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'Designed in Ethiopia' and 'Made in China'
Sino-Ethiopian technology collaboration in South-South relations

This policy brief provides an examination of China's rise in relation to its African partners. It takes into account geopolitical concerns, but homes in on China's Belt and Road Initiative, its means of expanding into Africa. It examines the role of the Digital Silk Road in the use of Chinese artificial intelligence and technology transfers on surveillance and the risks of repression. The brief aims to move beyond the politicised narratives surrounding Chinese involvement in Africa by testing them against practical initiatives on the ground. It examines Ethiopia, particularly its burgeoning tech hub known as the 'Sheba Valley', in order to understand China's role in development in African countries. Ethiopia is a critical case because of: 1) the country's strong relations with China, leading Ethiopia to model its developmental state model on the Chinese one and incentivising civil servants to learn from the Chinese experience; 2) Ethiopia's attempt to develop its relatively advanced ICT hub (the Sheba Valley) in collaboration with China's Shenzhen-based ICT hub; and 3) Ethiopia's historically heavy surveillance and repressive practices, in part modelled on China's practice of prioritising development over democratic reform. The brief finds that Chinese involvement in Ethiopia is significant, not only for its implications for Ethiopia as a major regional player, but also for the new approaches to South-South cooperation that China is showcasing in this regional diplomatic centre. There are no clear indications that China's relations with Ethiopia are guided by political motives to spread any ideological interpretation or diffuse surveillance capabilities. Ethiopia's partnership with China may be better understood as a continuation of a longer ongoing trend rather than a novel development in Ethiopia's surveillance model. While there are risks associated with Chinese engagement in ICT in Ethiopia, the value generated through the partnerships and business models it develops are tangible, domestically appreciated, and frequently not a Chinese centrally orchestrated push towards surveillance. As a consequence, an alarmist response failing to recognise the motivations of Ethiopian actors to engage with Chinese initiatives is unlikely to gain significant traction. Rather than stressing the risks, a more positive narrative highlighting alternative opportunities for ICT collaboration with European states may be a more effective way of positioning the EU in the debate and shifting relationships.

1 Introduction

Breaking stories regarding the US-Chinese trade war and concerns about the Chinese position in ICT abound in a variety of news outlets. Yet, the (re-)emergence of China as a global power and the subsequent reconfiguration of great-power relations should not surprise interested observers.[1] Rather, the rise of China has become a significant contextual factor, if not a driving force, in most policy debates, both internationally and in some cases domestically (for instance, university policies regarding Chinese exchange students).[2] Over the past decades, China has become an increasingly wealthy and capable actor in the international arena and has sought to assert its newfound capabilities, significantly affecting trade policy and international relations.[3] A key arena in which this plays out is China's increasingly influential role in the ICT and artificial intelligence (AI) sectors, comprising a wide range of technologies spanning from facial recognition surveillance to intelligent military innovations (i.e. autonomous weapons). China's increasing influence in this sector, combined with its illiberal governance model and its opposition to traditional human rights, has triggered a number of alarmist articles discussing a race

for leadership in ICT and AI.[4] While such analyses may be grounded in valid ethical concerns, especially given China's domestic use of AI, examinations of the policies underpinning China's ICT-related foreign policy have not been as thorough.

While Chinese policies and public statements highlight the digital connectivity and economic development potential of the Digital Silk Road (DSR) expansion as a prime example of south-south cooperation, international analysts have noted potential risks by pointing out that '*[...] Chinese-built fibre-optic networks […] could expose internet traffic to greater monitoring by local and Chinese intelligence agencies.*'[5] There is a growing tendency to view all Chinese activities along the Belt and Road Initiative (BRI), including its digital components under the DSR, as '*an extension of power [by] the Chinese state*', even if an exchange is supposedly conducted purely by private agencies or companies.[6] Such concerns are driven by Chinese domestic laws and administrative guidelines, as well as '*unspoken regulations and internal party committees*', that '*make it difficult to discern what is private and what is state-owned*',[7] prompting some analysts to conclude that

1   Shambaugh D.L. 2013. *China Goes Global: The Partial Power*, Oxford, UK: Oxford University Press; Breslin, S. 2013. 'China and the global order: signalling threat or friendship?', *International Affairs* 89.3, 615-634; Jones, B. 2020. *China and the return of great power strategic competition*, Brookings.

2   BBC. 2019. 'Australia to tackle foreign interference at universities', *BBC*, 28 August, https://www.bbc.com/news/world-australia-49492206 (accessed 2 October 2020); Wong, E. and Barnes J.E. 2020. 'U.S. to expel Chinese graduate students with ties to China's military schools', *The New York Times*, 28 May, https://www.nytimes.com/2020/05/28/us/politics/china-hong-kong-trump-student-visas.html (accessed 2 October 2020).

3   Shambaugh D.L. 2013. *China Goes Global: The Partial Power*, Oxford, UK: Oxford University Press.

4   Lucas, L. and Feng, E. 2017. 'China's push to become a tech superpower triggers alarms abroad', *Financial Times*, 19 March, https://www.ft.com/content/1d815944-f1da-11e6-8758-6876151821a6 (accessed 5 October 2020); Hoffmann, S., Lazanski, D. and Taylor, E. 2020. 'Standardising the splinternet: how China's technical standards could fragment the internet', *Journal of Cyber Policy*, 5(2), 239-264; Andersen, R. 2020. 'The panopticon is already here', *The Atlantic*, September issue, https://www.theatlantic.com/magazine/archive/2020/09/china-ai-surveillance/614197/ (accessed 5 October 2020).

5   Huang, Y. 2016. 'Understanding China's Belt & Road Initiative: motivation, framework and assessment.' *China Economic Review* 40, p. 314-421.

6   Gong, S. et al. 2019. *The Impact of the Belt Road Initiative Investment in Digital Connectivity and Information and Communication Technologies on Achieving the SDGs*. K4D: Emerging Issues Report. Brighton, UK: Institute of Development Studies, 1.

7   Ibid.

'*all Chinese companies are controlled by the party*'.[8] While such views are highly salient in the United States (US),[9] as the debate surrounding the adoption of Huawei's 5G-technology highlighted, there are a diversity of views among its transatlantic allies.[10] While some views are likely to reflect countries' individual strategies towards China's changing role, they may also reflect variations in visions of the liberal international order China is thought to challenge.[11] Nonetheless, President Xi Jinping's proposal to pursue an innovation-driven development agenda along the DSR, including the development of big data, cloud computing and smart cities, raised red flags among Western nations concerning the potential for abuse through surveillance, especially for countries with authoritarian governments of their own, Zimbabwe, Ecuador and Vietnam were noted

as examples.[12] However, it should be noted that viewpoints from current and potential recipient countries of this South-South cooperation model have been largely absent from the debate.

