E-commerce Incubation Centre, the China-Africa Medicine and Health Industrial Park and the China-Africa Economic and Trade Enterprise Headquarters Base.

130 Tingting, Yuegui and Mengfei, “China-Africa Economic and Trade”.

131 Tingting, Yuegui and Mengfei, “China-Africa Economic and Trade”.

132 Currency code for the Kenyan shilling.

133 Tingting, Yuegui and Mengfei, “China-Africa Economic and Trade”.

134 Tingting, Yuegui and Mengfei, “China-Africa Economic and Trade”.

135 “Jumia vs Kilimall: Comparison of Kenya, Africa Best Ecommerce Website to Shop”, Kenyayote, October 15, 2020.

136 Johnston and Onjala, “Why an Early Belt and Road”; Johnston, “The Belt and Road Initiative”.

137 “Hunan China-Africa Innovation Park in Tech Transfer Deal in Angola”, *China-Lusophone Brief*, August 24, 2021.

138 He, “Cooperation and Win-Win”.

The Live E-Commerce Incubation Centre shows Mandarin-speaking Africans niche marketing products online from their hometowns, while the Demonstration Park facilitated transactions in African products such as coffee, nuts, cocoa, sesame and dried peppers to a value of \$769 million, up to mid-2022.¹³⁹ Specific products marketed on the e-commerce livestream include South African nuts, Rwandan chili sauce, Ugandan coffee beans, DRC crystals, Tanzanian cashew nuts and Moroccan essential oils. The same products can be seen in the permanent exhibition hall in the same building.

The park also arranged a series of activities in 2022, including a Shuangpin Online Shopping Festival and an African Goods Festival, to promote the synchronisation of African specialty products with the Chinese market. One such product is the fusion of Rwandan chili and Hunan tempeh into a new brand of chili sauce called 'Fire Chief', now available on store shelves in China. That success and the rising value of Rwandan chilies has in turn inspired other chili and agricultural providers.

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China–Africa Digital Services Hub

Tangential to the physical and promotional logistics channels being promoted by the Hunan agenda, in February 2023 the Hunan China–Africa cooperation zone launched the China–Africa Digital Services Hub. According to *The North Africa Post*, the hub aims to 'support Chinese companies' trade with Africa' and focuses on cross-border communications support and data-sharing among Chinese companies working in Africa.

The hub will also 'promote the innovative application of new business forms such as cross-border e-commerce, China–Africa economic and trade data statistical analysis, and other digital products related to telecommunications, internet, software and information technology services'.¹⁴⁰ In addition, it will not only support the communications and data informational needs of Chinese companies in Africa but also provide website construction services in local African languages. In future, the hub may 'help some African countries build more comprehensive and efficient payment systems'.¹⁴¹

139 He, "Cooperation and Win-Win".

140 "China-Africa Digital Services Hub Focused on Facilitating Trade Established in Hunan", *North Africa Post*, February 11, 2023.

141 "China-Africa Economic, Trade Digitalization Service Base Established in Hunan", *China.org.cn*, February 8, 2023.

China–Africa economic and trade think-tanks and research institutes

There are a handful of think tanks and research institutes aligned with the China–Africa Economic Cooperation Pilot Zone. These could support the data-analytical functions of the Digital Services Hub and undertake research for policymakers and academics, among others.¹⁴² The China–Africa Economic and Trade Research Cooperation Research Institute is the flagship initiative, proposed by Hunan as a means of providing an intellectual support platform for the broader FOCAC and ‘eight major actions’ agenda.¹⁴³

The institute is led by Hunan University, and was jointly established by Central South University, Xiangtan University¹⁴⁴ and Hunan Agricultural University. Their mission in the context of the Hunan model of China–Africa economic relations is¹⁴⁵

to carry out scientific research on fundamental, overall, and long-term theoretical and practical issues in the development of economic and trade cooperation and provide and cultivate compound economic and trade talents (including undergraduate, master, doctoral, overseas student, executive training, etc.) for the sustainable development of China–Africa economic and trade.

