

China's Digital Silk Road and Africa's Technological Future

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Chinese involvement in Africa's telecoms sector predates the DSR. The global advance of Chinese telecommunications firms, such as Huawei and Zhongxing Telecom Ltd (ZTE), was largely enabled by China's "go out policy," which was launched in 1999 with the aim of promoting the internationalization of Chinese companies. Projects in countries where Chinese companies have extensive operations are linked to the DSR whether or not the country is part of the BRI/DSR network.¹ Some projects of Chinese firms in Africa are only now being branded as part of the DSR, and an assessment surmises that this is happening, in part, to reap political and financial support from Beijing for these Chinese companies.² As of January 2021, of the 140 countries believed to have signed a memorandum of understanding with China to join the BRI, 40 are reportedly in sub-Saharan Africa—all of them could potentially participate in the DSR.³ Although, a recent study by Tugendhat and Voo notes that the largest financing for technology related projects in Africa by China actually predates the launch of the DSR, which raises questions as to what actually constitutes the DSR, and questions whether the DSR at this stage is largely a public relations campaign.⁴ As such it is difficult to measure what the DSR actually means for participating countries in Africa. Nonetheless, assuming that the DSR is largely a rebranding of China's ongoing engagement in the

¹ Richard Ghiasy and Rajeshwari Krishnamurthy, "China's Digital Silk Road: Strategic Implications for the EU and India," Institute for Peace and Conflict Studies and Leiden Asia Centre, August 2020, <https://leidenasiacentre.nl/en/chinas-digital-silk-road-strategic-implications-for-the-eu-and-india/>, 13.

² Robert Greene and Paul Triolo, "Will China Control the Global Internet via its Digital Silk Road?" Carnegie Endowment for International Peace, May 8, 2020, <https://carnegieendowment.org/2020/05/08/will-china-control-global-internet-via-its-digital-silk-road-pub-81857>.

³ Christoph Nedopil, *Countries of the Belt and Road Initiative* (Beijing: IIGF Green BRI Center, 2021), www.green-bri.org.

⁴ Henry Tugendhat and Julia Voo, "China's Digital Silk Road in Africa and the Future of Internet Governance," Working Paper No. 2021/50, China Africa Research Initiative, School of Advanced International Studies, Johns Hopkins University, Washington, DC. Retrieved from <http://www.sais-cari.org/publications>.

digital technology sector, albeit in a more strategic manner, then understanding the extent of China's telecom infrastructure provision in Africa provides insights into what continued engagement under the DSR label could mean for Africa.

The influx of Chinese firms into Africa's telecoms sector coincided with the continent's telecommunications revolution in the 1990s, when many African countries liberalized their telecommunications sectors and upgraded their infrastructure. Driven by mobile telephony and the use of broadband (fixed and mobile) for internet access, Africa has seen rapid development in its telecommunications sector, and this trend is set to continue. By the end of 2020, there were 495 million mobile subscribers in sub-Saharan Africa amounting to 46% of the region's population, and that figure is estimated to rise to 615m subscribers by 2025, equivalent to 50% of the region's population.

Coupled with this liberalization, the arrival of global telecom heavyweights, such as Huawei, Ericsson, Siemens, and ZTE, has been pivotal in transforming Africa's telecoms industry. Particularly significant is the role played by Chinese financing and Chinese companies in providing telecommunication infrastructure in Africa. Chinese firms such as Huawei Technologies, ZTE, and China Telecom have been instrumental in building and upgrading telecoms infrastructure, from internet backbone networks to last-mile solutions. Their infrastructure investments and affordable yet effective equipment and products have enabled Africa's mobile telecoms revolution. Chinese telecoms equipment manufacturers such as Huawei—through competitive pricing, low production costs, cost-effective equipment and solutions, and access to Chinese state-subsidized funding and support—have penetrated and dominated Africa's telecoms sector, wresting market share from major non-Chinese firms, such as Ericsson, Alcatel, Nokia, and Siemens.⁵

The “go out policy” that propelled Chinese companies into Africa aimed to promote Chinese firms' ventures in overseas markets. It has been sustained by multiple Chinese government actors, including the Export-Import (EXIM) Bank of China, the China Development Bank (CDB), and the China-Africa Development Fund. The Ministry of Commerce has provided support services to facilitate payments from the policy banks, while Chinese telecoms firms have supplied the