This policy brief provides an examination of China's rise in relation to its African partners. It takes into account broader geopolitical concerns, but homes in on China's BRI, its means of expanding into Africa. It thus examines the role of the DSR in the use of Chinese AI and technology transfers on surveillance and the risks of repression. The brief aims to move beyond the politicised narratives surrounding Chinese involvement in Africa by testing them against practical initiatives on the ground. It examines Ethiopia, particularly its burgeoning tech hub known as the 'Sheba Valley', in order to understand China's role in development in African countries. Ethiopia is a critical case because of: 1) the country's strong relations with China, leading Ethiopia to model its developmental state model after the Chinese one and incentivising civil servants to learn from the Chinese experience;[13] 2) Ethiopia's attempt to develop its relatively advanced ICT hub (the Sheba Valley) in collaboration with China's Shenzhen-based ICT hub; and

8   Feng, A. 2019. 'We can't tell if Chinese firms work for the Party', *Foreign Policy*. 7 February, https://foreignpolicy.com/2019/02/07/we-cant-tell-if-chinese-firms-work-for-the-party/ (accessed 5 October 2020). See, however, Jayaram, K., Kassiri, O. and Sun I.Y. 2017. 'The closest look yet at Chinese economic engagement in Africa', *McKinsey*, June 28, https://www.mckinsey.com/featured-insights/middle-east-and-africa/the-closest-look-yet-at-chinese-economic-engagement-in-africa (accessed 5 October 2020).

9   U.S. Department of State. 2020. 'Communist China and the Free World's Future', 23 July, https://www.state.gov/communist-china-and-the-free-worlds-future/ (accessed 5 October 2020).

10   Dekker, B. and Okano-Heijmans, M. 2019. *The US-China trade-tech stand-off and the need for EU action on export control*, Clingendael; Voelsen, D., Ruhlig, T. and Seaman, J. 2019. *5G and the US–China Tech Rivalry – a test for Europe's future in the digital age*, Stiftung Wissenschaft und Politik. For a broader overview of the different attitudes towards China across the EU, see Huotari, M. et al. (eds). 2015. *Mapping Europe-China Relations. A bottom-up approach*. European Think-Tank Network on China.

11   Lind, J. 2019. *The Rise of China and the Future of the Transatlantic Relationship*, Brookings.

12   Hawkins, A. 2018. 'Beijing's big brother tech needs African faces', *Foreign Policy*, 24 July, https://foreignpolicy.com/2018/07/24/beijings-big-brother-tech-needs-african-faces/ (accessed 5 October 2020); Millern H. 2019. 'China is exporting its surveillance technology and repressive ideology', *Medium*, 6 May, https://medium.com/datadriveninvestor/china-is-exporting-their-surveillance-technology-and-repressive-ideology-5d99aa7e90ae (accessed 5 October 2020); Sherman, J. 2019. 'Vietnam's internet control: following in China's footsteps?', *The Diplomat*, 11 December, https://thediplomat.com/2019/12/vietnams-internet-control-following-in-chinas-footsteps/ (accessed 5 October 2020).

13   Tesfaye, A. 2019. 'China-Ethiopia relations and the Horn of Africa', *Italian Institute for International Political Studies*, 19 September, https://www.ispionline.it/en/publication/china-ethiopia-relations-and-horn-africa-23968 (accessed 5 October 2020); Fouriej, E. 2015. 'China's example for Meles' Ethiopia: When development 'models' land', *The Journal of Modern African Studies* 53(3), 289-316.

3) Ethiopia's historically heavy surveillance and repressive practices, in part modelled on China's practice of prioritising development over democratic reform.[14]

This policy brief aims to support policy makers interested in China's role in ICT and the associated risks by clarifying the discrepancies between different narratives surrounding Chinese technology cooperation with African states, and by highlighting the gap between such narratives and the actual implementation of China's policies. In order to frame the analysis, this policy brief commences with an overview of Ethiopian-Chinese relations, and subsequently explores some of the main initiatives that make up Ethiopian-Chinese technology collaboration and their role in the transfer of illiberal practices. It then analyses the significance of this collaboration for Ethiopia, China and Ethiopian surveillance practices. The brief concludes by setting out recommendations for European policy makers seeking to adjust their own policies towards African states in the light of growing Chinese involvement.

2 Chinese clout in Addis Ababa

The collaborative dynamic between Chinese and Ethiopian technology start-ups is a relatively recent phenomenon, yet the Ethiopian-Chinese partnership has a long history.[15] The outward-looking view in imperial Ethiopia under Haile Selassie,

inspired by Japanese modernisation, paved the way for the establishment of diplomatic relations between China and Ethiopia in 1970.[16] Relations were initially constrained, as China sided with Eritrea in the latter's push for independence, and later due to the Derg regime aligning with the USSR at the time of the Sino-Russian conflict.[17] However, following the commencement of the Ethiopian People's Revolutionary Democratic Front's (EPRDF) rule from 1991, relations quickly improved. Ethiopia's new prime minister, Meles Zenawi, believed that Ethiopia lacked a comparative advantage in any economic sector, necessitating a developmental state to guide the private sector to a form of value creation rather than rent seeking.[18] In line with preceding regimes, the new EPRDF regime looked outward for political models and foreign direct investment (FDI) to support such an approach. While the regime borrowed intellectually from other governments (South Korea, Taiwan, Japan and Vietnam), China formed an especially interesting partner, given its shared reliance on a vanguard-party model to push political development, its ability to back economic development models with FDI, and its ability to counterbalance (Washington Consensus-based reform) demands from Western donors.[19] As such, relations developed rapidly throughout the 1990s, with frequent reciprocal prime ministerial and presidential visits, increasing support from

14 De Freytas-Tamura, K. 2017. '"We are everywhere": How Ethiopia became a land of prying eyes', *The New York Times*, 5 November, https://www.nytimes.com/2017/11/05/world/africa/ethiopia-government-surveillance.html (accessed 5 October 2020); Brechenmacher, S. *Civil Society Under Assault. Repression and responses in Russia, Egypt, and Ethiopia*, Carnegie Endowment for International Peace, 65-90.

15 The genesis of Sino-Africa relations more broadly is contested, however, as some scholars have reported that the relations have ancient roots dating back to when Chinese explorers supposedly established links with many sub-Saharan African peoples, including in the Horn of Africa, centuries before their Europeans stepped foot on the continent (Dent, C. 2011. *China and Africa Development Relations*. Oxon: Routledge, p. 5)

16 Kebede, M. 1997. 'Japan and Ethiopia: An appraisal of similarities and divergent courses', *Ethiopia in Broader Perspective*, vol. 1, 640-644.