One example of an agreement already signed under this initiative is the tripartite strategic cooperation agreement between the Hunan China–Africa Economic and Trade Cooperation Research Association, Jinzai Food and Zhongxiang Overseas Construction Development Co. Ltd to build a China–Africa fisheries cooperation platform in the context of the China–Africa Kenya Fishery Industrial Park.¹⁴⁶ Researchers and affiliates associated with the research and think tank initiatives will also provide consulting services to support the needs of enterprises active in the China–Africa trade. One critique of this model has been that it would have been more helpful if a Kenyan institution had been involved in co-shaping this agenda from inception.

The zone is also home to the China–Africa Technology and Trade Measures Research and Evaluation Base. The base collects, collates and analyses information on product technology-related trade measures, and informs relevant enterprises and industry associations of the latest technology trade measures in Africa. Concurrently, this agenda also plans joint research undertakings. In addition, it encourages and guides industry associations and leading enterprises to actively participate in international standardisation activities and provides support for enterprise transformation and upgrading.¹⁴⁷

142 People’s Government of Hunan Province, “CAETE Boosts China-Africa”.

143 China-Africa Economic and Trade Research Institute, “About the Institute”, <http://caeti.hnu.edu.cn/gyCAETI/yjyj.htm>.

144 Founded in 1958, Xiangtan University is a comprehensive and major national university in Mao’s hometown of Xiangtan, Hunan province.

145 China-Africa Economic and Trade Research Institute, “About the Institute”.

146 “Jointly Building the China-Africa Fishery”.

147 National Committee of the Chinese People’s Political Consultative Conference, “China’s First Research and Evaluation Base on Non-Technical Trade Measures Landed in Changsha”, November 10, 2022.

The zone is also home to the China–Africa Technology and Trade Measures Research and Evaluation Base. The base collects, collates and analyses information on product technology-related trade measures, and informs relevant enterprises and industry associations of the latest technology trade measures in Africa

China–Africa Vocational Education Federation

In his keynote speech to FOCAC 2015, in Johannesburg, Xi identified three roadblocks to development: a shortage of capital; lack of infrastructure; and a shortage of skilled labour.¹⁴⁸ The following year, the BRI's official Education Action Plan was launched. The plan has three visions:

- promote people-to-people ties;
- cultivate supporting talent; and
- achieve common development.

Its four principles are:¹⁴⁹

- focusing on nurturing people and prioritising people-to-people exchanges;
- combining government guidance with social involvement;
- realising shared growth through consultation and collaboration and fostering greater openness and cooperation; and
- promoting harmony, inclusiveness, mutual benefits and win-win outcomes.

At the broadest level, the Hunan model's links to the BRI mean the China–Africa Vocational Educational Federation, launched in 2021, will seek to achieve the same visions and principles.

Shedding light on the specifics of the Federation are its direct objectives: talent training; standards building; and capacity improvement. To realise these objectives, the agenda has three sub-initiatives: China-Africa joint training of applied talents; China-Africa vocational skill level certification; and African vocational college capacity building.¹⁵⁰

148 Shexiu Huang and Hussein Askary, "China-Africa Belt and Road Cooperation in Education: Development and Prospects", The Belt and Road Institute in Sweden, August 3, 2023.

149 People's Republic of China, State Council Information Office, "Education Action Plan for the Belt and Road Initiative", July 13, 2016.

150 China Daily, "Launch of the Central African Vocational Education Consortium", FOCAC, May 13, 2022.

Since the federation's establishment in 2021, 15 pairs of partnerships have been formed, joint training has been carried out for more than 200 African students, training and practical training has been provided to more than 300 African principals and key teachers, and construction and mechanical professional skill-level certificates have been developed successfully.¹⁵¹