⁵ Roselyn Hsueh and Michael Byron Nelson, “Who Wins? China Wires Africa: The Cases of Angola and Nigeria” (paper prepared for presentation at the NYU/Giessen Development Finance Conference, New York University School of Law, New York, NY, April 9, 2013), <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.690.8265&rep=rep1&type=pdf>.

equipment and implemented the projects with host African governments.⁶ The table below lists selected Chinese-financed and -led telecoms infrastructure projects in Africa from 2010–2020.⁷

List of selected Chinese financed and led telecom infrastructure projects in Africa 2010-2020

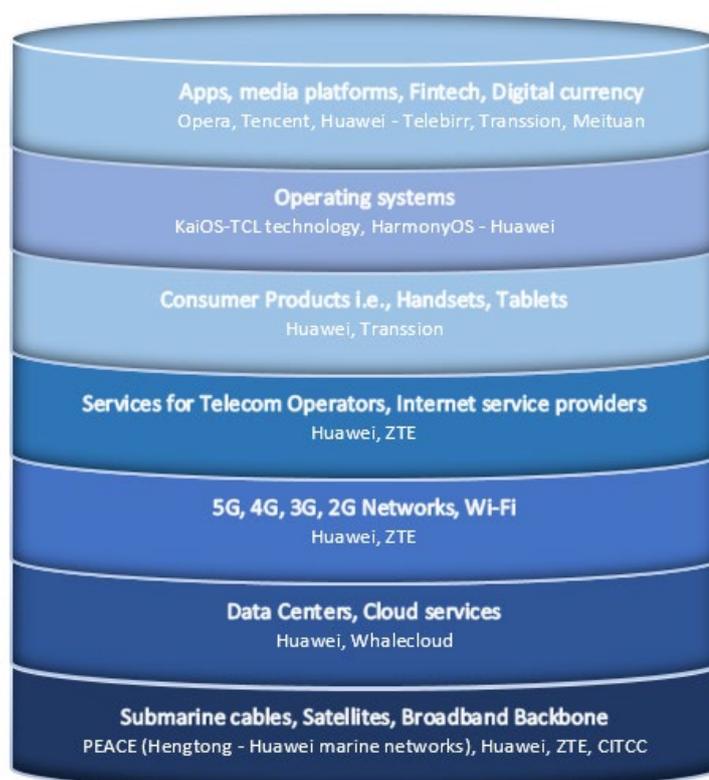
Country	Project	Financier	Borrower	Implementation	Amount	year
Tanzania	National ICT Broadband Backbone (NICTBB) Phase II	Exim bank	Tanzanian government	CITCC, Huawei	\$100m	2010
Cameroon	National broadband Network Phase I: 4G mobile broadband (LTE)	Exim bank	Cameroonian Government	Huawei	\$168m	2011
Kenya	National Optic Fibre Backbone Infrastructure (NOFBI), Phase II: E-government	Exim bank	Kenyan Government	Huawei	\$71m	2012
Nigeria	Galaxy Backbone project for National Security development system	Exim bank	Nigerian Government	Huawei	\$100m	2012
Ethiopia	Telecom Transformation and Expansion (4G network and mobile expansion) 6 Circles - ZTE	Exim bank	Ethiopian Government	ZTE	\$300m	2013
Ethiopia	Telecom Transformation and Expansion (4G network and mobile expansion) 7 Circles - Huawei	Exim Bank	Ethiopian Government	Huawei	\$800m	2013
Tanzania	National ICT Broadband Backbone (NICTBB) Phase III	Exim Bank	Tanzanian government	CITCC, Huawei	\$94m	2013
Nigeria	National Information Communication Technology Infrastructure Backbone (NICTIB), Phase I	Exim Bank	Nigerian Government	Huawei	\$100m	2013
Guinea	National Backbone fibre optics	Exim bank	Guinean Government	Huawei	\$214.2m	2014
Cameroon	National Telecommunications Broadband Network Project Phase II	Exim bank	Cameroonian Government	Huawei	\$337m	2015
Ivory Coast	Abidjan Video Surveillance Platform	Exim Bank	Ivory coast government	Huawei	\$56.7m	2016
Cameroon	South Atlantic Inter Link (SAIL)	Exim Bank	Cameroonian government	Huawei	\$85m	2017
Nigeria	National Information Communication Technology Infrastructure Backbone (NICTIB), Phase II	Exim bank	Nigerian government	Huawei	\$334m	2018
Sierra Leone	Fibre Optic Backbone Network Phase II	Exim Bank	Sierra Leonean government	Huawei	\$30m	2019

Decades on from their expansion into the African market, Chinese technology companies permeate almost all layers of Africa’s telecommunications technologies, from undersea cables, satellites, and backbone infrastructure to applications and platforms for individual consumers (Figure 1). This dominance draws African countries further into China’s technological sphere of influence.