17 Nicolas, F. 2017. *Chinese Investors in Ethiopia: A perfect match?* French Institute of International Relations.

18 De Waal, A. 2013. 'The theory and practice of Meles Zenawi', *African Affairs*, 112(446), 148-155.

19 Fouriej, E. 2015. 'China's example for Meles' Ethiopia: when development 'models' land', *The Journal of Modern African Studies* 53(3), 289-316; Nicolas, F. 2017. *Chinese Investors in Ethiopia: A perfect match?* French Institute of International Relations; Mueller, F. 2015. *Model transfer in the making: changing development strategies of, and expectations towards, the state in Ethiopia and Ghana*, DFG Working Papers; De Waal, 2018 *The Future of Ethiopia: Developmental state or political marketplace?*, World Peace Foundation.
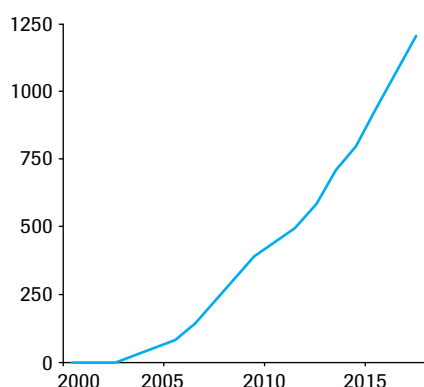
Figure 1 **Cumulative number of investment projects in Ethiopia with Chinese partners (EIC data)**
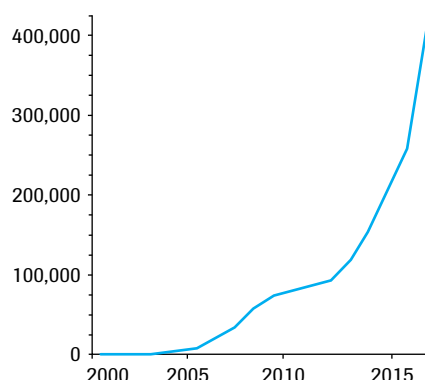

Figure 2 **Cumulative employment at investment projects in Ethiopia with Chinese partners (EIC data)**

Ethiopia towards China at the UN, Chinese grants and interest-free loans to Ethiopia, the establishment of the Joint Ministerial Commission, and eventually the launching of the Forum on China-African Cooperation (FOCAC) in 2000.

Following the rising interest in an alternative Chinese development model, FOCAC was created as a '*mechanism for collective dialogue and multilateral cooperation between Africa and China*', in which Ethiopia served as prominent partner (co-)hosting various events.[20] At the 2006 Beijing Summit, Hu Jintao, former general-secretary of the Communist Party of China, announced a number of BRI policy measures to ensure further cooperation with African host countries; '*Ethiopia was the only country to benefit from [them all]*'.[21] Two of the most important measures undertaken by China were the creation of a zero tariff for Ethiopian goods, which led to a significant increase in Ethiopian exports to China

(mainly agricultural), and the selection of '*Ethiopia as one of five countries in Africa for hosting China's overseas trade and technical cooperation zones*'.[22] Soon after these measures were introduced, in 2008 Ethiopia used its voting rights in the UN Human Rights Council, along with a coalition of other African states – e.g. Sudan and Eritrea – to protect and stand by China for its human rights record. Also important to the Chinese Communist Party has been Ethiopia's public support for China's '*long-standing policy of reinforcing domestic policy in the international arena, especially when issues of Taiwan and Tibet are raised*'.[23]

Collaboration between Ethiopia and China was once again deepened following the 2005 Ethiopian elections. Many Ethiopian government actors viewed the disappointing election results for the EPRDF and the violent crackdown on the opposition that followed as a consequence of too-rapid political liberalisation. The country turned to China in particular as an exemplar of a more authoritarian model favouring economic development over democratic reform, and partnered with the US in its post-9/11 anti-

20 Adem, S. 2014. *China's Diplomacy in Eastern and Southern Africa*. The International Political Economy of New Regionalisms Series, Routledge; Thakur, M. 2009. *Building on Progress? Chinese engagement in Ethiopia*. South African Institute of International Affairs: China in Africa Project, p. 7.

21 Dubale, Z. 2017. 'Sheba Valley – The Making of Ethiopia's Tech Sector.' *Afridigest*, July, https://afridigest.com/sheba-valley-making-ethiopias-tech-sector/ (accessed 5 October 2020).

22 Adem, S. 2014. *China's Diplomacy in Eastern and Southern Africa*. The International Political Economy of New Regionalisms Series, Routledge.

23 Thakur, M. 2009. *Building on Progress? Chinese Engagement in Ethiopia*. South African Institute of International Affairs: China in Africa Project, p. 7.

terror initiatives to gain access to high-tech surveillance.[24] As relations developed, so did institutional and ideological links between Ethiopia and China tighten. Elites increasingly sought to share lessons on dealing with issues of development and modernisation, and numerous Ethiopian elites took part in training in China.[25] In a number of cases, Ethiopian institutions also came to be modelled after their Chinese counterparts. For instance, the Meles Zenawi Leadership Academy for the training of Ethiopian diplomats is said to be modelled after the China Executive Leadership Academy Pudong and the Beijing Administrative College.[26]

Regardless of the close ties, however, Ethiopia also represents a somewhat anomalous case in the broader field of Sino-Africa relations. Unlike many other African states that are a part of China's Belt and Road Initiative (BRI), Ethiopia does not quite have the same high levels of developed mineral resources. Additionally, the country is land locked, reducing its logistical relevance. Nonetheless, China's Foreign Minister Wang Yi noted the important role Ethiopia plays as a bridge and link for the BRI to access construction projects in Africa.[27] Additionally, China perceives Ethiopia as an entry-point to secure deeper access into diplomatic and economic relationships with other African countries. As Addis Ababa hosts the headquarters of the African Union (AU), the United Nations Economic Commission for Africa (ECA) and frequent IGAD events, a frequently echoed viewpoint is that '*China sees Ethiopia as a showroom*'.[28] Ethiopia has long featured a Chinese-inspired authoritarian model and relative stability compared to neighbouring countries in the Horn of Africa. Coupled with its rapid economic development and the government's vocal role as an eager host to the BRI, Ethiopia provides a potentially attractive picture of partnering with China to the many African diplomats that frequent its capital.[29] Additionally, liberalisation efforts, the weakening of the EPRDF apparatus, and the push for debt relief (a substantial share of Ethiopian debt is held by China) following Covid-19 under the leadership of Prime Minister Abiy provide marked challenges to the ties between both states. Initially, this likely reflected the Ethiopian prime minister leveraging his reform-minded profile and the growing geopolitical prominence of Ethiopia in an attempt to further shore up the country's worsening financial position – successfully attracting substantial support from Western donors and United Arab Emirates. This may have had a negative impact on China's privileged relationship with Ethiopia, yet China remained an influential economic and political actor in the country. The subsequent death of Seyoum Mesfin, Ethiopia's former Minister of Foreign Affairs who was influential in building relations with China, during the Ethiopian National Defense Forces' operations in Tigray may lead to a further fraying of the relationship.[30]

24 Fouriej, E. 2015. 'China's example for Meles' Ethiopia: when development 'models' land', *The Journal of Modern African Studies* 53(3), 289-316; Turse, N. 2017. 'How The NSA Built A Secret Surveillance Network For Ethiopia', *The Intercept*, 13 September, https://theintercept. com/2017/09/13/nsa-ethiopia-surveillance-human- rights/ (accessed 5 October 2020); Human Rights Watch. 2014. *'They Know Everything We Do': Telecom and Internet Surveillance in Ethiopia*, HRW Reports.