China's approach to the delivery of technical and vocational training in other countries typically follows a partnership model using both local Technical Vocational Education and Training (TVET) institutions and its own international TVET training agency, Luban workshops. These form a 'replicable national brand for Belt and Road countries'.¹⁵² The first Luban workshop opened in 2016 in Ayutthaya, Thailand, home to many of Thailand's most advanced industrial zones. This Luban workshop is a partnership between Tianjin Bohai Vocational Technical College and the Phra Nakhon Si Ayutthaya Technical Vocational College. It focuses on teaching majors in mechatronics, such as digital circuits, pneumatic and hydraulic systems and system control, alongside majors in new energy vehicles, the Internet of Things and computer numerical control machining.¹⁵³ In 2018 it added a Railway Centre, in partnership with the Tianjin Railway Technical and Vocational College, and eight other Thai vocational colleges. The resulting two new majors – high-speed railway maintenance technologies and automatic control of railway signals – will allow graduates to work in the railway sector across South-East Asia. Similarly, the Luban workshop in Djibouti is a partnership between the Education Ministry of Djibouti and two Tianjin vocational colleges, the Tianjin Railway Technical and Vocational College and the Tianjin First Commercial School. Its training majors include operation and management of railways, rail engineering technology, business and logistics. Each of these four majors is certified by local education authorities. In Nigeria, a Luban Workshop was launched in November 2020 in a partnership between China's Tianjin Sino-German University of Applied Sciences and Tianjin Railway Vocational and Technical College and Nigeria's University of Abuja.¹⁵⁴

Chinese media reported in December 2021 that there were Luban workshops in more than 20 African countries in Africa, including Djibouti, Egypt, Ethiopia, Kenya, Mali, Nigeria and South Africa. At the August 2022 opening of the World Vocational and Technical Education Development Conference, hosted by Tianjin, Chinese Vice-Premier Sun Chunlan announced that China would build 20 Luban workshops with 'BRI countries' and set up 20 more vocational education training centres in Africa.¹⁵⁵ Since Luban workshops tend to teach Chinese technical standards and models, job opportunities after graduation often involve Chinese-invested projects. These include the Addis Ababa-Djibouti Railway, the first electrified railway in Africa constructed by a consortium formed by China Civil Engineering

151 China Daily, "Launch of the Central".

152 Peiyao Xia, "Luban Workshop: Empowering Technical Talents Along the Belt and Road", *People's Daily Online*, December 1, 2021. Lu Ban was a Chinese woodcraft master born in 507BCE, and is regarded as the father of Chinese carpentry and architecture.

153 Xia, "Luban Workshop: Empowering Technical".

154 "Luban Workshop in Nigeria Unveiled, Chinese Vocational Education Helps African Skills Improvement", *China Daily*, November 27, 2020.

155 Li Xuanmin, "China's Luban Workshop Creates a Pool of Skilled Workers for Developing Countries, Injects Vitality into Local Economies", *Global Times*, August 20, 2022.

Construction Corporation and China Rail Engineering Corporation.¹⁵⁶ One Zhejiang province education website describes Luban workshops as ‘an international cross-border industry-education integration, school-enterprise cooperation’¹⁵⁷ training base for skilled talent. It adds that the workshops are committed to ‘exporting advanced concepts, standards and resources of Chinese vocational education to Africa, and cultivating localized teachers familiar with welding technology, standards, and products for Kenya and talent’.¹⁵⁸

Luban workshops are not the only TVET training with which China is involved in Africa. Global Chinese firms such as Huawei and AVIC also engage in on-the-job TVET training. In Kenya, for example, AVIC International, a state-owned aviation-affiliated enterprise, signed a \$30 million agreement with the Ministry of Higher Education, Science and Technology for commissioning, installing and equipping public technical training institutions with mechanical, electrical and electronic equipment. The African Youth Innovation and Entrepreneurship Centre in Djibouti is a pilot project of the East Africa International Special Business Zone, jointly invested and developed by China Merchants Group and the Djibouti government. The centre plans to select 20 to 30 outstanding representatives from Djibouti and East Africa each year to study, receive training and participate at the centre. In the first ‘Digital Innovation and Cross-border E-commerce’ training camp, nearly 30 young African entrepreneurs from Djibouti, Ethiopia, Kenya and Uganda received training in digital technology, digital economy, entrepreneurial operations and other areas.¹⁵⁹

