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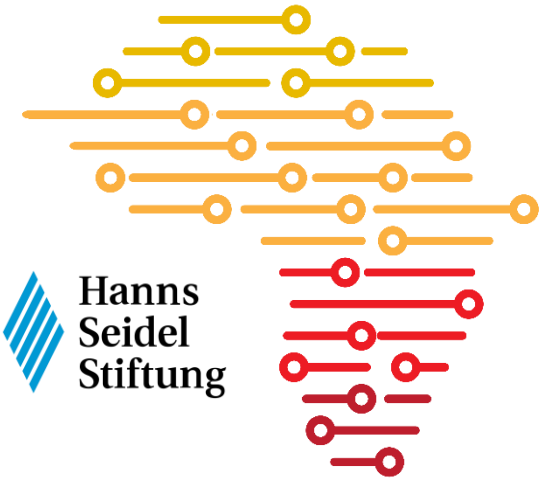
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Africa's agency in the competing narratives of external partners in Africa's digital market: A comparison of Japan and China

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Africa's agency in the competing narratives of external partners in Africa's digital market: A comparison of Japan and China

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Abstract

According to United Nations reports, Africa's economic growth potential is among the highest in the world. It is thus unsurprising that many global powers have turned their attention to the continent, often motivated by the opportunity to help Africa 'leapfrog' infrastructure challenges through funding the innovative application of information and communication technologies (ICTs). As the global competition for Africa's economic growth and, more specifically, Africa's digital sector heats up, understanding Africa's interests and agency within these negotiations becomes increasingly pertinent. This article explores some of the competing narratives provided by external states that seek a stake in the development of Africa's profitable digital market. The article employs Lesley Masters' (2021) digital diplomacy lens defined as 'a means of navigating the evolving international digital governance regime and negotiating a more even playing field to address the inequalities in the international structure'. The article compares and contrasts the narratives that are framed by two 'competitors', namely China and Japan. These two states are expected to become significant players in the development of Africa's digital market; China has become one of the most important funders in ICT networks in the global South and Japan's recent pledge of $30 billion in aid to Africa includes the digital technology sector.

Introduction

Africa's digital revolution holds significant economic and development potential for the continent. As noted by the AU Digital Transformation Strategy for Africa:
'… economic opportunities [are in] virtually every sector, and the continent's youthful population structure is an enormous opportunity in this digital era and hence the need for Africa to make digitally-enabled socio-economic development a high priority' (AU, 2020: 1).

Africa has boasted several digitalisation successes. For example, some African start-ups' valuations exceed US$1 billion, there are over 640 tech incubators across the continent (AUC/OECD, 2021: 23), over half of the African population live in an area covered by 4G networks (GSMA, 2020) and the continent's inbound international Internet bandwidth capacity increased more than 50 times in the past decade (Hamilton Research, 2020).

Despite the abovementioned successes, Africa remains lagging in the global digital revolution. Africa's Internet penetration in 2022 stands at 46.8%, while the average for the rest of the world is 80.4% (Internet World Stats, 2022).

This global digital divide has significantly constrained Africa's ability to contribute to digital entrepreneurship as digital entrepreneurs in developed countries have key advantages and therefore African digital entrepreneurs are unable to compete at a global scale (Graham et al., 2017). Intuitively, this has hampered Africa's home-gown digital market, largely left the continent dependent on 'imported' technology and made the continent susceptible to so-called 'digital colonialism'.

Digital colonialism has been explained as a 'structural form of domination [that] is exercised through the centralised ownership and control of the three core pillars of the digital ecosystem: software, hardware and network connectivity' (Kwet, 2019a: 4). Thus, a structural imbalance has been created whereby certain tech-forward countries – whether developed or developing – occupy positions as 'producers' and exporters of knowledge while Africa and other global South countries are positioned as 'consumers' of knowledge and are a market for technology and innovations (Masters, 2021: 367).

Although these producer-consumer exchanges have, in rhetoric at least, moved away from the exploitative relationships often described in digital colonialist literature (see: Kwet 2019b), they remain predominantly transactional in nature.

In 2021, Lesley Masters published an article entitled 'Africa, the Fourth Industrial Revolution (4IR), and digital diplomacy: (Re)Negotiating the International Knowledge Structure'. This paper argues that the lack of transformational partnerships in Africa's digital revolution has impeded the continent's ability to capitalise on the potential socio-economic development that the 4IR presents. Therefore, she argues, Africa ought to play an active role in negotiating the continent's access, resources, skills and priorities of African stakeholders and promote transformational partnerships with external actors rather than remain dependent on transactional relations. In closing, Masters emphasises the need for further research on Africa's diplomacy on digital technology, to assess the negotiations, the actors and the outcomes. It is within this research gap that this article makes a contribution.

As a result of Africa's youthful digital market and expanding digital framework, the African continent has emerged as a focal point in terms of technological potential. While this is an advantage to the African continent, especially in terms of the potential to boost economic development, African states must leverage international partnerships as a means to fully capitalise on its digital potential. Hence, the broad picture of this research aims to draw upon how Africa can navigate translating its agency into influence as a way of ensuring digital partnerships work in the continent's favour and digital partners do not merely dictate the rules of the game to African states.

China and Japan were used as case studies within the context of this research. This was done as a means to highlight the transformational and transactional framework that exists within the African digital market space. China has positioned itself as an important player in the African digital market; currently 70% of all African information technology frameworks are constructed by Chinese actors. China has also been key in the construction of smart tech cities in several key African cities as part of its Digital Silk Road initiative, which aims to digitally connect the African continent to European and Chinese markets. While Japanese investment within the African digital market has not matched the size of that of Chinese investment,

Japan has instead opted to pursue several effective and meaningful Japanese –African technology partnerships, making it to an important partner in crafting Africa's digital future. Japan has leveraged agencies which include the Japanese Bank for International Cooperation and the Tokyo Conference for African Development to help fund technology investments, such as subsea cables and investments in several emerging African digital start-up innovations.