⁶ D. Cisse, “Going Global in Growth Markets—Chinese Investments in Telecommunications in Africa” (policy brief, Centre for Chinese Studies, Stellenbosch, South Africa, April 2012).

⁷ Data were compiled from the following sources: Melanie Hart and Jordan Link, “There Is a Solution to the Huawei Challenge,” Centre for American Progress, October 14, 2020, <https://www.americanprogress.org/issues/security/reports/2020/10/14/491476/solution-huawei-challenge/>. Chinese Loans to Africa Database, China Africa Research Initiative, Johns Hopkins School of Advanced International Studies and Boston University Global Development Policy Center, <https://chinaafricaloandata.bu.edu/>.

Figure 1: China in Africa's telecom technology stack



Implications

The Impact of the DSR on Chinese firms' presence in Africa

By building core telecoms network infrastructure in many African countries, companies such as Huawei and ZTE have positioned themselves to win subsequent network upgrade contracts and provide complementary services in the contracting countries.⁸ In Tanzania, for example, China International Telecommunication Construction Corporation (CITCC), the Chinese company contracted to deploy the national ICT broadband backbone (NICTBB), constructed it to be

⁸ "China's Telecommunication Footprint," in *China in Africa—A Strategic Overview*, IDE-JETRO Report, 2009, https://www.ide.go.jp/English/Data/Africa_file/Manualreport/cia_09.html.

compatible only with Huawei routers.⁹ Such practices further entrench Chinese technological standards in African countries and afford a competitive advantage to Chinese firms, in this case Huawei, in subsequent bids to construct or upgrade telecoms infrastructure. Access to state financing support via China's EXIM bank gave CITCC, the implementing company of the NICTBB project, an "entry ticket" into Tanzania, as the NICTBB was its first and largest project in the country.¹⁰ Undoubtedly, state backing and the scope of the DSR will further consolidate the presence of Chinese firms, such as Huawei, in the region.

The continued provision of telecoms infrastructure in Africa—whether as financier, builder, owner, or operator—further advances China's broader goals related to the BRI and DSR. Through Beijing's economic interaction with Africa over the past two decades, Chinese enterprises had already made inroads into Africa's ICT sectors, and continued provision of ICT infrastructure provides further opportunity to expand and maintain their dominance in Africa. With the DSR, Chinese enterprises in the telecommunications sector can expand and scale up operations in the global south, and this has been noted as one of the driving forces of the DSR.¹¹ Companies such as Huawei, ZTE, China Telecom, and China Mobile all stand to benefit greatly from the DSR advancing their corporate interests along with the state's as they facilitate the construction of data centers, submarine cables that are being laid alongside the physical BRI projects in transport and energy sectors, and other projects. State support and financing enables Chinese enterprises to meet not only the telecommunications infrastructure needs of African countries but also their financing needs, enabling Chinese firms to pursue their corporate interests, African countries to meet their needs for infrastructure and associated financing, and the Chinese state to achieve its strategic goal of strengthening its engagement in the region while advancing its ascent to global ICT leadership.

The EXIM bank model of financing that enables the use of Chinese suppliers and equipment creates further inroads for Chinese tech firms' dominance in African countries, which arguably allows them to set the standards and norms in multiple technology sectors. An assessment of Huawei's access to

⁹ Veda Vaidyanathan and Jumanne Gomera, "Power and Communication Infrastructure in China's Infrastructure Development," in *Africa: An Examination of Projects in Tanzania and Kenya*, ed. Veda Vaidyanathan (Delhi: Institute of Chinese Studies, 2019).