In the first ‘Digital Innovation and Cross-border E-commerce’ training camp, nearly 30 young African entrepreneurs from Djibouti, Ethiopia, Kenya and Uganda received training in digital technology, digital economy, entrepreneurial operations and other areas

‘China’s digital technology is developing rapidly, and we are very much looking forward to learning from China,’ Randall Carolissen, dean of the Johannesburg Business School at the University of Johannesburg, said in a media interview. Carolissen added that improved technology could help people escape poverty and build a more equal and fair society. In general, China seeks to foster an ‘engineering dividend’, one that results from its many highly qualified engineers and technicians while stimulating opportunities for China’s own industry.¹⁶⁰

156 Xuanmin, “China’s Luban Workshop Creates”.

157 Zhejiang Provincial Educational Department, “‘Luban Workshop’ Crosses the Ocean to Go to the Sea: ZME Helps the Development of VET in Africa”, May 10, 2022.

158 Zhejiang Provincial Department of Education, “‘Luban Workshop’ Crosses the Ocean”.

159 Yueying Zhu, “African Countries Strengthen Digital Skills Training”, China Merchants Group, November 4, 2022.

160 Liu Ge, “China’s Single Market Still Has Great Dividend Potential in Consumer Sectors”, *Global Times*, July 16, 2019.

In this dynamic and multi-layered picture, Hunan's China-Africa Vocational Education Federation is still nascent, and so its ultimate goals and achievements are not yet clear. However, its core visions and principles have been set out, and activities such as the Luban workshops and industry training partnerships may be good indicators of what is to come. It is thus important that African countries optimise their bargaining power and capacity to be technology and industry standard shapers at home, as much as taking on the standards of more established industrial players.

Reviewing China's interest in the Hunan model

Of the 'Nine Programmes', programmes 2 and 3 – poverty reduction and agricultural development, and trade promotion – most directly speak to the need to find a way forward for China-Africa economic ties beyond the 'Angola model'. It would seem the goal is to move towards a more non-raw-mineral/fuel basis for economic and trade ties between China and Africa. Thus far this paper has focused on exploring Hunan and some of the limitations of a Hunan model. But what is on the agenda for China, and how might African countries better understand this and use it for leveraging their own interests going forward?

China's food security ambitions

Several forces have converged to put China's historically precarious and only recently acquired food security at risk. First, trade tensions with major agricultural suppliers such as Australia and the US have led China to seek a more diverse array of agricultural providers, potentially including African partners in terms of soybean and other crops.¹⁶¹ Second, environmental stressors, including air and soil pollution, have reduced the productivity and amount of arable land.¹⁶² Third, climate change is also adversely affecting agricultural production in China, including via rising incidences of floods, droughts and pestilence.¹⁶³ Wheat and rice – both staples in China's diet – are expected to be the worst affected. Under the worst-case climate change scenario, wheat production is expected to drop by almost 10% by 2050.¹⁶⁴

Linked to and compounding adverse climate-related shocks are increasing infestations and viral outbreaks. Over the past two decades African swine flu has killed millions of hogs, and armyworm and locust outbreaks have devastated millions of hectares of crops in the north

161 Lauren Johnston et al., *China's Appetite for International Agricultural Investment: Case Studies of Kyrgyzstan, Myanmar and Tanzania* (London: Overseas Development Institute, 2021).

162 Xiaohu Gu et al., "Reduction of Wheat Photosynthesis by Fine Particulate (PM_{2.5}) Pollution over the North China Plain", *International Journal of Environmental Health Research* 28, no. 6 (2018): 635-641.

163 Rong Yu and Panmoa Zhai, "More Frequent and Widespread Persistent Compound Drought and Heat Event Observed in China", *Scientific Reports* 10, September 3, 2020. (A daily index reflecting the compound drought and heat event has been defined for the warm season based on the most recent daily temperature and drought index used in China.)

