

Tugendhat, Henry; Voo, Julia

Research Report

China's Digital Silk Road in Africa and the Future of Internet Governance

Policy Brief, No. 60/2021

Provided in Cooperation with:

China Africa Research Initiative (CARI), School of Advanced International Studies (SAIS), Johns Hopkins University

Suggested Citation: Tugendhat, Henry; Voo, Julia (2021) : China's Digital Silk Road in Africa and the Future of Internet Governance, Policy Brief, No. 60/2021, China Africa Research Initiative (CARI), School of Advanced International Studies (SAIS), Johns Hopkins University, Washington, DC,
<http://www.sais-cari.org/publications-policy-briefs>

This Version is available at:

<https://hdl.handle.net/10419/248239>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

POLICY POINTS

There is no strong evidence of the DSR or Chinese lending relating to African support at the ITU. Explanations for African support at the ITU are either that China has successfully convinced African counterparts of the importance of their proposal through other diplomatic means or many African countries may consider China's propositions to be innately appealing due to their own domestic political considerations.

Chinese lending for technology or DSR-related loans was actually much greater before the initiative was launched in 2015, than after.

China's Digital Silk Road in Africa and the Future of Internet Governance

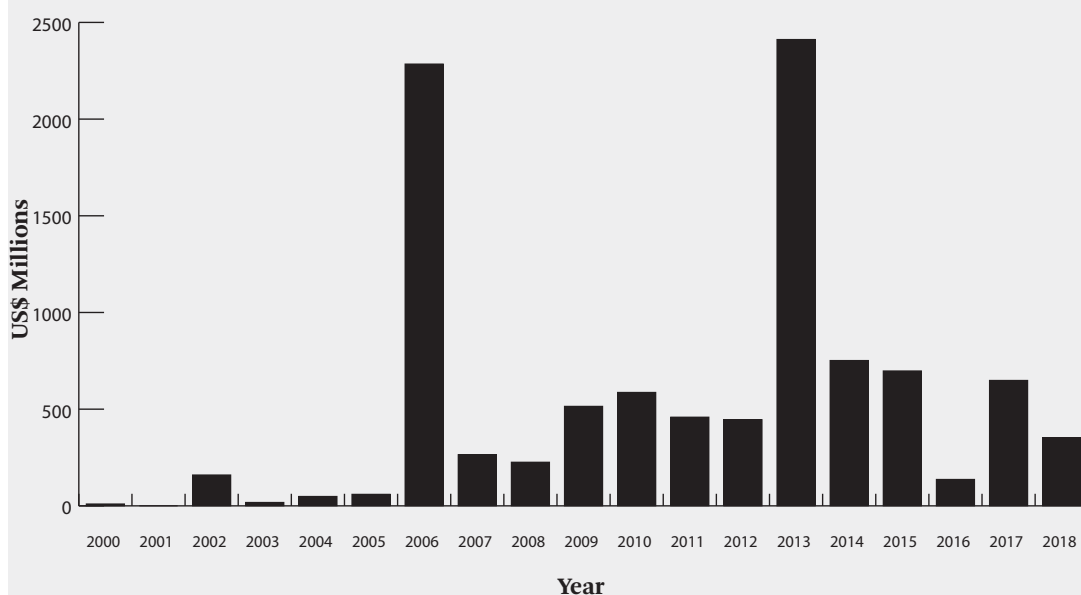
Henry Tugendhat and Julia Voo

THIS STUDY OFFERS A PRELIMINARY ANALYSIS OF WHAT the Digital Silk Road (DSR) entails in Africa. We seek to understand its effectiveness as a policy initiative by measuring its relationship to the Chinese government's promotion of "cyber sovereignty". We focus on a series of proposals made by Chinese telecommunications firms at the International Telecommunications Union (ITU) between September 2019 and May 2020, and the subsequent public statement of support they received from a group of African countries in July 2020. We compare this with Chinese policy bank lending for technology projects in Africa that would meet the definition of the DSR's agenda. To this end we gathered data from as many publicly available sources as possible on Chinese loans for technology-related projects between 2000-2018. We find that Chinese lending for technology projects in Africa was actually greater before the launch of the DSR than after. We also find that there is very little relationship between Africa's loan-recipient countries and those who made public statements of support for Huawei at the ITU. Lastly, we find that despite their significance as a voting bloc Africa has made relatively few engagements at the ITU.

WHAT IS THE DIGITAL SILK ROAD?

IN 2015, CHINA ARTICULATED ITS BELT AND ROAD INITIATIVE (BRI) – an overarching international strategy to connect Asia with Africa and Europe via land and maritime networks with the stated goal of regional integration, increased trade, and economic growth. The Chinese government articulated a need for: "bilateral cross-border optical cable networks at a quicker pace, plan transcontinental submarine optical cable projects, and improve spatial (satellite) information passageways to expand information exchanges and cooperation."¹ One part of the BRI is the DSR, presented as both a boon to Chinese tech companies and a form of support for developing country partners.