This paper employs Masters' lens of digital diplomacy in a comparative study of the competing narratives provided by Japan and China as prominent global players in Africa's digital revolution.

To achieve this goal, the authors chose to focus on two research questions:

1. What are the competing narratives of Japan and China's digital cooperation with Africa?
2. Where does Africa's agency lie in these negotiations?

Gap in literature and theoretical underpinnings

As noted by Lesley Masters (2021), although significant research has been conducted on the implications of technological advances, fewer studies have looked at the impact of the 4IR and negotiating the international governance of these emerging digital technologies (Masters, 2021: 361).

One study by Mzukisi Qobo (2021) investigates Africa's agency within the US –China tech war, arguing that 'Africa must safeguard their right to choose from the broadest possible range of foreign policy partners and technology options that suit their countries' digital needs' (Qobo, 2021: 183).

There are no studies known to the authors that consider Africa's agency at the negotiation table within the Japan –Sino competition in Africa's digital sector. This gap in the literature is where this study find its relevance.

The theoretical frame that this article employs is Lesley Masters' (2021) digital diplomacy lens which is defined as 'a means of navigating the evolving international digital governance regime and negotiating a more even playing field to address the inequalities in the international structure'. Masters' conceptual framework emerges from the power structure that is inevitably formed by the control and governance of digital technologies. She, therefore, proposes understanding 'digital diplomacy' as diplomacy for digital technologies; as a lens to assess the competition and cooperation around digital technologies globally.

As previously mentioned, exploitative partnerships have, at least in rhetoric, largely been avoided in the last few years. Although transactional digital partnerships between external partners and Africa have filled the gap, Masters argues that it is transformational digital partnerships that Africa requires and should negotiate towards.

Enos and Morton (2003) define transactional relationships as instrumental and often designed to complete short-term tasks in which partners corporate on an exchange basis, both benefit from the exchange, and no long-term change is expected. This is distinct from transformational relationships wherein both persons grow and change. Transformational relationships offer deeper and more sustainable commitments, with partners engaging in open-ended long-term processes.

The article is divided into four sections: the first will provide a brief overview of the existing literature on this theme and identify the gap this paper addresses. The second section briefly presents the methodology that was employed to study and provide relevant conceptual clarifications. The third section discusses the findings of the study in the form of a comparative analysis of the competing narratives of the Japan –Africa and Sino –Africa digital partnerships, respectively. This section provides concrete examples of competing narratives. The final section offers a discussion of the implications of the results, focusing on Africa's agency and further considerations towards practice, policy and research possibilities.

Literature review

Africa's digital market potential and competition

At the beginning of the 21st century, the 'Africa Rising' narrative came into prominence as analysts reported positive trends in Africa's gross domestic product (GDP) figures. However, the Africa Rising narrative has since been largely discredited, due to its consideration of gross domestic product (GDP) as a sole measure of economic growth, which did not account for social inclusion at the ground level context and did not mirror the 'rising' narrative (see Khiso, 2020).

Considering the disappointment of the 'Africa Rising' concept, observers have argued that innovation-driven development might be the key. This introduced the now prominent argument that Africa has the potential to 'leapfrog' development through digitalisation (UN Office of the Special Adviser on Africa). As articulated by Cathy Smith, the 4IR 'has the potential to turbocharge the socio-economic development of the entire African continent' (Smith, 2019). This fuels the notion that the future prosperity of African states will vastly depend on the extent to which they can integrate into this digital global village.

Some of these arguments have been grounded in the fact that digitalisation can boost economic growth by boosting international trade (Freund & Weinhold, 2004). Other studies have argued that a well-functioning digital economy guarantees low transaction costs, effective delivery, quick access to foreign markets and faster transmission of business information and data, thereby boosting economic growth (Petersen, 2019).

An interesting study by Isaac Appiah-Otoo and Na Song (2021) investigated the impact of information communication technology (ICT) on economic growth in rich and in poorer countries. Looking at 123 countries between 2002 and 2017, the study found that, although ICT increased economic growth in both rich and poor countries, poorer countries tended to benefit more than rich countries from the ICT revolution.

On the African continent, contextualisation is key to this argument. Central to this is Africa's demographic dividend. As argued by Cilliers (2018), Africa is the only region globally where

the size of the working-age population relative to dependents will expand beyond 2030. This is significant compared to the global ratio of the working-age population to dependents which peaked in 2012, leading to a slowing down of economic growth. Thus, coming off a low-labour productivity base, Africa could exploit the 4IR to its development gap more so than the rest of the world. African states could leverage the digital revolution as a means to gain an increased equitable footing in their economic and political relations with the rest of the world.

Another advantage of Africa's emerging youth population is the general tendency for young people to use technology more than adults. A report by the GSM Association (2021) argues that with more than 40% of the region's population under the age of 15, young consumers buying a mobile phone for the first time will remain the primary source of growth for the foreseeable future. It is projected that there will be around 120 million new cell phone subscribers by 2025.

A plethora of research has been published in recent years on the economic potential of Africa's digital market resulting from Africa's digitalisation. A recent report by Endeavour (2022) projected that Africa's digital economy is set to increase six-fold from its current value of $115 billion to $712 billion by 2050 (Endeavour, 2022). Although there is great potential for growth in Africa's digital sector, there is relative consensus in the literature that Africa is still playing catch-up when it comes to infrastructure, skills and education (Ayentimi and Burgess, 2019).

Africa suffers a digital divide. The digital divide is simply defined as 'inequality of access to the Internet' (Castells, 2002: 248). In 2021, only 33% of Africa's population had access to the Internet; 871 million people on the continent were not benefiting from the potential digital dividends (Munga, 2022). Due to Africa's delayed arrival in the digital world, there is already an imbalance of power in the global digital structures. Authors such as Desmond Ayentimi and John Burgess (2019) have even asked the question, given a large informal economy, a lack of infrastructure and technical skills: 'Is the Fourth Industrial Revolution [4IR] even relevant to sub-Saharan Africa?'