25 Fouriej, E. 2015. 'China's example for Meles' Ethiopia: when development "models" land', *The Journal of Modern African Studies* 53(3), 289-316; Nicolas, F. 2017. *Chinese Investors in Ethiopia: A perfect match?* French Institute of International Relations.

26 Mueller, F. 2015. *Model transfer in the making: changing development strategies of, and expectations towards, the state in Ethiopia and Ghana*, DFG Working Papers.

27 Ibid.

28 Interview with an Ethiopian academic in Addis Ababa, 2017.

29 Ursu, A.E. and Van den Berg, W. 2018. 'China and the EU in the Horn of Africa: competition and cooperation?', *Clingendael Institute*.

30 Reuters, 2021, *Ethiopia says ex-foreign minister killed by military after refusing to surrender*, 14 January, https://www.reuters.com/article/us-ethiopia- conflict/ethiopia-says-ex-foreign-minister- killed-by-military-after-refusing-to-surrender- idUSKBN29I2GB (visited 19 January 2021).

3 Chinese technology transfers from the people's perspective

As well as close diplomatic ties, economic interactions between Ethiopia and China have been developing considerably in the past decade, but have also been relatively one-sided. Although the export of coffee and other resources has increasingly been supplemented with goods manufactured in Ethiopia, this change has been significantly associated with China's ambition to move up in the value chain by moving low value-added manufacturing activities to low-cost countries. As such, a number of Chinese companies have developed expanding production facilities (mainly in export textiles) in Ethiopia's Industrial Parks (Special Economic Zones). Yet, given the low wages and low added value, little benefit of such activities has accrued to Ethiopian involvement in these ventures. Part of China's foreign policy towards Ethiopia has been establishing Ethiopia-China learning institutions such as the Ethiopia-China Polytechnic College, established in 2009, where large numbers of Ethiopian students are granted scholarships to study in Chinese universities, '*including short-term training for large numbers of government officials and technocrats from line ministries*'.[31] Also in 2009, a large training and vocational education centre was founded in Ethiopia financed by Chinese aid, enrolling roughly 3,000 students per year. The school teaches courses taught by Chinese and Ethiopian teachers in '*construction skills, architecture, engineering, electronics, electrical engineering, computers, textiles, and apparel*', all areas and skillsets that Chinese companies operating in Ethiopia would find desirable in future employees.[32] As a consequence of these developments, Ethiopian perceptions of China fluctuate significantly, with some seeing China as a model for the country's own development while others blame it for the economic impact of cheap Chinese products substituting previously traditional domestically produced goods.[33]

Ethiopia's ICT sector has seen significant involvement from Huawei and ZTE, leading to significant domestic improvements in connectivity but repatriating a large percentage of profits back to the Chinese parent companies. Nonetheless, ZTE has set up a communications institute with the Ethiopian Telecommunications Corporation to train 3,000 Ethiopian telecommunications engineers.[34]

In addition to such large investments, a range of smaller private Chinese-connected firms have been operating in the Ethiopian market, as well as in the ICT sector (notably TECNO, manufacturing a range of phones for the African continent). Yet, the considerable range of barriers in the Ethiopian ICT sector – notably the lack of technology infrastructure, poor availability of manufactured components, lack of HR skills and weak intellectual property protection – has largely precluded significant FDI and rapid development of the sector.[35] In contrast, China's main ICT hub in Shenzhen has developed rapidly and is increasingly branding itself internationally as a burgeoning hub for ICT innovation and entrepreneurship. As part of China's international outreach, fully funded scholarships have been made available for (African) students to study IT-related subjects in China, and a range of hackathons and collaboration spaces are made available.

While it is generally not feasible for African students to remain in China, exchange programmes have been instrumental

31 Marton P., and Matura, T. 2011. 'The "voracious dragon", the "scramble" and the "honey pot": Conceptions of conflict over Africa's natural resources', *Journal of Contemporary African Studies*, 29(2), 144-167.

32 Eldrandaly, K. et al. 2019. 'PTZ-Surveillance coverage based on artificial intelligence for smart cities', *International Journal of Information Management* 49, p. 520.

33 Interview with an Ethiopian academic, Addis Ababa, October 2019.

34 Eldrandaly, K. et al. 2019. 'PTZ-Surveillance coverage based on artificial intelligence for smart cities', *International Journal of Information Management* 49, p. 520.

35 Interviews with an Ethiopian ICT entrepreneur and a European Academic, June and July 2020.

in changing perceptions of China, familiarising students with production possibilities in Shenzhen and developing connections between communities of ICT professionals.[36] For example, one student noted that Ethiopia has been struggling to improve its agricultural production, while in China everyone is food secure, in part due to better ICT.[37] As one Ethiopian ICT professional noted, the technology sector in Ethiopia has been importing hardware and designs that are clearly *'designed for another world'*.[38] Therefore, the question for many involved in the ICT sector is how existing solutions could be better tailored to the African market, leading to product ideas developed at grassroots, for example USB FM-dongles used to overcome the lack of internet connectivity in rural Ethiopia.[39] A collaboration between a Hong Kong-based and an Addis Ababa-based institution has produced products that include computational linguistics for Amharic and other African languages.[40] Linking Ethiopian coders and product developers thus has the potential to increase the availability of ICT products tailored to African technological and cultural contexts. On the Chinese side, it presents Shenzhen-based producers with an edge in accessing the African e-commerce

market, which is expected to grow substantially over the coming years.[41] As one ICT entrepreneur notes, '*From a Shenzhen entrepreneur's perspective, finding partners in emerging markets makes business sense. Rising labour costs and fierce competition in China are driving many businesses to reach more consumers outside the country.'*[42]

Sheba Valley, Ethiopia's emerging technology hub, named after Ethiopia's ancient Queen of Sheba and the US Silicon Valley, thrives mostly on individual entrepreneurs' initiatives.[43] Yet, involvement from the Ethiopian government can also be important. Although the Ethiopian government does not appear to have developed any specific policy instruments to stimulate collaboration (apart from the involvement of Ethiopian embassy staff in raising awareness of relevant events in Shenzhen), government buy-in has proven significant. Grassroots ICT efforts have engaged the Ministry of Innovation and Technology, (rather than larger investments running through the Ethiopian Investment Commission, linked directly to the prime minister's offices). Although the ministry has encouraged efforts to develop the Sheba Valley and made some funding available to do so, one tech entrepreneur highlighted especially the ministry's involvement in providing preferential access to foreign currency to pay external partners.[44] On the

36 Interviews with an Ethiopian ICT entrepreneur and a European Academic, June and July 2020.

37 Interview with an Ethiopian ICT entrepreneur, July 2020.

38 Niu, I. 'How Shenzhen is fueling Ethiopia's burgeoning startup scene', *Quartz Media*, Because China (Episode 8), 17 June, https://qz.com/1644536/how-shenzhen-is-fueling-ethiopias-burgeoning-startup-scene-2/ (accessed 5 October 2020).