Africa is a key partner for China's BRI, and therefore China's digital interests too. According to China's BRI website, the Chinese government has signed 46 bilateral cooperation agreements with African countries. In 2016 Chinese media reported that China had concluded Memorandums of Understanding with 16 countries on DSR construction. However, there is no clarification on what DSR membership actually

Figure 1: Chinese Technology Infrastructure Loan Disbursements by Year, 2000-2018

Source: Author's calculations based on gathered loans data.

means in practice for participating countries. As such, the notion of “DSR countries” that has been articulated in Chinese policy documents which is both a subject of pride and terror - depending on one’s affiliations - is difficult to measure.

Let’s shed some light on this topic. Firstly, we know that loans are a key facet of the DSR. Loans are both a means of supporting Chinese firms’ growth into foreign markets, as well as a means of building goodwill with foreign countries who make use of the loans. Loans can thus simultaneously represent political priorities for Chinese policy makers and potential soft power gains among debtors. Secondly, we know that Chinese foreign policy has grown increasingly focused on influencing global standards bodies in recent years. This is due in part to China’s industrial policy and global ambitions for technology leadership and developing country partners play an important role in this strategy.

CHINA’S FINANCING OF DIGITAL PROJECTS IN AFRICA

BASED ON OUR ANALYSIS OF CHINESE policy bank loans in Africa between 2000 and 2018, technology-related finance most frequently involved Huawei as a contractor both by number of loans and by value of loans. As such, the loans data we have gathered sheds new light on Huawei. If Huawei really is a private company as it claims, then it is significant for being given greater financial support from Chinese policy banks than any of the technology-focused Chinese state-owned enterprises (SOEs) in Africa. This is highly unusual, since the vast majority of Chinese

lending in Africa that contracts Chinese firms supports SOEs.

Loans can shed light on China’s strategic priorities. For example, we are able to see which countries received the most loans, and what years most loans were disbursed. We found that Ethiopia was the largest loan recipient, having accrued just over US\$ 3.5 billion in telecommunications-related loans from the Chinese government. Roughly US\$ 2.7 billion of those loans was spent on projects contracted out to ZTE, and the remaining amount to projects contracted

out to Huawei.

Notably, the largest amounts of technology-related loans were actually disbursed before the launch of the DSR in 2015. This suggests that the DSR may serve as a “rebranding” of pre-existing Chinese engagements in Africa, much like the BRI. It is also surprising that technology-related loans seem to have decreased since 2015, given that this is one of China’s principal mechanisms for offering development assistance.

INFLUENCING INTERNATIONAL DIGITAL TECHNICAL STANDARDS

ONE OF THE AMBITIONS OF THE DSR is to promote Chinese standards at international bodies. The ITU is a multilateral institution based on a one-country, one-vote system, which therefore allowed us to measure relationships between the countries that received Chinese financial assistance for its technological developments and the countries that expressed support for Chinese proposals at the ITU.

In particular, we focused on proposals submitted to two ITU working groups by Chinese firms, academics, and government representatives. The Chinese representatives called on ITU member states and their firms to start work on a new internet protocol, which they called “New IP”. They argued that the world’s current internet protocol of TCP/IP would not be capable of keeping pace with the speed of package transfers needed in the upcoming developments of 5G technologies. In essence, they argued that if TCP/IP protocols are incapable of transferring

data packages fast enough then this would pose a risk to people dependent on 5G technologies; such as passengers of driverless cars or patients in remote surgery operations.

The technical merits of this argument are beyond the scope of this study, but the New IP proposal was politically significant for two reasons. Firstly, in a paper written by the Chinese firm Huawei, New IP involved a discussion of “Many Networks”.² Critics interpreted this to be a reference to China’s desire to establish control over information flows according to sovereign borders; in other words, although the paper lacked concrete details about Many Networks’ implementation, it sounded like a call for cyber-sovereignty.

Secondly, and perhaps more significantly, the world’s current internet protocol (TCP/IP) has evolved under the control of an institution known as the Internet Engineering Task Force (IETF) since 1986. This is a non-profit organization, based in the US, in which agendas are loosely driven by working groups comprised of anybody who would like to join them. Typically, private sector corporations have the most to gain from participation at the IETF, and the funds necessary to subsidise technical experts to drive these working groups; as such it is overwhelmingly dominated by North American and European tech corporations. The New IP proposals were therefore not just saying that the TCP/IP system should be retired. By submitting these proposals at the ITU, Chinese actors also implied that any future protocols should be developed and governed at the ITU under a one country one vote system and not at the IETF which is evidently less appealing to many countries in the world that lack big tech corporations.

The decision to adopt the Chinese proposal studying New IP will be decided when the ITU’s World Telecommunication Standardization Assembly next meets in March 2022. In July 2020, two groupings of African countries submitted public statements of support for the New IP work item in the two working groups where New IP was proposed. This was the only contribution over the 11 years of this ITU working groups that we studied submitted by an alliance of African countries speaking out directly in favor of a proposal submitted by China. Some of the countries had never even participated in those ITU working groups previously, such as Tanzania and South Sudan.

In comparing these countries with the loans data discussed in the previous section, we found very little relationship between the signing of a DSR agreement, the disbursement of DSR-related loans, and the propensity to support China at the ITU. Most countries that received DSR-related loans did not join the statement of support for New IP. The loudest silence was from

Ethiopia who we found to be the largest recipient of Chinese technology-related loans since 2000 but was absent from the alliance in support of New-IP.