164 Wei Xie et al., "Climate Change Impacts on China's Agriculture: The Responses from Market and Trade", *China Economic Review* 62 (2020): 101-256.

of the country.¹⁶⁵ Between 2018 and 2019, some 100 million hogs were lost to swine flu, representing a quarter of the world's pig population.¹⁶⁶ At the peak of the resulting price inflation in February 2020, the price of pork was 135.2% up on the previous year.¹⁶⁷ The COVID-19 pandemic also meant some major agriculture-supplying countries limited trade in agricultural inputs such as fertiliser and in food. In addition, Russia's war on Ukraine has interrupted supply chains and led to rising food prices globally.¹⁶⁸

Such is the sense of food security pressure that in August 2020 Xi called on the Chinese people not to waste food – a call that has since become a national campaign.¹⁶⁹ This came on the back of rising animal product consumption in China in recent decades, with earlier, less prominent, exhortations to lower meat and dairy consumption.¹⁷⁰ It takes 2 400–12 600 litres of water to produce a kilogram of meat, compared to 800–1 300 litres for cereals.¹⁷¹

TABLE 3 AGRICULTURE AND FOOD SECURITY-RELATED GOALS IN THE 14th FIVE-YEAR PLAN (2021–2025) AND LONG-TERM GOALS FOR 2035

Agriculture-related goals

- Prioritise agricultural and rural development, and comprehensively promote rural revitalisation
- Improve agricultural quality, efficiency and competitiveness
- Implement rural infrastructure construction activities
- Improve the urban-rural integration development system and mechanism
- Make an effective connection between the consolidation and expansion of poverty alleviation achievements and rural revitalisation

Inaugural food security-related goals

- Overall grain production should exceed 650 million tonnes
- Preserve 120 million hectares of arable land (roughly equivalent in area to South Africa)

Source: Lauren Johnston et al., *China's Appetite for International Agricultural Investment: Case Studies of Kyrgyzstan, Myanmar and Tanzania* (London: Overseas Development Institute, 2021) 4.

This combination of forces may have helped to galvanise political will to address China's underlying and challenging structural food security concerns, in collaboration with other countries at risk of food insecurity. China's latest Five-Year Plan (2021–2025), released in March 2021, for the first time has a food security agenda (Table 3) as well as a priority rural

165 Riley Walters, "Why China's Food Crisis Could Get Worse Amid Pests, Pestilence", The Heritage Foundation, August 21, 2020.

166 "As China Recovers from COVID-19, African Swine Fever Threatens Its Pig Population", *The Week*, April 3, 2020.

167 Hallie Gu et al., "China's Corn, Wheat Imports in 2020 Reach Record Highs", *Reuters*, January 18, 2021.

168 Pamela Coke Hamilton and Janvier Nkurunziza, "COVID-19 and Food Security in Vulnerable Countries", *UNCTAD News*, April 14, 2020. Hamilton, "COVID-19 and Food Security".

169 Sal Gilbertie, "China Food Crisis? Rising Domestic Prices and Large Import Purchases Send a Signal", *Forbes*, July 28, 2020; Lily Kuo, "Operation Empty Plate: Xi Jinping Makes Food Waste His Next Target", *The Guardian*, August 13, 2020.

170 Y He et al., "Consumption of Meat and Dairy Products in China: A Review", *Proceedings of the Nutrition Society* 75, no. 3 (2016): 385–391.

171 Junguo Liu and Hubert HG Savenije, "Food Consumption Patterns and their Effect on Water Requirement in China", *Hydrology and Earth System Sciences* 12, no. 3 (2008): 887–898.

and agricultural development agenda. The plan also pushes China in the direction of greater digitisation and increased use of artificial intelligence – agendas that are being applied in agriculture.¹⁷² Hunan province is home to some of the leading related companies in China.