39 A product designed by Burnous Design in Addis Ababa, with support from the Designed in Ethiopia project connecting Ethiopian coding with Shenzhen production capabilities.

40 Hanson Robotics and iCog Labs have produced products that include computational linguistics for African languages – the first being Amharic, one of the official widely spoken languages of Ethiopia. See *AfricaNews*. 2019. 'Ethiopia aims to become Africa's Artificial Intelligence (AI) giant', *AfricaNews*, 9 December, https://www.africanews.com/2018/09/05/ethiopia-aims-to-become-africa-s-artificial-intelligence-ai-giant/ (accessed 5 October 2020).

41 Estimates suggest that by 2025 e-commerce could make up 10% of retail sales in Africa's largest economies. See Hattingh, D., Leke, A. and Russo, B. 2017. 'Lions (still) on the move: Growth in Africa's consumer sector', *McKinsey*, 2 October, https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/lions-still-on-the-move-growth-in-africas-consumer-sector (accessed 5 October 2020).

42 Niu, I. 'How Shenzhen is fuelling Ethiopia's burgeoning startup scene', *Quartz Media*, Because China (Episode 8), 17 June, https://qz.com/1644536/how-shenzhen-is-fueling-ethiopias-burgeoning-startup-scene-2/ (accessed 5 October 2020).

43 Dubale, Z. 2017. 'Sheba Valley – the making of Ethiopia's tech sector.' *Afridigest*, July, https://afridigest.com/sheba-valley-making-ethiopias-tech-sector/ (accessed 5 October 2020).

44 Interview with an Ethiopian ICT entrepreneur, July 2020.

Chinese side, it should be noted that the New Generation of Artificial Intelligence Development Plan (AIDP) pushed forth an agenda to mobilise groups of society, both domestic and abroad, to participate in supporting the development of artificial intelligence initiatives. Relying on the BRI strategy to '*promote the construction of international AI scientific and technological cooperation bases and joint research centres*', the AIDP plan seeks to encourage domestic AI companies to 'go out'. In listing the services that the Chinese government aims to provide to capable AI enterprises abroad, the plan indicates that China will '*carry out overseas mergers and acquisitions, equity investment, venture capital and the establishment of overseas R&D centres, encourage foreign AI enterprises and research institutions to set up R&D centres in China*'.[45] It aims to promote the application of artificial intelligence technology in the field of public safety, and hopes to spread the notion of public safety intelligent monitoring and smart cities as tools that can contribute to criminal investigations, anti-terrorism

and 'other urgent needs'.[46] While this likely includes surveillance, it also aims to apply AI developments on issues like climate change and the 2030 Agenda for Sustainable Development. Notable in this regard is the use of 'public opinion guidance' training for policy makers, in order to help them generate a 'better response to the development of AI.'[47] While there is no clear evidence of AI-related collaboration projects being developed with Ethiopian actors, such initiatives may become a concern in future years.

4 The impact of Chinese ICT involvement in perspective

In the ICT sector, concerns over Chinese support for recipient states' repressive capabilities have to some extent proven valid for Ethiopia as well. The vast majority of the Ethiopian telecommunications infrastructure has been constructed by Chinese contractors, and a number of surveillance-capable software packages appear to be in use in Ethiopia. Most notably, ZTE's ZSmart package appears to be used to track customers' phone records while it appears likely that ZTE's Deep Package Inspection tool (ZXMT) is used to monitor data traffic.[48] It should be noted, however, that ZSmart is a customer management package designed for legitimate functions (i.e. billing customers), and privacy concerns mainly arise out of the system's implementation and use in Ethiopia rather than its specific

45 The People's Republic of China State Council. 2017. 'A next generation artificial intelligence development plan', 20 July, http://www.gov.cn/zhengce/content/2017-07/20/content_5211996.htm (accessed 5 October 2020), p. 24. English translation by Webster, G. et al. 2017. 'Full translation: China's 'New Generation Artificial Intelligence Development Plan' (2017)', *New America*, 1 August, https://www.newamerica.org/cybersecurity-initiative/digichina/blog/full-translation-chinas-new-generation-artificial-intelligence-development-plan-2017/ (accessed 5 October 2020).Public opinion guidance was also mentioned by *The New York Times* as a form of monitoring training that 36 countries along the Digital Silk Road have supposedly received. Freedom House very directly denotes 'public opinion guidance' training as a euphemism for censorship training that the group believes China conducts. See Mozur, P., Kessel, J.M. and Chan, M. 2019. 'Made in China, exported to the world: the surveillance state', *The New York Times*, 24 April, https://www.nytimes.com/2019/04/24/technology/ecuador-surveillance-cameras-police-government.html (accessed 5 October 2020).

46 The People's Republic of China State Council. 2017. 'A next generation artificial intelligence development plan', 20 July, http://www.gov.cn/zhengce/content/2017-07/20/content_5211996.htm (accessed 5 October 2020), p. 21.

47 The People's Republic of China State Council. 2017. 'A Next Generation Artificial Intelligence Development Plan', 20 July, http://www.gov.cn/zhengce/content/2017-07/20/content_5211996.htm (accessed 5 October 2020), p. 28.

48 Human Rights Watch. 2014. *'They know everything we do': telecom and internet surveillance in Ethiopia*, HRW Reports.

capabilities.[49] Regarding the potential use of ZXMT, it should be noted that ZTE tends to bundle a range of products in a single offer.[50] The potential presence of such surveillance packages may be considered problematic, yet the surveillance-related components of this collaboration represent a relatively small part of a larger telecoms project rather than a partnership specifically geared towards building Ethiopia's surveillance capacity.

When it comes to more advanced technological innovations, no clear indication of collaboration aimed at surveillance emerges. In contrast to a number of other countries along the BRI, there are currently no plans to transform Addis Ababa into a 'smart city' like those that exist in China.[51] Neither are there clear indications of any transfer to Ethiopia of more advanced artificial intelligence capacities related to surveillance, nor of involvement by major Chinese surveillance companies, as is the case in Zimbabwe or Ecuador for instance. Rather, the scope of artificial intelligence-related collaboration between Ethiopia and China appears to be largely a bottom-up process, in which young entrepreneurs and technology students suggest potential

projects and define the types of collaboration and technologies required to make such projects a success.[52] The reliance on bottom-up initiatives is in line with the wider aim of the BRI policies, aiming to spur entrepreneurship in an attempt to stimulate innovation-driven growth into foreign markets.