¹⁰ Huib Huyse Makundi and Patrick Develtere, "Cooperation between China and Tanzania on ICT: Fish, Fishing Tackle or Fishing Skills?" *Journal of Chinese Economic and Business Studies* 14, no. 2 (2016): 129–149, doi: 10.1080/14765284.2016.1174459.

¹¹ Jorge Malena, *The Extension of the Digital Silk Road to Latin America: Advantages and Potential Risks* (Council on Foreign Relations, CEBRI Brazilian Centre for International Relations).
<https://www.cfr.org/blog/extension-digital-silk-road-latin-america-advantages-and-potential-risks>.

state funding concludes that the Chinese company leverages state financial support to underbid its competitors.¹² The study notes that “iron triangle loans” to Huawei’s customers (i.e., loans provided by Chinese state-owned banks, namely, the CDB and the EXIM bank) give Huawei an advantage in bidding, as its competitors struggle to compete with the state-subsidized financing that benefits Huawei’s customers.¹³ These loans are granted at relatively low interest rates and terms that commercial banks often cannot match. The attractive financing enables Huawei’s customers to embark on projects without expending their cash reserves. Uptake of the so-called iron triangle loans is highest in Africa, where governments and their state-owned enterprises across 24 countries have taken up to an estimated 57 loans totaling US\$4.7 billion to fund Huawei-implemented telecoms infrastructure projects in their countries, with Ethiopia receiving one of the largest telecoms investments from China.¹⁴

Although Huawei has suffered setbacks globally as a result of U.S. sanctions and a campaign to block its access to global markets for 5G network infrastructure, the firm is still set to take center stage in the rollout of the technology in Africa. Countries including Kenya, South Africa, and Lesotho have contracted with Huawei to provide their 5G networks. With Chinese tech giants such as Huawei, ZTE, Tencent, Alibaba, Baidu, China Telecom, and China Mobile providing tech solutions in developing countries, they are increasingly involved in and, in some cases, driving technological development in these countries, setting the stage for dependence on Chinese technology systems and providing an opportunity to set technological standards.

There is also a supply-and-demand logic to China’s dominance in Africa’s telecoms sector. China is an eager partner to Africa, as it clearly wants to expand opportunities for its firms’ global operations and acquisition of new markets and technology, especially as some Chinese companies are losing access to developed markets like Australia, the United States, and the United Kingdom. For their part, African countries need financing and expertise to develop their telecoms sectors and infrastructure, but, beyond China, the supply has been limited, so they have turned to China as a willing partner. In the case of Tanzania’s NICTBB, the country made proposals to several donor agencies, including the World Bank, but China was the only willing financier of the project to

¹² Melanie Hart and Jordan Link, “There Is a Solution,” 10.

¹³ Melanie Hart and Jordan Link, “There Is a Solution,” 10.

¹⁴ Melanie Hart and Jordan Link, “There Is a Solution,” 11.

develop a critical broadband backbone to significantly improve connectivity in Tanzania and the East Africa region.¹⁵

A recent assessment asserts that China's export finance model is changing the norm, as contracting countries now view the availability of government-backed financing as an important component in bid evaluation.¹⁶ Furthermore, China's EXIM bank financing model is forcing other countries' export credit agencies to defensively change their policies to maintain access to large global markets.¹⁷ As in other infrastructure sectors, this practice has long-term implications for other foreign technology firms and their respective industries.

BRI projects and, by extension, DSR projects are largely driven by government-to-government initiatives and backed by concessional lending agreements that favor Chinese contractors, which undoubtedly advantages Chinese firms (although these practices are by no means exclusive to China). Additionally, it has been noted that opaque procurement processes in BRI projects preclude the participation of foreign firms;¹⁸ a recent study notes that over 60% of Chinese-funded projects under the BRI have been awarded to Chinese firms. Because the implementation of projects under the BRI and, by extension, the DSR is tied to Chinese contractors and conducted via a largely closed bidding process, Chinese companies, such as Huawei, benefit immensely and further cement their dominance in Africa. This does not completely prevent the participation of local firms, whose knowledge of the local context and connections to local administrative authorities are advantageous, but the disparity in technological capacity between Chinese and local firms in Africa essentially keeps the latter from participating at the higher end of the value chain, where they cannot compete with Chinese firms.