Africa's own dependence on imports for its consumption is the highest in the world as a share of gross domestic product. This implies that there is also a large business opportunity in fostering Africa's agricultural sector

Many developing countries are home to young – and fast-growing – populations, notably in Africa. Demand for food in such regions is likely to increase over the coming decades. Africa's own dependence on imports for its consumption is the highest in the world as a share of gross domestic product. This implies that there is also a large business opportunity in fostering Africa's agricultural sector.¹⁷³ Moreover, since the poor in developing countries are disproportionately rural, by helping to raise rural incomes via elevated rural productivity, China can also contribute to realising the Sustainable Development Goals and its own national soft-power goal to help alleviate poverty in other countries.

The export of African avocados is an early example of how agricultural trade is being encouraged from Africa to China. Kenya was the first to export avocados to China, in 2022, after export guidelines were issued by the General Administration of Customs of the People's Republic of China in 2019.¹⁷⁴ In November 2022 Tanzania signed a phytosanitary protocol with export guidelines issued by the General Administration of Customs of the People's Republic of China, and South Africa has also reached an advanced phase, with the hope that negotiations can be concluded before Xi's attendance at a multilateral summit in August 2023.¹⁷⁵

The experiences of avocado farmers and trade officials in this context and that of the bigger Hunan model warrant more focused study toward extracting lessons for other crops, and for lessons on how Africa can maximise such trade opportunities. This could include optimising approval to export to China to accelerate approval for export to new markets elsewhere. For example, after China approved Kenya's avocados, Kenya soon made similar agreements with India and Malaysia.¹⁷⁶ In this way, Africa can use the Hunan model as a mechanism in its own larger global development agenda.

172 Qin Hengde, "Digital Technologies Key to Modernization of Farm Ecosystem", *China Daily*, March 8, 2021.

173 Lilac Nachum, "Africa's Agribusiness Sector Should Drive the Continent's Economic Development: Five Reasons Why", *The Conversation*, February 17, 2023.

174 Manny Anyango, "Kenya Exports Sh7 Billion Avocados to China in Three Months", *The Star*, December 13, 2022.

175 Fred Meintjes, "South African Avocados Close In On China Access", *Fruitnet*, April 20, 2023.

176 "Kenya to Double Its Avocado Export in the Next Five Years as Demand Increases", *Farmers Review Africa*, April 5, 2023.

A focus on agriculture via Hunan offers China three more immediate benefits. First, some of the produce can be exported to China, solving some of its own food security challenges. Second, Chinese agricultural and agri-tech firms may be able to invest in the process, increasing their own profit margins and reach. Third, elevating agricultural productivity in particular was central to China's overall development and poverty eradication success. Via investment in an equivalent model of rural-weighted development abroad, China can also 'export' its own model of economic success. Deeper collaboration via the Hunan model could be a step towards that process.

Global development and economic ambition

In 2021 China marked an important development milestone – the eradication of absolute poverty.¹⁷⁷ This also marked the achievement of the first of two politically important 'centennial goals' – 'to build a moderately prosperous society in all respects'.¹⁷⁸

For China, elevating 800 million people out of poverty, according to both national and international measurements,¹⁷⁹ was 'not only an important milestone in [its] own development but also provides confidence, experience and inspiration for the vast number of developing countries, including African countries, to shake off absolute poverty'.¹⁸⁰ Following China's example, fostering higher rural incomes not only builds food security but also contributes to alleviating income-based poverty.¹⁸¹

Closer inspection finds a connection between Hunan and China's poverty alleviation milestone. Xi visited Hunan in November 2013 in a campaign of poverty alleviation that launched a 'precision poverty alleviation' agenda.¹⁸² This approach reached a new level of specificity by focusing on the needs of poverty-stricken areas – right down to the level of individuals within impoverished households.¹⁸³ The ensuing 2015 'Decision of the Central Committee of the Communist Party of China and the State Council on Winning the Fight Against Poverty' set goals for all rural residents to have access to sufficient food and clothing, education, medical care and housing by the end of 2020.¹⁸⁴

177 Bert Hofman, Lauren Johnston and Samuel Freije-Rodriguez, "China's Poverty Reduction and the Role of the World Bank", in *Poverty Reduction in China: Achievements, Experience and International Cooperation*, eds. Houkai Wei and Lei Wang (New York: Springer, 2022), 193–210.