Other authors such as Louise Fox and Landry Signé (2022) have argued that although Africa is lagging and the social and economic disruption risks of the 4IR are high, creating countervailing policies could be a solution.

Considering Africa's digital market potential, it is intuitive that global powers are competing for a piece of the pie. This has been termed ‘the new scramble’ for Africa's data and market access to technology (Gravett, 2020). By considering the significant digital divide between Africa and the rest of the world, global powers such as China, the United States (US), Europe and Japan have stepped up competition to capture this largely untapped market (Hofmeyer et al., 2022: 14).

Our literature revealed that significant scholarly attention has been paid to the competing narratives between the US and China (see Abdoulaye and Cha, 2021). Other studies have considered the growing competition among emerging actors such as South Korea and India (Tirziu, 2021). Much of this literature acknowledges that the competition for Africa's digital market by foreign governments in Africa's digital revolution has helped African nations by, for example, providing mobile technology infrastructure. In Rwanda, South Korea's largest telecom provider (KT Corporation) assisted Rwanda to achieve over 97% 4G mobile coverage by 2020 (PPIAF, 2020). Observers, citing the major funding gap, have also highlighted the fundamental need for Africa to accept foreign aid in its digital revolution. It has been estimated that Africa requires $3 billion a year to meet the overall ICT infrastructure development (Infrastructure Consortium for Africa, 2018).

Although some authors have argued that the competition by foreign governments leaves Africa vulnerable to dependence and manipulation, with civil liberties at risk (see Polyakova and Meserole, 2019), Alina Polyakova and Chris Meserole (2019) argue that the spread of authoritarianism through the export of surveillance technology is targeted. Polyakova and Meserole argue that China and Russia have developed and exported distinct technology-driven playbooks which encourages authoritarian rule. They further argue that the US must act to counteract this spread of digital authoritarianism.

Other authors have argued that this phenomenon is fairly neutral. For example, Nathaniel Allen and Matthew La Lime (2021) highlight that there are many diverse actors contributing to the digital surveillance industry in Africa, including Israel's NSO Group, China-based Huawei, UK-based Gamma Group, Milan-based Hacking Team and the French firm Amesys. They further argue that the export of these technologies could fuel authoritarian tendencies that are already present in some African countries.

As Christianne Heidbrink and Conrad Becker (2021) demonstrate, some of these analyses are also built upon a negative bias among think tanks and political elites, primarily in the US, that frame China's Digital Belt And Road (DBAR) as a means for creating excessive vulnerabilities for participating states towards digital authoritarianism, especially African states. Heindbrink and Becker demonstrate that these biases are built upon China's threat to the US cyber power. For example, an often-cited justification is the Chinese National Intelligence Law which was passed in 2017. This law compels Chinese tech firms to cooperate with the State, especially for the approval of Chinese security firms to gather and process information by Chinese firms about foreign entities and individuals. Essentially, this creates military-civil fusion as DBAR grants the Chinese State direct access to sensitive government information and communications (Heidbrink & Becker, 2022 p.15-16).

These narratives can be problematic, most notably because they obliterate the African agency in the negotiations. As Iginio Gagliardone (2021) argues, these narratives fail to recognise how African stakeholders have developed and pursued their versions of their national information societies, regardless of the donor country's intentions.

Considering the debate among scholars on the positive and negative impacts of foreign competition on Africa's digital economy, this article builds on Kranzberg’s first law of technology: Technology is neither good nor bad; nor is it neutral (Kranzberg 1986).Corrected.

Methodology and conceptual clarifications

Methodology and case studies

This article employs a qualitative method of analysis using both document analysis and Open Source Investigation (OSINT)1 to analyse and compare the narratives projected by the 'competitors', Japan and China, through their foreign policy documents and strategies. This report considers primary data in the form of speeches, social media posts and policy documents published by the respective governments, in addition to open-source data and secondary data.

The two case studied were chosen, firstly, due to the lack of academic research existing on their competing narratives in Africa's digital space and, secondly, due to their relevance within a context of renewed Sino –Japan competition on the African continent.

In the twentieth century following World War II, most of Japan's foreign aid was directed to Asia, with 98.2% of Japan's aid going to Asia in 1970 (MOFA of Japan, 2003). However, by the end of the twentieth century, Africa became more of a priority and Japan shifted its Africa policy from an economic-oriented policy towards a human-security-based policy (Sato, 2005). To demonstrate the expansion of Japan –African partnerships, the Tokyo International Conference on African Development (TICAD) was established.

Conversely, in the mid –nineteenth to twentieth century, Africa was a major recipient of China's aid in an attempt to counter the hegemonic 'imperialist forces' – the United States and the USSR (Eisenman, 2007: 31). However, towards the end of the twentieth century, China's aid to Africa was cut and the discourse of China's Africa policy shifted to one of 'self-reliance' (Eisenman, 2007). Hirono (2019) argues that China's policy towards Africa in the twentieth century was a 'means to its ultimate end'. At the beginning of the twenty-first century, China returned to Africa to advance its economic development. This return marked a shift in relations with Africa and the establishment of FOCAC, underpinned by the 'China – Africa friendship'.

[1] Open-source intelligence is the collection and analysis of data gathered from open sources to produce actionable intelligence.

On 29 August 2022, Japan pledged US$30 billion to Africa in aid and investment over the coming three years. This significant investment has been framed as an attempt to counter China's growing influence on the continent, with analysts citing the comments made by the Japanese foreign minister, Yoshimasa Hayashi. These have been interpreted as alluding to China's alleged 'debt trap diplomacy' by asserting that Africa's growth ‘must not be impaired by unfair and opaque lending’ (Keyue, 2022).