Security implications of Chinese technology provision in Africa

The clear ties of many Chinese companies to the Chinese government have been a source of concern for many policymakers—particularly the implications of these links for cybersecurity and physical security. For example, the U.S. government has repeatedly claimed that Huawei is an extension of the Chinese Communist Party and can use its equipment to collect intelligence, steal intellectual

¹⁵ Huib Huyse Makundi and Patrick Develtere, "Cooperation between China and Tanzania," 137.

¹⁶ U.S. Export-Import Bank, *Report to the U.S. Congress on Global Export Credit Competition* (June 2019), ii.

¹⁷ U.S. Export-Import Bank, *Report to the U.S. Congress*, ii, 6.

¹⁸ Economist Intelligence Unit, "Participation of Foreign Firms in the BRI," June 19, 2018, <https://www.business.hsbc.com/belt-and-road/participation-of-foreign-firms-in-the-bri>.

property, and monitor critics on behalf of the Chinese government.¹⁹ Despite being a private company, Huawei, because of its ties to the Chinese government evidenced in its access to state financial support and its ownership model,²⁰ has been subject to outright bans on bidding for contracts in some developed states, including the United States, Canada, and Australia. Similarly, countries such as France, Germany, Japan, and the United Kingdom have sought to limit their local network operators' future engagement with Huawei based on the possibility of cybersecurity breaches and concerns about Huawei's links to Beijing. These concerns have not drawn similar reactions from most African governments, despite allegations of China's hacking into computers at the African Union's headquarters in 2018.²¹ Rather, African countries are pragmatic in their approach, placing access to infrastructure above security risks as they continue to partner with Chinese firms such as Huawei on ICT development projects. For example, the Ivorian government in October 2020 partnered with Huawei in designing its national digital economy strategy, further engaging the Chinese firm to assist with its broadband development strategy.²²

Further investment in technology infrastructure or DSR-related projects in Africa has the potential to enhance digital connectivity on the continent. Digital technology infrastructure can help African countries achieve the goal of universal access, participate in the global digital economy, catalyze the growth of small and medium enterprises in the digital space, improve productivity and services in various sectors (including agriculture and finance), and enhance the provision of health care, disaster management, and logistics. Chinese provision of digital infrastructures and solutions such as the Smart City and Safe City initiatives promise bundled solutions to address a wide range of issues from terrorism to crime to e-government gaps. An example is the recently announced Chinese-funded 'Smart Burkina' project which consists of the installation of fiber optic network cables to enhance digital connectivity and facilitate e-government as well as the installation of a

¹⁹ David Sacks, "China's Huawei Is Winning the 5G Race. Here's What the United States Should Do to Respond" (blog), Council on Foreign Relations, March 29, 2021, <https://www.cfr.org/blog/china-huawei-5g>.

²⁰ Henry Tugendhat and Julia Voo, "China's Digital Silk Road in Africa and the Future of Internet Governance," Working Paper No. 2021/50, China Africa Research Initiative, School of Advanced International Studies, Johns Hopkins University, Washington, DC. Retrieved from <http://www.sais-cari.org/publications>. Balding, Christopher and Clarke, Donald C., Who Owns Huawei? (April 17, 2019). Available at SSRN: <https://ssrn.com/abstract=3372669> or <http://dx.doi.org/10.2139/ssrn.3372669>

²¹ Ghalia Kadiri and Joan Tilouine, "A Addis-Abeba, le siège de l'Union africaine espionné par Pékin," *Le Monde*, January 26, 2018, https://www.lemonde.fr/afrique/article/2018/01/26/a-addis-abeba-le-siege-de-l-union-africaine-espionne-par-les-chinois_5247521_3212.html.

²² Otiato Opali, "Côte d'Ivoire strengthens ICT sector with Huawei" *China Daily*, October 13, 2020, <https://www.chinadaily.com.cn/a/202010/13/WS5f84f183a31024ad0ba7e397.html>

surveillance system to address insecurity and crime amidst a terrorist insurgency in Burkina Faso.²³ The provision of digital infrastructure will enable African countries to exploit the opportunities that digital technologies provide to enhance economic growth; for many countries, it also represents an opportunity to diversify their economy away from dependence on resources such as oil and gas. However, the use of such surveillance technologies should be governed and subject to oversight mechanisms in order to mitigate the risks of using such technologies beyond addressing crime and terrorism to purposes that restrict civil liberties and undermine democratic processes.