178 Lauren Johnston, "China's Second Centennial Goal will be Easier on Some Developing Countries – and Harder on Developed Countries", SOAS China Institute, December 1, 2020.

179 World Bank, "Lifting 800 Million People Out of Poverty – New Report Looks at Lessons from China's Experience", April 1, 2022.

180 Consulate of the People's Republic of China in Johannesburg, "China and Africa Shall Share Poverty Reduction Experience to Create a Better Life for the People", March 10, 2021.

181 Yansui Liu, Yuanzhi Guo and Yang Zhou, "Poverty Alleviation in Rural China: Policy Changes, Future Challenges and Policy Implications", *China Agricultural Economic Review* (2018).

182 Yuanzhi Guo, Yang Zhou and Yansui Liu, "Targeted Poverty Alleviation and its Practices in Rural China: A Case Study of Fuping County, Hebei Province", *Journal of Rural Studies* (2019).

183 Laurence Chandy, Hiroshi Kato and Homi Kharas, eds, *The Last Mile in Ending Extreme Poverty* (Washington DC: Brookings Institution Press, 2015).

184 Qinqin Zheng and Jieyou Zhang, "Targeted Poverty Alleviation and the China Philanthropy E-Commerce Platform", Council on Business and Society, January 31, 2023.

This strategy involves the participation of the private sector. In the case of China's poverty alleviation agenda, an additional mechanism has been the China Philanthropy Platform.¹⁸⁵ The platform connects the impoverished to opportunities for skills development, income generation and other resources, and has been found to boost family incomes.¹⁸⁶ Replicating the use of e-commerce technologies and China's poverty alleviation approach via a Hunan model may be an additional means of understanding the Hunan model itself.

Hunan has also been a leader in realising the commercialisation of hybrid rice in African countries and forming whole-industry chain cooperation with non-agricultural product breeding, planting, processing and sales.¹⁸⁷ Equally, infrastructure plays a well-documented role in economic development. Hunan is home to not only China's but also one of the world's leading construction manufacturing clusters. This positions it well to proactively support China's push to invest in African infrastructure under the umbrella of the BRI.¹⁸⁸

Hunan has also been a leader in realising the commercialisation of hybrid rice in African countries and forming whole-industry chain cooperation with non-agricultural product breeding, planting, processing and sales

Overall, the Hunan model appears to be built on fostering complementarity in the next phase of development for both Africa and China. Bilaterally, sub-regionally and at the Africa-China level going forward, there should be a political economy negotiation of optimising respective interests. This would ensure that African interests, which at present are less well-resourced and far more fragmented, are sufficiently empowered.

Policy recommendations for Africa

The Hunan model as discussed here will both shape and be shaped by the broader flow of China-Africa cooperation over coming years. In the short to medium term, it seeks to help realise the 'Nine Programmes' of the first three-year plan of the China-Africa Cooperation Vision 2035. In turn, this may support increased exports to China by non-resource exporters in particular, which may also support growth, post-COVID recovery and sovereign debt sustainability. Capturing the full potential of China's efforts to foster mutual economic development from Hunan will mean not only following the evolution of the Hunan model

185 Chien-Chung Huang et al., "The Effects of an Innovative E-Commerce Poverty Alleviation Platform on Chinese Rural Laborer Skills Development and Family Well-Being", *Children and Youth Services Review* 116 (2020): 105-189.

186 Huang, "The Effects of an Innovative".

187 Tingting, Yuegui and Mengfei, "China-Africa Economic and Trade".

188 Johnston, "The Belt and Road Initiative", 40-58; Johnston and Onjala, "Why an Early Belt and Road".

over time but also ensuring relevant proactive and reactive co-shaping of the model from and by African interests. Some suggestions to deepen what has already begun are offered here.

- African bureaucrats, researchers and trade associations should invest time in understanding the substance of and Chinese interests in framing a Hunan model, and optimise the potential and trajectory of the agenda for African development. In particular, the role of African embassies and their economic divisions should be elevated to undertake the necessary steps in this regard.