Data collection and procedure

This study began by conducting a qualitative content analysis exercise which was followed by an in-depth analysis of specific cases. The content analysis exercise considered speeches, policy documents and open sources, using a concept-driven approach to structure the content (Schreier, 2014). For this purpose, we established a binary category system to code the material based on Enos and Morton’s (2003) rubric of transactional versus transformational partnerships (see Table 1 below).

Table 1: Rubric of transactional versus transformational partnerships

Transactional	Transformational
[———]	
1	10
*Short-term	*Long-term; indefinite
*Project-based	*Issue-based
*Limited, planned commitments	*Dynamic, open commitments
*Work within systems	*Create new systems
*Maintain separate identities	*Create group identity
*Accept institutional goals	*Critically examine goals
EACH BENEFITS	EACH GROWS

Source: Enos and Morton (2003)

To select relevant documents for content analysis, we followed a triangulation approach. The first step involved reviewing all documents and speeches presented at FOCAC and TICAD, and removing those that did not reference cooperation on digital technologies. Second, we searched for relevant policy documents and speeches cited in academic papers on the subject. Third, we conducted an Internet search for opinion pieces and quotes by government officials related to relevant cooperation projects on digital technology.

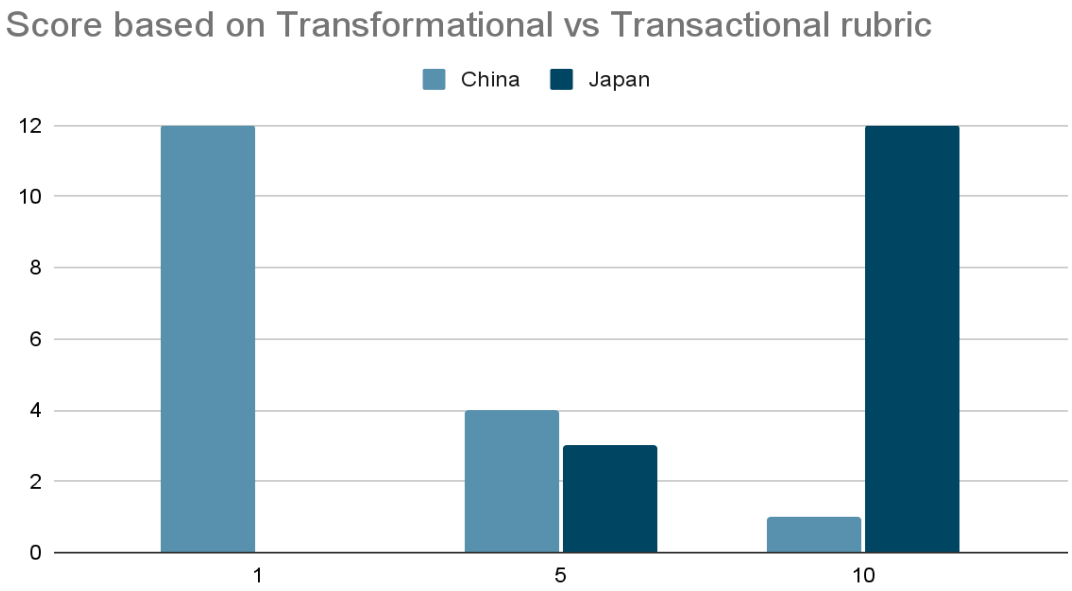
The final sample included 12 policy documents, 9 speeches, 3 press releases, 6 pieces written by relevant government officials and 2 news articles – 17 relating to China's partnerships and 15 relating to Japan (see Annexure A for a full list of the initial documents analysed).

Following the close reading of each document, the researchers assigned a score according to the binary code frame. If the text described a digital technology exchange with Africa in a transactional manner, according to the rubric (see Figure 1 below), it was scored '1'. If the exchange was described in a transformational manner, according to the rubric, it was scored '10'. If the description had reference to both a transaction and a transformational exchange, it was scored '5'.

Results

Figure 1 below presents the results of the qualitative content analysis exercise. The results demonstrate that China articulated their digital partnerships with the continent as more transactional, whereas Japan presented a more transformational partnership.

Figure 1: Qualitative content analysis results



Source: Authors creation based on documents in Annexure 1

Figure 1 demonstrates that, from the documents analysed in this study, the rhetoric used by the Chinese government to describe the digital technology exchange with its African counterparts was noticeably more often transactional; transformational rhetoric was seldom used. Conversely, the Japanese government almost always used transformational rhetoric to describe these exchanges. On a few occasions, both governments used transformational and transactional rhetoric in the same document to describe the exchange. The following section discusses the implications of these findings and presents a closer reading of individual cases.

Discussion

This section analyses several case studies from the sample documents and compares the divergent narratives presented by Japan and China within each case. The goal of this section is to answer RQ 1: What are the competing narratives of Japan and China's digital cooperation with Africa?

Infrastructure: Information communication technology (ICT) sector

China has become one of the most important funders of ICT networks, not only in Africa but also across the global South. In terms of quantity, China has been involved significantly more than Japan in Africa's ICT sector. The nature of the respective partnerships is also starkly different.

China's ICT cooperation in Africa forms an essential part of the Digital Silk Road initiative and has had significant influence. Huawei has constructed 70% of 4G networks in Africa (Gravett, 2020: 126–136). The Digital Silk Road initiative, part of the broader BRI project, provided Chinese ICT companies with an urgently needed external market due to low domestic consumption. By the end of 2015, overcapacity in China's optical fibre and cable industry exceeded 50% (Zhou et al., 2015).

One example of China's ICT cooperation in Africa is the National ICT Broadband Backbone in Tanzania (NICTBB). This project was a significant intervention in Tanzania's telecommunication sector, fostering e-education and e-government (The United Republic of

Tanzania National Audit Office, 2017; Pazi and Chatwin, 2014). This project was largely articulated by the Chinese government as a transactional exchange, being described by the Chinese Ambassador to Tanzania, Wang Ke, several times as the first 'National Information Highway' (H.E. Ambassador Wang Ke, 2019; 2020). This is an apt description for an initiative that developed high-speed, high-quality capacity fibre optic connectivity from Tanzania to Africa and the world (NICTBB). However, there has been little attempt to frame the initiative as anything other than instrumental. Furthermore, there was little focus on capacity building by the Chinese contractor, which resulted in inadequate local operation and management of the infrastructure (Agbebi et al., 2021:9). Thus, there is little evidence to demonstrate that this was more than a short-term transactional exchange.