A lack of support from other major donors in the development of critical ICT infrastructure in Africa can be said to have opened the door for Beijing's taking the leading role in developing such infrastructure on the continent. The availability of financing from China's EXIM bank and the competitive pricing for high-quality products offered by Chinese companies such as Huawei (in comparison to counterparts such as Ericsson, Alcatel, and Cisco) further entice African governments and ensure that they continue to work with Chinese technology firms. Many African countries still lack basic telecommunication infrastructure or need to upgrade their infrastructure to ensure better connectivity and broadband penetration, so they welcome Chinese companies such as Huawei despite concerns about security risks, which do not resonate as strongly in Africa. In the absence of low-cost and viable alternatives, African governments prioritize access to cost-effective, high-quality telecom equipment and infrastructure above security risks; as a Foreign Policy report headline puts it, 'for Africa, Chinese-Built internet is better than no internet at all'.²⁴

The DSR's impact on Africa's digital landscapes, privacy, and broader internet governance

The development of scientific capacity in participating developing countries is an integral component of the BRI,²⁵ through which the local private sector benefits from capital inflows as well as Chinese tech expertise. At the same time, those countries increasingly depend on China in certain strategic sectors. Chinese companies gain access to massive amounts of metadata that will give them

²³ Fatma Bendhaou, "Burkina Faso: Launch of the Smart Burkina Project to fight against Insecurity and Crime – Funded by a chinese loan," *Anadolu Agency*, July 8, 2021, <https://www.aa.com.tr/fr/afrique/burkina-faso-lancement-du-projet-smart-burkina-pour-lutter-contre-lins%C3%A9curit%C3%A9-et-la-criminalit%C3%A9/2298255>

²⁴ Amy Mackinnon, "For Africa, Chinese Internet is better than no Internet at all", *Foreign Policy*, March 19, 2019, <https://foreignpolicy.com/2019/03/19/for-africa-chinese-built-internet-is-better-than-no-internet-at-all/>

²⁵ C. Bai, "Road to Innovation," *Bulletin of Chinese Academy of Sciences* 32, no. 3 (2018): 130–131.

a further advantage in better tailoring their products and services to consumers, allowing them to gain influence to shape developments and, potentially, policies in these markets. Furthermore, the possibility that such data could be passed on to African states with authoritarian tendencies to subvert democratic processes or control citizens is also a concern. Take, for instance, the cases of Zambia and Uganda where, according to a Wall Street Journal report, Huawei employees allegedly aided government officials to spy on political opposition members.²⁶ Thus, the implications of reliance on Chinese technology abound.

Chinese technological exports to Africa comprise a wide range of products and services, including, but not limited to, telecom network infrastructures, surveillance, smart city infrastructures, data centers, digital partnerships with higher education institutions, R&D and innovation labs, and capacity development. China's digital technology exports can be used for various purposes that benefit African economies, such as enhancing connectivity and enabling participation in the global digital economy, as well as for purposes that undermine democracy and restrict civil liberties. The motives for the procurement and deployment of digital technology from China by democratic African countries that have active civil society organizations and whose governments respect the rule of law—such as Ghana, Botswana, and Mauritius—may differ and have different implications than those of African states with authoritarian tendencies, where such technologies could be utilized to curtail political opposition and civil society.

China's dominant involvement in Africa's telecommunications landscape has raised concerns that the importation of its technology into Africa could lead to African countries' adopting Chinese internet and technology governance norms. These concerns stem from the Chinese government's own practice of internet control, censorship, and its advocacy in the UN forum for closed, state-based internet sovereignty and technology governance.

Widespread access to the internet and mobile phones can be an important tool for opposition and civil-society political groups in advancing democracy and human rights. Far from being unmitigated positives, however, the internet and mobile telecommunications also can be used and controlled to undermine democracy and civil liberties. Regimes with authoritarian/autocratic tendencies—Egypt under Mubarak, Ethiopia, Zambia, and Uganda—have restricted internet connectivity, blocked

²⁶ Joe Parkinson, Nicholas Bariyo and Josh Chin, "Huawei's Technicians helped African Governments spy on Political Opponents", *Wall Street Journal*, August 15, 2019, <https://www.wsj.com/articles/huawei-technicians-helped-african-governments-spy-on-political-opponents-11565793017>

social media, censored, and monitored the flow of information among their citizens and between their citizens and the outside world in the hope of containing potential forces of political opposition.²⁷

On the one hand, the Chinese provision of telecoms infrastructure could be said to have fostered citizen participation, as its network technologies in Africa have enhanced connectivity, which has helped citizens coordinate and share information for collective action, such as protests and demonstrations. Existing studies support this conclusion, as places with better mobile connectivity are more likely to experience protests.²⁸ On the other hand, services and technologies procured from Chinese firms have been used to suppress collective action, protests, and opposition movements against the government in Ethiopia, Uganda, and Zambia.