Nevertheless, it is possible that many more African countries may support the proposal to study New IP over the ITU’s next study period when they vote in March 2022. If the Chinese proposals to study New IP pass, the relevant Study Groups would then commit to study and develop a new protocol for the internet that is subsequently governed by the sovereign states that are represented there.

However, it is important to stress that this would not mean that New IP would de facto replace TCP/IP. Firstly, governance and technological developments of TCP/IP firmly remain under the control of the IETF, and there is a consensus among Western actors who hold the most power over these developments that these processes should not be transferred to the ITU. And secondly, if New IP is released as a new internet protocol, it would be up to the market to decide the extent to which New IP is adopted; either in parallel to TCP/IP or as a replacement. These hypothetical next steps are beyond the scope of this paper, but if the proposals to study New IP pass at the ITU in March 2022 then it would at least represent a diplomatic success for China and the supporters of this proposal.

CONCLUSIONS

CHINA IS OPEN ABOUT ITS DESIRE for cyber sovereignty and for this path to be respected by the international community. However, the diplomatic mechanisms by which China aims to shape this debate are unclear. Our analysis of China’s policy documents describing the ambitions and scope of the DSR yielded little insight into how much money has been disbursed for the DSR so far, whether it has a timeline, what its financing mechanisms are, or even what its geographical scope is. Nevertheless, by leveraging publicly available data on Chinese technology loans to Africa we were able to make several interesting observations.

Firstly, there is no strong evidence of the DSR or Chinese lending relating to African support at the ITU. This is important, because by ruling out loans as an explanation for African support at the ITU we are left with two possibilities. Either China has successfully convinced African counterparts of the importance of their proposal through other diplomatic means; this could be the subject of further research. Or a more likely scenario is that many African countries may consider China’s propositions

to be innately appealing due to their own domestic political considerations.

Secondly, we found that Chinese lending for technology or DSR-related loans was actually much greater before the initiative was launched in 2015, than after. This decline in lending is commensurate with a broader decline in Chinese lending to Africa that began in the middle of the second decade of this century. However, this raises questions about what defines the DSR and who will finance its construction if it is more than just an abstract concept. It is possible that it is largely a successful public relations campaign at this stage.

Lastly, by looking at the ITU data, we found that despite their voting power in a one country, one vote system such as the ITU, African countries seldom engage. Although the ITU still has no significant power over how the internet is governed, these collaborations between some African countries and China represent a growing coalition of discontent towards the current multistakeholder model of internet governance. ★

ENDNOTES

1. The State Council, the People's Republic of China, "Full text: Action plan on the Belt and Road Initiative," (March 30, 2015), http://english.www.gov.cn/archive/publications/2015/03/30/content_281475080249035.htm.
2. Zhe Chen *et al.*, "New IP Framework and Protocol for Future Applications," *NOMS 2020 - 2020 IEEE/IFIP Network Operations and Management Symposium*, April 2020, <https://ieeexplore.ieee.org/document/9110352>.

AUTHORS

HENRY TUGENDHAT is a Ph.D. student at Johns Hopkins University, SAIS. Henry specializes in Chinese telecommunications in Africa and his research has featured in journals such as *World Development* and the *Journal of Chinese Economic and Business Studies*, and in news outlets including the *Washington Post*, the *Economist*, and the *Financial Times*. Henry is a Senior Policy Analyst at the US Institute of Peace, and previously worked at the World Bank's Macroeconomics, Trade and Investment team, SAIS-CARI's loans database, and the Institute for Development Studies (UK). Henry holds a M.Sc. from the School of Oriental and African Studies, University of London and a B.A. from the University of Leeds. **JULIA VOO** is a Cyber Fellow at Harvard's Belfer Center for Science and International Affairs and leads the team behind Belfer's National Cyber Power Index. Her research concerns geotech strategy including the Digital Silk Road, industrial policy, and technical standards for strategic technologies. A graduate of Harvard Kennedy School, Julia served at the British Embassy in Beijing where she covered China's cyber and artificial intelligence policy from a commercial perspective, technical standards, and other trade policy issues. Julia's research, writings and commentary have featured in several media outlets including the *Financial Times*, the *Economist*, *BBC World News*, *Wired Magazine*, and *Cyberscoop*.

THE SAIS CHINA-AFRICA RESEARCH INITIATIVE at the Johns Hopkins University School of Advanced International Studies (SAIS) in Washington, D.C. was launched in 2014. Our mission is to promote research, conduct evidence-based analysis, foster collaboration, and train future leaders to better understand the economic and political dimensions of China-Africa relations and their implications for human security and global development.

SAIS China-Africa Research Initiative
1717 Massachusetts Ave NW, Suite 733
Washington, DC 20036
www.sais-cari.org
Email: sais-cari@jhu.edu

Support for this working paper was provided by a grant from Carnegie Corporation of New York. Carnegie Corporation of New York is a philanthropic foundation created by Andrew Carnegie in 1911 to do "real and permanent good in this world."