Another example of China's ICT infrastructure cooperation with Africa is the Pakistan and East Africa Connecting Europe (PEACE) cable. The PEACE cable was a response to the increase in virtual online interactions, which prompted the need for increased connectivity and bandwidth. The 15 000-metre-long fibre optic cable connecting the three continents of Africa, the Middle East and Europe has achieved the dual objective of helping Africa attain greater bandwidth and China the ability to project soft power globally. Thomas Blaubach (2022) highlights that the PEACE cable will achieve the goal of connecting the future digital economy via Chinese digital infrastructure, ultimately helping Beijing attain its 'Made in 2025' initiative target of ascertaining a 60% share in the global fibre-optic market (Blaubach, 2022: 2). Although this may indicate that the exchange is simply transactional, at the ceremony celebrating the landing of the cable in Seychelles in March 2022, the Chinese ambassador to Seychelles, Guo Wei, awarded several local technicians with certificates of completion of technical training in the operation, maintenance and troubleshooting of the new facility (Seychelles Nation, 2022). This indicates China's commitment to the sustainability of the project.

Comparatively, Japan's ICT interactions on the continent have been on a much smaller scale. It could be argued that Japan's ICT cooperation in Africa is a strategic counter-influence to China's cooperation by positioning itself as a partner within the African digital tech space, and fostering long-term strategic partnerships between Japan and many African states, as opposed to short-term transactional exchanges.

A further example is the collaboration between Japanese telecommunications firm NEC and Angola in constructing the South Atlantic Cable System (SACS). The SACS links Africa to both South and North America, including major cities such as New York and Miami. The Japan Bank for International Cooperation (JBIC), which provided a loan of US$65.8 million for the project, articulated that the project was important as a means to 'improve the accessibility of Angola and the peripheral areas and help revitalize the economy' in addition to 'contribute to maintaining and strengthening the international competitiveness of Japanese industries' (Japan Bank for International Cooperation, 2015). Japan presented this Japan –Africa partnership as a dual growth opportunity, which allowed Angola to diversify its economy (Angolan national GDP was predominantly oil dependent) while allowing Africa to achieve vital goals. Japan presented this project to ensure the growth and sustainability of opportunities and partnerships for Japanese companies in Africa.

Japan's involvement in Rwanda's ICT sector development is yet another example. Japan International Cooperation Agency (JICA) supported various stages of the Rwanda government's 'Vision 2020', the National ICT Strategy and Plan (NICI). Through this cooperation, Japan has also supported the establishment of the Knowledge Laboratory (kLab), which supports the young generation of 'Digital Natives' to implement ICT innovations designed by Rwandans themselves (MOFA Japan, 2013). Initiatives such as these are of mutual growth: Japanese support catalyses economic development in Africa, while the relationships created can work as a foothold for the entry into African markets by Japanese companies (MOFA Japan, 2013). Furthermore, in an internal paper discussing Japan's involvement in Africa's ICT sector, written by Tomoyuki Naito, senior adviser of ICT and Development at JICA, it was noted that 'it goes without saying that as foreigners we cannot envision the solution, and it will only become clear when the people of Africa take ownership and study it' (Naito, 2018: 11). Therefore, the Japanese government articulates their involvement in Africa's ICT initiatives as transformational, assisting in African-owned innovations rather than transferring Japanese-made solutions.

These examples demonstrate that Japan not only wants to 'sell' their cooperation in Africa's ICT sector as focussed on African ownership and bottom-up solutions, but sees this as a long-

term partnership, which allows both parties to grow from the exchange. This is a clear example of a transformational relationship narrative. China's partnerships with Africa's ICT sector, although mutually beneficial, are not framed around mutual growth and long-term partnership; rather, they are transactional partnerships.

Innovation: Emerging 4IR technology

Emerging technologies in the 4IR consider a myriad of different technologies, including artificial intelligence, Virtual Reality, Big data and 3D printing, in addition to advances in the domain of nanotechnology and biotechnology (Lavopa and Delera, 2021).

There has been significant commentary on China's exportation of artificial intelligence systems to Africa as a means to 'exporting repression' (Gwagwa, 2018) based on their domestic model of surveillance technology. In 1998, China launched the Golden Shield Programme (GSP). The GSP is a surveillance initiative that aims to create a fully digitalised public security sector using a national surveillance network. Although it began primarily using surveillance cameras, the system has grown in sophistication and now includes 416 million surveillance cameras that use artificial intelligence (AI) facial recognition (Weber and Ververis, 2021).

Out of the GSP, the 'safe city model' has evolved. This system is a Huawei product that consists of surveillance and governance technologies, including CCTV cameras, tracking devices, software and cloud storage systems (Jili, 2022a). This initiative has been exported across the global South, including in Kenya and Botswana. The narrative used to 'sell' this technology abroad is based on Beijing's assumption on development, known as Kexue Fazhan Guan – the idea that technical interventions can numerically capture and abate social challenges such as crime (Jili, 2022b: 2).

Bulelani Jili (2022c) demonstrated that China actively uses multilateral institutions, such as FOCAC and BRICS, to promote its surveillance platforms across the global South. These systems are sold as solutions to crime and rising terrorist threats.

Although the Chinese government sells the safe city surveillance system as a solution to societal challenges such as crime, this has not been translated on the African continent. Despite Huawei's claim that crime rates had decreased by 46% from 2014 to 2015 (Huawei, 2016), in Nairobi and Mombasa crime had reportedly increased.