Two points merit attention in assessing the implications of continued Chinese provision of technology infrastructure for privacy and broader internet governance in Africa. First, China has no monopoly on supplying technology and services that undermine democracy and suppress civil liberties in Africa, as seen in Ethiopia, where technologies of surveillance and censorship have reportedly been supplied to the Ethiopian government by European as well as Chinese firms.²⁹ These technologies have been used to limit access to information, curtail freedom of expression and association, and suppress political opposition. Seeing that the behavior of Chinese companies in host African countries is not altogether different from that of their Western counterparts from liberal democracies, it is an open question to what extent Chinese private companies are actively promoting the interests of the Chinese government as opposed to their own corporate interests in maximizing profit and competing in those markets.

²⁷ Christopher Rhoads and Geoffrey A. Fowler, "Egypt shuts down internet, cellphone services", *Wall Street Journal*, January 29, 2011,

<https://www.wsj.com/articles/SB10001424052748703956604576110453371369740>; Will Brown, "Ethiopia's civil war: 'We left them to die in their hospital beds. I don't know how I will face God,'" *Telegraph*, November 21, 2020, <https://www.telegraph.co.uk/news/2020/11/21/left-die-hospital-beds-dont-know-will-face-god/>; Freedom on the Net 2021, Uganda, <https://freedomhouse.org/country/uganda/freedom-net/2021>

²⁸ Francesco Lacoella et al., "Chinese Official Finance and Political Participation in Africa," *European Economic Review* 136 (2021), 103741, <https://doi.org/10.1016/j.eurocorev.2021.103741>.

²⁹ Human Rights Watch, "*They Know Everything We Do*": *Telecom and Internet Surveillance in Ethiopia*, March 25, 2014, <https://www.hrw.org/report/2014/03/25/they-know-everything-we-do/telecom-and-internet-surveillance-ethiopia>.

Second, while on the one hand, China has not actively promoted inclusive information societies to African governments with authoritarian tendencies, on the other hand, it can hardly be said to have imposed its own model on those countries. Its current provision of ICT infrastructure in Africa has not discriminated between African states with authoritarian tendencies and those that are more democratic, indicating that its engagement in the sector, particularly as it relates to finance, serves more the diplomatic purpose of strengthening ties with key African partners than the strategic aim of imposing its own model of technology sovereignty.³⁰ Although, a Freedom House report details a series of trainings offered to media elites and government officials of BRI-participating countries on “*new media or information management*,” trainings it surmises are a medium for Beijing to cultivate a following of its internet policy model.³¹ The extent to which these trainings influence participating countries’ policies on internet governance is however unclear.

Like its economic model, Beijing’s version of internet governance norms appeals to some African governments that want to leverage ICT for economic development while retaining strict control of the internet and how it is used. For example, in response to the use of social media to organize and facilitate the #Endsars protests in October 2020, the Nigerian government proposed the regulation of social media (among other measures that essentially sought to suppress demonstrations and opposition to the government).³² Nigeria’s Minister of Information, Culture, and Tourism, Lai Mohammed, called for a social media policy and the use of technology to dominate social media, citing China’s censorship and regulation of social media and the internet as a model that could be adopted. He also mentioned the country’s need to acquire such technologies to dominate social media and censor information.³³ The Nigerian government’s recent ban of Twitter and its reported consultation with the Cyberspace Administration of China (which oversees China’s cybersecurity

³⁰ Iginio Gagliardone, “*The Impact of Chinese Tech Provision on Civil Liberties in Africa*”, South African Institute of International Affairs Policy Insights 99, December 2020, <https://saiia.org.za/research/the-impact-of-chinese-tech-provision-on-civil-liberties-in-africa/>.