Chinese efforts and investments in the development of Sheba Valley and new initiatives and technologies should also be seen in the context China's strategic aim to reposition itself in the ICT value chain. As described in China's strategic plan for the manufacturing sector '*Made in China 2025*', one of China's aims for the sector is to move away from being a low-cost supplier and assembler, and instead to move up the value chain by creating more innovative and differentiated products, thereby increasing the export of Chinese-produced products.[53] As a consequence, Chinese suppliers are increasingly attempting to reduce their business model reliance on low-cost and efficient assembly of foreign-developed and produced components into final products, and instead increase the use of domestically produced parts.[54] While the Chinese government is spurring innovation domestically based on this policy framework, it should be noted that not all development needs to take place domestically in order for the policy's other goals to be met.[55] While the collaboration model for the Sheba Valley may strongly push products '*designed in Ethiopia*', it should be noted that Ethiopia largely

49 'While standard, off-the-shelf customer management and billing systems have legitimate purposes, the ease of access by security agencies and lack of procedural or legal constraints, means that the system can be misused in inappropriate ways to access information that should remain private. That the ZSmart system in Ethiopia has been configured to enable access to text messages and full recordings of phone conversations only exacerbates the risk of abuse.' (Human Rights Watch. 2014. *'They know everything we do': telecom and internet surveillance in Ethiopia*, HRW Reports.)

50 Human Rights Watch. 2014. *'They know everything we do': telecom and internet surveillance in Ethiopia*, HRW Reports. Note however that states can opt out of the ZXMT package.

51 Plans for smart cities along the BRI abound, for instance, in the ASEAN region (Tritto, A. and He, Y. 2020. 'Cities in China's BRI: green and smart or gray and clumsy?', *Italian Institute for International Political Studies*). Also, Huawei has signed a number of 'Safe City' agreements with countries all around the world (Hillman, J.E. and McCalpin, M. 2019. 'Watching Huawei's "Safe Cities"', *Center for Strategic and International Studies*).

52 Interview with an Ethiopian ICT entrepreneur, July 2020.

53 Moving up the value chain is listed among the 'Strategic Goals' outlined in *'Made in China 2025'*, 2015. The People's Republic of China State Council, 19 May, http://www.gov.cn/zhengce/content/2015-05/19/content_9784.htm (accessed 5 October 2020). English translation: Città della Scienza. 2017. *'Made in China 2025'*, http://www.cittadellascienza.it/cina/wp-content/uploads/2017/02/IoT-ONE-Made-in-China-2025.pdf (accessed 5 October 2020).

54 For instance, MIC 2025 (written in 2015) called for 40% of essential spare parts and key materials to have domestic sources (Ibid.).

55 ISDP. 2018. *Made in China 2025. Backgrounder*, Institute for Security and Development Policy.

lacks the capacity to produce the designed products at sufficient quality, scale and cost as is possible in the Shenzhen technology hub. Collaboration with Ethiopian producers thus does represent the opportunity to increase demand for Chinese-produced components. Additionally, it should be kept in mind that by localising design in Ethiopia, the products developed may uniquely position its producers for expansion into a new kind of market. Various prognoses forecast that African markets will grow rapidly in the coming years. As illustrated by the USB FM-dongle, allowing someone to listen to the radio without relying on data connection, the demand for technological solutions stemming from these markets may not be the same as the solutions required in Europe and the US. Investing in Sheba Valley may thus allow Chinese suppliers to better position themselves to capitalise on the growth they expect across the African continent.[56]

Although the Ethiopian-Chinese partnership thus appears largely to be motivated by considerations other than surveillance-related ones, this does not mean there are no risks related to the expanding collaboration developing inside and outside the technology sector. As part of the development of the Sheba Valley, Ethiopian developers and engineers are increasingly exposed to a variety of Chinese cultural values and many have been educated at universities across China. Such exposure may significantly develop their skills, knowledge and ability to work interculturally, but another consequence may be the increasing familiarisation with and socialisation in the Chinese value system. While intercultural exposure may have many positive aspects for an individual, training in China could also play a role in diffusing political ideologies related to surveillance and social control (and its reflection in big-data governance). Software developers may learn to rely on a set of programming approaches, coding libraries and information governance principles which may be tailored to a far less liberal ecosystem than approaches from Europe or the US. In particular, as China's

share in the ICT market grows, in Africa and globally, so may its role in setting standards and norms that govern the use of ICT and AI. This dynamic is already evident in the publishing of the Beijing AI Principles, as an alternative to the EU and OECD principles.[57] Of similar indirect concern is training offered for engineers and public officials on topics such as 'public opinion guidance', potentially proliferating a different concept of freedom of expression and more advanced model of censorship than has previously been applied in Ethiopia.[58]

While the increasingly collaborative nature of the tech and innovation sector may have no direct bearing on surveillance or oppression, the potential indirect effects may be considered threatening to Ethiopia's Western partners, especially given the ideological alignment and growing economic partnership between Ethiopia and China. While there are no clear indications that China's relations with Ethiopia are guided by a political motive aimed at spreading an ideological interpretation or at diffusing surveillance capabilities, it should be kept in mind that the Ethiopian government has notably relied on

56 Interviews with a European Academic, June 2020.

57 Sahin, K. 2019. 'The devil's in the detail', *Berlin Policy Journal*, 29 August, https://berlinpolicyjournal.com/the-devils-in-the-detail/ (accessed 5 October 2020).

58 Freedom House very directly denotes 'public opinion guidance' training as a euphemism for censorship training that the group believes China conducts. See: Mozur, P., Kessel, J.M. and Chan, M. 2019. 'Made in China, exported to the world: the surveillance state', *The New York Times*, 24 April, https://www.nytimes.com/2019/04/24/technology/ecuador-surveillance-cameras-police-government.html (accessed 5 October 2020). For a closer examination of China's conceptual innovations in ICT censorship, see: King, G., Pan, J. and Roberts M.E. 2014. 'Reverse-engineering censorship in China: Randomized experimentation and participant observation', *Science* 345 (6199), 1251722-1; King, G., Pan, J. and Roberts M.E. 2013. 'How censorship in China allows government criticism but silences collective expression', *American Political Science Review* (2013), 323-343; King, G., Pan, J. and Roberts M.E. 2017, 'How the Chinese government fabricates social media posts for strategic distraction, not engaged argument', *American Political Science Review* 111 (3), 484-501.

Western partners for its surveillance needs in the past. As stated in a 2005 internal US intelligence community memo describing the Ethiopian-US intelligence partnership, '*… the Ethiopians provide the location and linguists and we provide the technology and training.*'[59] This partnership appears to have continued until at least 2010.[60] Services and products from companies based in a number of European nations have also been noted to provide surveillance capabilities for the Ethiopian government, as have Israeli companies.[61] The surveillance capabilities acquired through Ethiopia's partnership with China are thus perhaps better understood as a continuation or development of a wider ongoing trend rather than a novel development in Ethiopia's surveillance model.