Japan's artificial intelligence and surveillance technology has not neared China's infiltration into Africa. The Japanese government has committed to 'develop technologies and solutions that will contribute to the digital transformation of Africa' while 'encouraging strengthening the relationship between Japanese ICT companies and African companies' (Japanese Government, 2021: 2) in areas such as smart cities, among other areas. The Japanese government also launched the 'Green Growth Initiative with Africa' at TICAD 8. The initiative aims to use innovation and digital solutions 'to facilitate Africa's own-lead development' based on 'ownership and co-creation, flexible finance mobilisation and collaboration with diverse partners' (Japanese Government, 2022).

Although China has significantly overshadowed Japan's partnerships with Africa in emerging technology in terms of quantity, Japan has phrased its future cooperation as 'African-owned' and 'co-created'. In contrast, China's is a largely transactional approach or transferring of Chinese emerging technology to Africa. Therefore, Japan's cooperation has largely contributed to African tech start-ups. This has allowed for African bottom-up emerging tech innovations.

Investment: Tech start-ups and fintechs

Africa is becoming a hotbed for tech start-ups2. Between 2020 and 2021, the number of tech start-ups in Africa tripled to around 5 200 companies with estimated revenues of around $4 billion to $6 billion in 2020 (McKinsey and Company, 2022). Financial services in Africa are often extremely costly on a continent in which the majority of citizens live on less than two dollars a day. For this reason, 70% of the sub-Saharan population remains unbanked; fintech

[2] A tech start-up is a company whose purpose is to bring technology products or services to market. These companies deliver new technology products or services or deliver existing technology products or services in new ways (see Funders Club https://fundersclub.com/learn/tech-startups/overview-of-tech-startups/what-are-tech-startups/.).

offers mobile banking with lower cost and high efficiency which acts as an alternative to traditional banking (Dondjio and Manushaqa, 2020: 4). Africa's fast-growing tech start-up industry has thus received significant foreign attention and investment, not least from China and Japan.

Under the agreements of the TICAD 7 summit, Japan pledged its continued support to be a partner to African states within various sectors, but most notably its digital development sector. Aligned with these commitments, the Japan Business Council (JBCA) and Next Innovation with Japan (NINJA)3 launched. According to the joint statement of TICAD 8 (2019), through JBCA and NINJA, Japanese tech giants are tasked with partnering and supporting African digital start-ups to bolster skills and project co-development.

Consequently, Japanese companies have been heavily involved in Africa's growing fintech4 industry. For example, Japanese venture capital firm Leapfrog Ventures has invested in Ugandan fintech start-ups Xente Tech Ltd and Swipe2pay, which offer mobile banking services to informal traders. Mr Kato Ryuichi, vice-president of JICA, highlighted that JICA's cooperation with African tech start-ups has been built on 'Home Grown Solutions' (Ryuichi, 2021).

Although supporting foreign tech companies may be opposed to China's 'Made in China ' policy, China has invested in Africa's fintech sector, including in Nigeria, South Africa and Rwanda. For example, Chinese tech giant ICBC invested US$5.5 billion in Standard Bank's digital banking division (Meyer and Alden, 2008: 8).

There is also evidence that the Chinese government adapts its 'sale tactic' to fit the local environment. For example, in 2019, the Ethiopian and Chinese governments signed an MoU that included the establishment of the Sheba Valley innovation hub. The Chinese Vice

[3] NINJA is a start-up support initiative by the Japan International Cooperation Agency (JICA) launched in January 2020 to promote entrepreneurship, innovation and the creation of new businesses in emerging countries. https://jica.ninja/.

[4] Fintech, 'financial technology', refers to companies using new technology to compete with traditional financial methods in the delivery of financial services. https://www.investopedia.com/terms/f/fintech.asp).

Minister of Commerce, Qian Keming, articulated the MoU as complementary to Ethiopia's 'Home-Grown Economic Reform' (ENA, 2022).

Observers have argued that the innovation hub has primarily worked on bottom-up initiatives and that the Ethiopian government showed 'a remarkable ability to shape and retain control of their surveillance apparatus' (Gagliardone, 2021: 26; Meester, 2021). This transformational partnership highlights the Sino –African cooperation which can be adapted to the local environment and context, allowing greater agency on the African side when asked for.

Broad picture

In addition to the small cases discussed above, it is as important to consider the broad strategic narratives of Japan and China's respective approaches to digital cooperation with Africa.

In a speech by Japan's former Prime Minister Shinzo Abe in 2014, it was articulated that, in Japan's opinion, 'Africa is no longer a recipient of "aid"... [investments in Africa] are made for Japan to grow together with the African countries' (Abe, 2014). Similarly, Japan International Cooperation Agency (JICA) advocates digital transformation that is intentionally inclusive (UNDP, 2022).

This contrasts with China's strategic approach. In China's proposals for the China –Africa Partnership Plan on Digital Innovation, it is explicated that 'China will share its digital technologies with Africa' (Ministry of Foreign Affairs of the Republic of China, 2021 [emphasis added]). There is little provision for African ownership of digital solutions. Moreover, as China entrenches its technologies within global trade avenues, not only does this result in an increasing market share for Chinese tech firms but also it makes the country's technology ecosystem increasingly ubiquitous with drastic consequences for dependencies on systems that facilitate trade (Hofmeyer et al., 2022: 10).

Furthermore, China has strongly promoted the concept of cyber sovereignty, referring to the respect for the nation's right to choose the trajectory of its Internet development and

management (Creemers, 2020). China has seemingly used digital cooperation agreements with African countries to garner support for this concept. For example, in the Dakar Declaration of the Eighth Ministerial Conference of the Forum on China –Africa Cooperation, paragraph 24 states 'Africa takes due note of and will further positively consider the Global Initiative on Data Security launched by China. We stand ready to build on this Initiative to advance the formulation of global digital governance rules, and call on the international community to jointly build a peaceful, secure, open, cooperative and orderly cyberspace and a community with a shared future in cyberspace' (FOCAC, 2021).