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- Some aspects of the Hunan model will complement African development interests while others may compete with economies such as South Africa that have similar economic interests and structures. Setting out a competitive framework of incentives and stabilisers, alongside institutional frameworks that foster capture of related spillovers in Africa – ahead of time – may serve to make the most of it for both African and Chinese development. It may also be useful to draw lessons here from China’s own development, as well as its ties with other developing countries, such as Indonesia, the Philippines and Malaysia. There should be proactive transparency and fostering of related protocols around trade, including full awareness of trade preferences and how to reap that potential; technology standards; and phytosanitary requirements and related barriers. Here it may even be useful for sub-regional African organisations to establish ties with, for example, the Association of Southeast Asian Nations or with particular member countries to facilitate such learning and empowerment.
- Certain standards are embedded in the Hunan model, such as the need for African countries to elevate their agricultural productivity standards to export more crops to China. Moreover, in China’s TVET training offerings and in its local currency and e-commerce push there are also multiple layers of standards – technological, financial, digital payment-based, seeds used for agriculture, and so on. Working with industry associations, colleges and relevant public agencies, it may be best to set out African interests in proactively shaping any industry and other standards. FOCAC may, for example, set up a focused standards-related working group and dialogue.

- The trade facilitation aspects of the Hunan model are immense. It may make sense to raise broader awareness of CAETE and its offerings, and even have competitions and ‘wild card’ entrepreneur opportunities to travel to Hunan to foster seed funding and new areas of trade. Moreover, China is investing in trade facilitation measures for Chinese entrepreneurs, such as translation services from Chinese into languages used in Africa and digital commerce and technology-related business support services. These help to reduce the transaction costs and risks of doing business in Africa for Chinese firms. At the African end, there may be insufficient equivalent trade facilitation, for example a one-stop trade promotion hub that offers a full supply chain of trade-related services in terms of translation, legal and technological support that enable African entrepreneurs to export to and invest in China. Industry associations and sub-regional economic communities should explore the services offered to Chinese firms in the Hunan zone and evaluate how equivalent services can be provided to firms in Africa.
- The Hunan model encourages Chinese researchers to study trends in China–Africa economic relations, including ways to foster those ties directly, and offers consultancies. African research agencies should tap into this network, benefit from the research outputs and encourage an equivalent understanding of Africa–China economic flows and balances toward maximising the shared potential for development. For example, a study of the progress of African avocado exports to China could include aspects of learning from frontier exporters to speed up trade for other markets. Other research opportunities include a study of where African countries are competitors for versus joint winners of export opportunities to China, and how this impacts Africa’s own development and trade agenda; and using the approval to export a given crop to China to ensure speedier approval from other new markets.
- Just as Angola is not the only country in Africa to have shaped how China creates innovative financial instruments for accessing commodities, Hunan will not be the only province in China to determine the shape and direction of China–Africa economic ties. Guangdong province, for example, has considerable person-to-person and private sector-led trade ties across Africa, as does the town of Yiwu in Zhejiang. Hence, while what happens in Hunan over the coming years may be especially important to follow and understand, it should not be the only focus.

Author

Associate Professor Lauren A Johnston

is a Senior Researcher (Consultant), China/Africa, at the South African Institute of International Affairs and an Associate Professor at the China Studies Centre, University of Sydney. An economist by training, she specialises in China's economy and its outbound trade and investment, especially with Africa. She was an ODI Fellow in Sierra Leone, and holds a PhD in Economics from Peking University, an MSc in Development Economics from SOAS (London) and a BA/BCom (Melbourne).

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Cover image

Chinese and Ethiopian construction workers, Addis Abbaba (Per-Anders Petterson/Getty Images)

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Jan Smuts House, East Campus, University of the Witwatersrand
PO Box 31596, Braamfontein 2017, Johannesburg, South Africa
Tel +27 (0)11 339-2021 · Fax +27 (0)11 339-2154
www.saiia.org.za · info@saiia.org.za