Many perspectives in the literature on China's involvement in African states highlight the importance of access to resources and cheap labour in, feeding critiques regarding China's role in, for instance, resource extraction, infrastructure and the developing garment sector in Ethiopia.[62] While Ethiopia's potential for Chinese investors and policy makers may be important in driving collaboration between the countries, it is important as illustrated above not to overlook Ethiopian interests in the partnership. Especially when it comes to the Sheba Valley, collaboration with Shenzhen poses a relatively unique value proposition. A considerable number of Ethiopian developers are interested in working with China, given that hardware development and open-source design in Shenzhen is cheap. It also provides a range of additional benefits in the areas of education and the scaling-up of production which are otherwise hard to access for Ethiopian developers (due to both domestic scarcity and barriers to European or US hubs).[63] As such, the emerging start-up innovation sphere poses a stark alternative to the narrative of resource and labour exploitation often presented. Many young Ethiopians working in collaboration with Chinese entrepreneurs in the Sheba Valley feel empowered to bring original ideas to the table and to design products for Ethiopians, regardless of which nation's hardware capabilities such developments are based on. And while the scaling-up of collaboration projects will undoubtedly benefit Chinese partners, some benefits will also accrue to Ethiopian stakeholders and the wider Ethiopian technology hub.

59   The Intercept. 2017. 'LION'S PRICE – Fighting terrorism in the Horn of Africa', *The Intercept's Snowden Archive*, 13 September, https://theintercept.com/snowden-sidtoday/3991127-lion-s-pride-fighting-terrorism-on-the-horn-of/ (accessed 5 October 2020).

60   US: '*As part of these partnerships, the US trained Ethiopia's army and security agency in surveillance techniques in exchange for local language capabilities and well-placed intelligence operations centers.*' See: Horne, F. 2017. 'How US surveillance helps repressive regimes –the Ethiopia case', *Human Rights Watch*, 3 October, https://www.hrw.org/news/2017/10/03/how-us-surveillance-helps-repressive-regimes-ethiopia-case (accessed 5 October 2020).

61   Marczak, B. et al. 2017. 'Champing at the cyberbit. Ethiopian dissidents targeted with new commercial spyware', *The Citizen Lab*, 6 December, https://citizenlab.ca/2017/12/champing-cyberbit-ethiopian-dissidents-targeted-commercial-spyware/ (accessed 5 October 2020); Marczak, B. et al. 2015. 'Hacking team reloaded? US-Based Ethiopian journalists again targeted with spyware', *The Citizen Lab*, 9 March, https://citizenlab.ca/2015/03/hacking-team-reloaded-us-based-ethiopian-journalists-targeted-spyware/ (accessed 5 October 2020). See also: Erlich, H. 2007. *Saudi Arabia and Ethiopia: Islam, Christianity and politics entwined*, Boulder, Lynne Rienner.

62   Marsh, J. 2015. 'Supplying the world's factory: environmental impacts of Chinese resource extraction in Africa', *Tulane Environmental Law Journal* 28 (2), 393-407; Pairault, T. 2020. 'China's infrastructure-heavy model for African growth is failing', *The Diplomat*, 30 July, https://thediplomat.com/2020/07/chinas-infrastructure-heavy-model-for-african-growth-is-failing/ (accessed 5 October 2020); Donahue, B. 2018. 'China is turning Ethiopia into a giant fast-fashion factory', *Bloomberg*, 2 March, https://www.bloomberg.com/news/features/2018-03-02/china-is-turning-ethiopia-into-a-giant-fast-fashion-factory (accessed 5 October 2020); Mourdoukoutas, P. 2019. 'What does China want from Africa? Everything', *Forbes*, 4 May, https://www.forbes.com/sites/panosmourdoukoutas/2019/05/04/what-china-wants-from-africa-everything/ (accessed 5 October 2020).

63   Interviews with an Ethiopian ICT entrepreneur, July 2020.

5 Recommendations

Chinese involvement in Ethiopia is significant, not only for its implications for Ethiopia as a major regional player, but also for the new approaches to South-South cooperation that China is showcasing in this regional diplomatic centre. In addition to geopolitical considerations, evidence from Chinese engagement elsewhere may also give cause for concern, and allegations of exploitation and critical views on the implementation of Chinese AI in other locations are well documented.[64] However, as illustrated in this policy brief, while there are risks associated with Chinese engagement in ICT in Ethiopia, the value generated through the partnerships and business models it develops are tangible, domestically appreciated, and frequently not a Chinese centrally orchestrated push towards surveillance. As a consequence, an alarmist response failing to recognise the motivations of Ethiopian actors to engage with Chinese initiatives is unlikely to gain significant traction. Rather than stressing the risks, a more positive narrative highlighting alternative opportunities for ICT collaboration with European states may be a more effective way of positioning the EU in the debate and shifting relationships. In order to develop such an approach, the following considerations may be informative.

Developing a visible and differentiated EU narrative on ICT development cooperation

China's increasing development cooperation efforts in Ethiopia differ substantially from the European liberal rights-based development modality, which may indeed risk losing ground in a number of policy areas that the European model champions. However, while the 'no-strings-attached' funding from Chinese development partners provides attractive opportunities, it should be noted that for many policy makers and practitioners native to the Horn of Africa the jury is still out on the potential impact of such projects on their domestic constituencies.[65] The initiatives around the DSR may provide opportunities for substantial finance and tangible output, yet European intervention models are a known and appreciated quality in many recipient countries. China differentiates its interventions by stressing the principle of non-interference in domestic politics (in contrast to the European more normative liberal and good-governance agenda).[66] Yet, a politically blind intervention may equally form a recipe for conflict in a divided multi-ethnic context such as Ethiopia, where relative economic gains across ethnic groups are highly politicised. A number of Ethiopian actors have also voiced concerns over the concrete implementation of a number of projects developed with Chinese involvement, highlighting the evasion of currency controls, environmental degradation affecting surrounding areas, heavy use of Chinese contractors employing local labour, and poor working conditions for local

64 Lucas, L. and Feng, E. 2017. 'China's push to become a tech superpower triggers alarms abroad', *Financial Times*, 19 March, https://www.ft.com/content/1d815944-f1da-11e6-8758-6876151821a6 (accessed 5 October 2020); Hoffmann, S., Lazanski, D. and Taylor, E. 2020. 'Standardising the splinternet: how China's technical standards could fragment the internet', *Journal of Cyber Policy*, 5(2), 239-264; Andersen, R. 2020. 'The panopticon is already here', *The Atlantic*, September issue, https://www.theatlantic.com/magazine/archive/2020/09/china-ai-surveillance/614197/ (accessed 5 October 2020);

65 Interview with an Ethiopian academic and a Somali diplomat, February 2020 and November 2019.

66 M. 2018. 'What's behind China's "non-interference" in Africa?', *Deutsche Welle*, 3 September, https://www.dw.com/en/whats-behind-chinas-non-interference-in-africa/a-45333266 (accessed 5 October 2020); Aidoo, R. and Hess, S. 2015. 'Non-interference 2.0: China's evolving foreign policy towards a changing Africa', *Journal of Current Chinese Affairs* 1/2015, 107–139.

labourers when used.[67] Similar sentiments have surfaced in the public debate.[68] While in practice such concerns are likely to vary by sector and intervention, a key issue is that for many on the receiving end, it is still not certain how the tangible benefits and potential tensions stack up against a more interventionist good-governance driven agenda. While African actors are in the process of determining their position towards Chinese development initiatives, a significant opportunity exists for European policy makers to clarify the added value of European initiatives.