Comparison discussion and implications for Africa's agency

Despite the impressive potential of Africa's digital market, Ndung'u and Signé (2020: 61) note that 'Africa still lags behind in several indicators essential for a successful digital revolution, especially in infrastructure, technology access, and education'.

Moreover, the prevailing narrative on Africa and the 4IR promotes the ideals of partnerships (Masters, 2021: 363), regardless of the terms and conditions and the impact it may have on the control and governance of the digital space. This is largely premised on the idea that Africa's ability to leapfrog development through technology is worth more. This most notably as many African governments seek to promote digitisation and the use of technology as a means to grow African economies out of poverty while employing tech as a means to solve everyday issues, such as logistics, finance, education and healthcare.

Nonetheless, this article aims to demonstrate that the types of partnership do matter. Considering the growing competition among global powers, Africa has some leverage in considering its options.

The previous section demonstrated that, on balance, China's narrative of its digital partnerships with Africa is more transactional than Japan's narration which is presented as more transformational. Yet, each partnership comes with its benefits and risks.

The US –China trade war, which heated up in 2019, demonstrated one key risk of depending on digital partnerships with China, especially as US –China technology decoupling becomes a more likely scenario. The risk includes the banning of Chinese technology in American companies or banning US-based apps on Chinese phones. This directly impacts Africa, which is largely dependent on mobile phones from vendors incorporated in China, primarily Huawei, but is significantly disadvantaged by the limited accessibility to key US apps such as Gmail, Google Maps and YouTube which were banned from being added to Huawei phones post 2019 (Munga and Denwood, 2022).

Hence, an over-reliance on Chinese technologies by African states wishing to spur development could also, in the long run, undermine African innovation. Digital market access may be vastly controlled by Chinese state-backed tech firms shutting out both African tech entrepreneurs and outside firms wishing to do business in Africa. As Chinese firms gain a hand in dictating with whom governments can do business, writers Paul Triolo and Kevin Allison add to this debate by highlighting that China's funding of Digital Silk Road projects, such as smart cities, cloud services and mobile payments, can breed dependence, making it difficult for other digital corporations to do business in BRI countries for political and economic reasons related to control by China in Africa (Triolo and Allison, 2020: 2-3).

The 4IR and emerging technology, such as artificial intelligence (AI), has prompted a rush for digital hegemons to patent and trademark various digital innovations. As Andreas Bielig (2021) highlights, the growth of digital tech can be quantified by the increasing applications to large patent international offices in Japan, China and the EU (Bielig, 2021: 6). Ultimately, these patent laws may have drastic implications for Africa's digital economy and innovation. For example, African states may become caught in a perpetual cycle of dependence, with patents prohibiting African innovators from developing generic cheaper and thus more affordable technologies for everyday African citizens to use. However, other observers have argued that the Cold War trope of digital dependence is a lazy stereotype that has ‘little sensitivity to empirical evidence’ (Gagliardone, 2021).

Although the findings of this paper demonstrate that the narration of Japan’s digital partnership with Africa is often more considerate of Africa's situational context and

transformational in nature, it also has constraints. As noted by Purnendra Jain from the National University of Singapore's Institute of South Asian Studies, Japan may not be able to compete in quantity with China, but Japan offers quality projects that are in partnership with African nations. Jain further notes that it is up to African nations to decide for themselves which model appeals to them and is in their national interests (Siow, 2022).

The intention of this article was not to argue that one partnership type is better than and should be prioritised by Africa over the other. The article uncovers the different narratives and 'options' open to Africa for its crucial digital revolution.

Although Masters argues that Africa ought to negotiate towards transformational partnerships, the comparison between China's transactional relations and Japan's transformational ones also demonstrate that quantity was in China's favour.

As Africa aims to leapfrog development, some sense of pragmatism is required; Africa does not have the luxury to turn down too much development assistance from external funders – regardless of the partnership type.

This pragmatism is evident already. For example, despite the scandal of compromised Huawei technology at AU headquarters, leading to a five-year-long data leak to China, the AU president denied allegations of espionage and, in 2019, signed a new MoU with Huawei to expand partnerships. This decision can be surmised simply as acknowledging the importance of the technology provided by Huawei over the security risk.

That being said, Africa does have a level of agency in the negotiation.

Despite the evident competition between China and Japan for Africa's digital market, African countries' cooperation with both actors is unlikely to cause the same disruption as the US – China technology Cold War. For example, in 2021, Japan even donated three Chinese-made robots to Kenya amid the Covid 19 recovery (Digital Times, 2021).

The competition between China and Japan could be leveraged to adapt the partnership conditions offered to Africa. For example, TICAD was initially held every five years and was exclusively hosted by Japan. In 2016, however, TICAD was held in Nairobi – the first time on the African continent – and it was agreed that the conference would happen every three years thereafter. According to Takeshi Daimon-Sato, this decision was influenced by the fact that the rival movement, the Forum on China –Africa Cooperation (FOCAC), met every three years and alternated between Beijing and an African city (Daimon-Sato, 2020: 18). This demonstrates that the methods of cooperating with Africa that China used impacted on Japan's cooperation with Africa.

China's adaptive strategy to consider innovative financing options, taking into consideration the difficulty for developing countries to repay loans which were largely due to pressure on its alleged 'debt-trap diplomacy', demonstrates that unfavourable terms can be altered.

Furthermore, African governments should take initiative to improve their regulatory environment. Research done by Motolani Agbebi et al. (2021) demonstrated that Chinese contractors were amenable to local legislation and standards. It is when domestic regulation is weak that the socio-economic success of ICT infrastructure projects is diminished. However, new projects and legislation, such as the Digital Single Market (DSM), which would make possible the uninterrupted flow of digital transactions across African borders, and the publication of the AU Data Policy Framework, show initiative of African governments and regional organisations to install a regulatory framework and attain some sort of African digital sovereignty (Hofmeyer et al., 2022: 19).