³¹ Adrian Shahbaz, “Freedom on the Net 2018. The Rise of Digital authoritarianism. Fake news, Data collection and the Challenge to Democracy”. <https://freedomhouse.org/report/freedom-net/2018/rise-digital-authoritarianism>

³² Yomi Kazeem, “Nigerians Are Bracing for Another Government Attempt to Regulate Social Media after National Protests,” *Quartz Africa*, November 3, 2020, <https://qz.com/africa/1926334/endsars-nigerian-government-looks-to-regulate-social-media/>; Human Rights Watch, Nigeria, “Punitive Financial Moves against Protesters,” November 13, 2020, <https://www.hrw.org/news/2020/11/13/nigeria-punitive-financial-moves-against-protesters>.

³³ “#EndSARS: We need Technology to Regulate Social Media, Nigerian Government Says” Sahara Reporters, New York, October 27, 2020, <http://saharareporters.com/2020/10/27/endsars-we-need-technology-regulate-social-media-nigerian-government-says>

and digital economy initiatives) regarding the implementation of a Chinese-style firewall further heighten concerns that the country intends to adopt China's model of internet governance.³⁴ A recent Freedom House Freedom on the Net report on internet access, freedom of expression, and privacy issues notes that, of the 65 countries assessed, 26 had experienced overall declines in internet freedom, with the biggest declines in Africa found in Egypt, Kenya, and Nigeria. These developments validate concerns about African countries adopting China's model of internet sovereignty as the model is gaining traction in some African countries.

These African governments' demands for surveillance technologies and other technologies that raise concerns about encroachment on civil liberties is being met by companies willing to provide such equipment and services, regardless of the firms' countries of origin or ownership. Case in point is Ethiopia, where services and technologies offered by firms based in Italy, the United Kingdom, and Germany aided the Ethiopian government in censoring dissent and surveilling its political opponents.³⁵ As such, home country governments of these firms, whether in China or elsewhere, should regulate the export of such technologies. One such export control measure is the Wassenaar arrangement.³⁶ Unlike developed democracies such as the United States, United Kingdom, Germany, France, and Italy, who are members of the Wassenaar arrangement on export controls for conventional arms and dual use goods and technologies and can restrict exports of or apply pressure on their firms not to provide such technologies that limit civil liberties to other countries, that is not the case with China, as it is not a member to the arrangement. Arrangements such as the Wassenaar arrangement are indeed crucial but are only effective to the extent that they are complied with. The Wassenaar arrangement is currently not bound by a treaty and as such there are no formal mechanisms to enforce compliance.

Ultimately, while Chinese firms or firms from other developed democracies can provide digital technologies, how these technologies are deployed is largely up to the African governments. Civil society and government oversight mechanisms also have a role to play in how these technologies are utilized and their bearing on civil liberties. Active civil society can challenge the implementation

³⁴ Socrates Mbamalu, "Presidency Meets with China's Cyber Regulator to Build Nigerian Firewall," Foundation for Investigative Journalism, June 6, 2021, <https://fij.ng/article/exclusive-presidency-meets-with-chinas-cyber-regulator-to-build-nigerian-internet-firewall/>.

³⁵ Iginio Gargliardone, "Going beyond the stereotypes: China's digital Infrastructure in Africa", In FOCAC AT 21: Future trajectories of China-Africa relations, China Foresight, October 2021, LSE Ideas, <https://www.lse.ac.uk/ideas/Assets/Documents/reports/LSE-IDEAS-FOCAC-at-21.pdf>

³⁶ Wassenaar Arrangement, <https://www.wassenaar.org/>

of a model of media and internet governance that restricts civil liberties. A case in point is Eswatini, where civil society activists are pursuing legal action against telecoms operators MTN, Eswatini Mobile, and Eswatini Post in order to get the companies to restore internet services following an internet shutdown ordered by the Eswatini communications commission, in an effort to suppress recent demonstrations in the African country.³⁷

The DSR undoubtedly presents opportunities and risks for participating countries in Africa. For China, though, the DSR will almost surely help Beijing consolidate its strategic aims and strengthen its influence in Africa.

³⁷ “Statement: Internet Shutdown in E-Swatini challenged in the High court” *Southern Africa Litigation Centre*, July 5, 2021, <https://www.southernafricalitigationcentre.org/2021/07/05/statement-internet-shutdown-in-eswatini-challenged-in-the-high-court/>