On a more practical level, the ICT sector could provide a concrete entry point, as Western innovations and products are considered to be substantially more advanced than Chinese alternatives.[69] The technical focus of ICT development could present an alternative entry point to (ICT) governance issues, which is relevant given Ethiopia's historically reluctant engagement

with good-governance initiatives.[70] Additionally, a closer look at the types of projects currently being developed in the Sheba Valley reveals a substantial appetite among young Ethiopian tech developers to engage with some of the EU's key development issues, as these projects are frequently aimed at tackling bottlenecks in education, agri-food and healthcare.[71] Rather than stressing the risks of Chinese ICT products, EU policy makers could build the EU's leading position in the sector to set a positive, growth opportunity-oriented agenda by: 1) setting out a vision that identifies growth opportunities for entrepreneurs (e.g. growing African ecommerce market, adaptation of ICT products for the African market, etc); 2) creating opportunities allowing entrepreneurs from both continents to explore value-added collaboration models; and 3) aligning trade incentives and ODA to stimulate the identified opportunities. Maintaining a leading position in the sector without excluding African companies and start-ups from growth opportunities might be the most effective way influence the norms and values surrounding the use of AI.

Decoupling the debate on repression and Chinese ICT involvement

On the global stage, ICT-related issues such as 5G and AI have become major flashpoints symbolising the tension between Western and Chinese approaches in international trade. However, it should be kept in mind that

67 Interview with an Ethiopian journalist, academic and business consultant, December 2017; Alden, C. 2005. 'China in Africa: survival', *Global Politics and Strategy* 47(3), p. 157.

68 See, for instance, Asongu, S. 2013. 'Is China a friend of Africa?', *Addis Standard*, 21 November, https://addisstandard.com/is-china-a-friend-of-africa/ (accessed 6 October 2020); Giorgis, T. 2019. 'Ethiopia: DBE suffers mammoth loss of 1.7 billion Br', 18 May, https://allafrica.com/stories/201905220484.html (accessed 6 October 2020); Tsige, T. 2018. 'Chinese corruption suspect petitions PM's intervention', *The Reporter*, June 2, https://www.thereporterethiopia.com/article/chinese-corruption-suspect-petitions-pms-intervention (accessed 6 October 2020); Minwagaw, N. 2019. 'Low wages cast shadow on industrial parks', May 25, https://addisfortune.news/low-wages-cast-shadow-on-industrial-parks/ (accessed 6 October 2020).

69 White, E. 2019. 'China's ability to make computer chips still "years behind" industry leaders', *Financial Times*, 22 January, https://www.ft.com/content/a002a9e4-1a42-11e9-b93e-f4351a53f1c3, (accessed 6 October 2020), but also see The Economist, 2019, 'America still leads in technology, but China is catching up fast', May 16, https://www.economist.com/special-report/2019/05/16/america-still-leads-in-technology-but-china-is-catching-up-fast (accessed 6 October 2020).

70 Hackenesch, C. 2015. 'Not as bad as it seems: EU and US democracy promotion faces China in Africa', *Democratization* 22(3), 427-429.

71 For instance, among the finalists of the 2019 'Startup Ethiopia' event there were businesses that leveraged innovative technological solutions to address problems related to education (e.g. Langbot), agri-food (e.g. Deamat, Grohydro) and health (e.g. Eden, Rohobot). See: Karanja, M. 2019. 'The Ethiopia tech ecosystem: a sleeping giant is waking up!', *GSMA*, 3 July, https://www.gsma.com/mobilefordevelopment/blog/the-ethiopia-tech-ecosystem-a-sleeping-giant-is-waking-up/ (accessed 6 October 2020).

China's foreign policy portfolio is similarly multifaceted like those of other actors. Rather than focusing on contributions to the growing rhetoric on China's export of its surveillance technology and state-led internet governance, it is important to understand the specific technology collaborations and exchanges taking place in 'third countries' or host countries along the Digital Silk Road. As the Ethiopian example demonstrates, Chinese involvement is not necessarily exploitative nor is its involvement in the ICT sector as impactful on Ethiopian surveillance practices as the involvement of some Western actors has been in recent history. Additionally, it should be remembered that the Ethiopian state has a relatively strong administrative capacity and has demonstrated in the past that is not reliant on technological solutions to implement advanced methods of monitoring and controlling sections of its population.[72] Rather than highlighting the risks of surveillance technology, a more productive approach might be to capitalise on entry points created by the Abiy administration's legal reforms (and deal with the domestic risks associated with this) in order to discuss governance development. For a number of states, the high prioritisation of migration management and/or regional security concerns may be a bigger obstacle to promoting rights-based development than Chinese involvement is.

Additionally, looking beyond the interests at stake in Ethiopia, it should be kept in mind that the global debate is not just normative, but is also related to the leading role that European and US actors have maintained in the ICT sector. The surveillance-driven narrative is, to a considerable degree, a product of a protectionist agenda aiming to shield domestic markets from Chinese products. While this may to some extent protect Western businesses' leading position in the field, it is unlikely to be a productive longer-term growth strategy. Taking into account the potentially rising significance of African markets in the coming decades, a strategy aiming for growth in the ICT sector will need to consider access to resources, production opportunities and/or access to consumers in African and other emerging markets. A European ICT strategy should therefore go beyond protectionist considerations, and instead seek to enable proactive engagement and partnerships with actors in emerging and developing countries. Such a strategy would not only enable further growth, but might also reinforce the EU's standard-setting role in emerging fields such as AI.

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72 Brechenmacher, S. *Civil Society Under Assault. Repression and responses in Russia, Egypt, and Ethiopia*, Carnegie Endowment for International Peace, 65-90.

About the author

Jos Meester is a Senior Research Fellow at the Conflict Research Unit
of Clingendael (CRU). His research work focuses on the functioning
of the private sector in conflict-affected environments and migrant
economies. He is particularly interested in supply chains spanning
political divisions, as well as the close relationship between political and
private sector elites and its consequences for the stability of political
power structures.