Conclusion

This article compared the competing narratives presented by Japan and China on their potential digital cooperation with Africa. The investigation found that, although neither state offered an exploitative partnership, China narrated a much more transactional partnership than Japan who presented a partnership based on transformation and mutual growth rather than only mutual benefit.

It was further argued that Africa has, and should better use, its agency when negotiating these digital partnerships. Although this article did not intend to argue that a partnership with one state should be pursued over the other, the article argued that African nations should use their agency to negotiate better terms of the partnerships, for example, by leveraging the Sino –Japanese competition and putting in place legislation that requires transformational partnerships and the creation of a united front.

This article compared two states which have demonstrated commitment to contributing to Africa's digital transformation for the foreseeable future. However, these are by no means the only competing actors. Further research could be conducted to compare Sino –Japanese narratives to other actors, such as South Korea, India and the EU.

This article also focussed on the narratives presented by the respective governments on the type of partnerships offered to the continent. Considering this focus, this article paid little attention to the outcomes of the cooperation. Further research could be conducted to compare the narrative to the outcome.

It is also important to note that the dynamics of these partnerships are ever-changing, especially in the face of global crises such as the Covid-19 pandemic, which saw Chinese investment in Africa dwindle. Another nascent dynamic is the possible shift from China's 'Go Out' policy towards a 'Dual Circulation', which would see China reduce overseas export reliance and rebalance domestic consumption. This would significantly reduce Chinese outward financial flows, yet it could also benefit African countries by reducing Chinese export competition.

Put simply, it would require a significant renegotiation of Sino –African relations. However, scholars have noted that a successful transition to the 'Dual Circulation' principle remains unlikely (Paduano, 2021).

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Annexure A

Document title with link	Country related to	Type of document
Joint Statement of the Coordinators' Meeting on the Implementation of the Follow-up Actions of the Eighth Ministerial Conference of the Forum on China-Africa Cooperation (FOCAC)	China	Policy document
Keynote speech by Chinese President Xi Jinping at opening ceremony of 8th FOCAC ministerial conference	China	Speech
Forum on China-Africa Cooperation Dakar Action Plan (2022-2024)	China	Policy document
Elaboration on the Eight Major Initiatives of the FOCAC Beijing Summit	China	Policy document
Declaration of the Johannesburg Summit of the Forum on China-Africa Cooperation	China	Policy document
Dakar Declaration of the Eighth Ministerial Conference of the Forum on China-Africa Cooperation	China	Policy document
Ambassador Wang Ke's Article on the 20th Anniversary of the Founding of FOCAC	China	Opinion piece by ambassador
Speech by H.E. Ambassador Wang Ke at the Reception of the 70th Anniversary of the Establishment of the People's Republic of China	China	Speech
Ethiopia, China Sign MoU on Investment, Five Cooperation Agreements on Sectors	China	News article
Speech at the Awarding Ceremony for 2021-2022 Huawei Sub-Saharan Africa Regional ICT Competition &Seeds for the Future Program	China	Speech
China and Africa in the New Era: A Partnership of Equals	China	Policy document

Address by H. E. Xi Jinping, President of the People's Republic of China, at the Opening Ceremony of the Johannesburg Summit of The Forum on China-Africa Cooperation, 4 December 2015	China	Speech
ZHAO ZHONGYI: China-Africa cooperation strengthens investment and promotes mutual benefit	China	Opinion piece by Government official
Ambassador Ma Xinmin Publishes Article Titled Partnership on Digital Innovation Expands Substance of China-Africa Community with Shared Future on Brown Land	China	Opinion piece by Ambassador
China will work with Africa to formulate and implement a China-Africa Partnership Plan on Digital Innovation	China	Opinion piece by Ambassador
H.E. Ambassador Lin Songtian Attends the Send Off Ceremony of the 2017 Huawei South African Seeds for the Future Program	China	Speech
Statement by Ambassador WANG Min, Deputy Permanent Representative of the People's Republic of China to the UN at the 68th Session of the UN General Assembly On item 63(a) NEPAD: Progress in Implementation and International Support, and item 63(b), Causes of Conflicts in Africa and Promoting Lasting Peace and Sustainable Development	China	Speech
Japan's Green Growth Initiative with Africa (GGA)	Japan	Policy document
Tunis Declaration 28 August 2022 TICAD 8	Japan	Policy document
TICAD 8: Japan's Contributions for Africa	Japan	Policy document
Signing of Investment agreement for "Fintech Start-ups Growing Support Project"	Japan	Press release
Project NINJA launches at last	Japan	Press release

TICAD 7 Yokohama Declaration 2019	Japan	Policy document
Yokohama Plan of Actions 2019 **Actions for Implementation of the Yokohama Declaration 2019**	Japan	Policy document
Keynote Address by Mr. Shinzo Abe, Prime Minister of Japan **at the Opening Session of the Seventh Tokyo International Conference on African Development (TICAD 7)**	Japan	Speech
Address by Prime Minister Shinzo Abe at the Opening Session of the Sixth Tokyo International Conference on African Development (TICAD VI)	Japan	Speech
Export Credit Line for Development Bank of Angola	Japan	Press release
Policy Speech of the Minister for Foreign Affairs of Japan Makiko Tanaka **on the occasion of the TICAD Ministerial-level Meeting**	Japan	Speech
Implementing Strategic Plans for ICT Designed by Rwandans Themselves	Japan	Opinion piece by Ambassador
Current State and Development Potential of the ICT Sector in Africa. Japan International Cooperation Agency.	Japan	Opinion piece by Ambassador
JOINT STATEMENT ON AFRICA-JAPAN ICT HIGH-LEVEL ROUND TABLE **HELD DURING TICAD7 ON 28 AUGUST 2019**	Japan	Policy document
AFRI CONVERSE Special Edition: Repositioning Africa for a Decade of Shared Prosperity	Japan	News article