Chinese Telecommunications Companies in Africa: Competition or Partnership with African Telecommunications Companies?

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Abstract: By studying the expansion of Chinese telecommunications companies abroad, with a particular focus on Africa in our case study, the paper aims to explore the relationship (i.e. partnership or/and competition) between African and Chinese telecommunications companies in Africa. While competition between Chinese telecommunications companies and their foreign counterparts in overseas markets exists and is strongly discussed, increasingly, multinational companies (including Chinese multinational companies) in various sectors of their business activities partner to develop common projects and achieve common objectives. Such partnerships, in the case of Chinese telecommunications companies, are driven by various factors, for example, access to a host country's telecommunications network, increase in market share, access to a more diversified distribution channel, co-branding, development of technical and managerial expertise. The partnerships enable Chinese telecommunications companies to tap into African telecommunications companies' comparative and competitive advantages while operating across the continent. Due to the strict requirement by China's government for full Chinese ownership and leadership in China's key economic sectors, foreign companies are restricted from solely and freely operating in the Chinese market. In sectors such as telecommunications, railways, finance, aerospace, among others, for foreign companies which operate in China, partnering with Chinese state-owned enterprises becomes compulsory. The research is partly based on qualitative interviews conducted with employees and managers at Huawei and ZTE in South Africa and Senegal between 2012 and 2015 alongside the author's numerous observations on the engagement between African and Chinese telecom companies in the South African and Senegalese telecom markets.

Keywords: Africa, China, telecommunications companies, business strategies, competition, partnership

Introduction

Since the 1990s, opening up to attract foreign investments has been China's strategic plan, not only to create jobs for its population but also as a learning process to develop key sectors for its economic development by putting an emphasis on skills and technology transfers for its population and its industries. Therefore, through this

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learning process, China has managed to set up and develop state and private enterprises in its key economic sectors to be big players locally as well as internationally.

These companies first started in China, before expanding their activities internationally and becoming globally competitive. Chinese telecommunications companies, in this case, Huawei and ZTE, followed this strategy. By expanding their activities abroad, Chinese multinational companies contribute to China's overseas investments and contribute to promoting China's overseas political economy.

Policies by African governments in the late 1990s and the early 2000s to modernise the telecommunications sector and bridge the telecom divide between people in rural and urban areas across the continent, and the increase in demand for mobile phones in Africa and around the world during the last two decades, have attracted the attention of telecom companies (Alper and Miktus 2019). Africa has become a thriving market for the telecom industry and is among the world's fastest-growing mobile phone markets (International Trade Centre 2020). This fast growth has been facilitated by the liberalisation of telecom policies in African countries, which has allowed for the creation of regulatory bodies and increased competition in Africa's telecom market. New operators in Africa's telecom industry have created competition with state-owned telecom services providers by influencing price competition and driving telecom subscription services growth rates. Linked to the growth of mobile services in Africa and limited access to telecom networks in rural and remote areas, more telecom services providers and telecom equipment manufacturers are interested in increasing their operations in Africa. Mbeki (2003) noted that the inequitable development of and access to telecommunications services across Africa in general, and in South Africa in particular, have created two separate but co-existing domains: a sophisticated, advanced, and globally competitive first world and an informal, marginalised, and unskilled developing world. Specifically, urban areas have been targets for major telecom operators in Africa (McKinsey Global Institute 2013). However, more focus is currently applied to rural areas to help rural residents access telecom networks, develop businesses and communicate, and increasingly bridge the gap between rural and urban areas. For these reasons, and their quest to establish markets abroad, Chinese telecom companies are increasingly investing across Africa; following the imperative digital transformation of the continent. Over the past two decades, Chinese companies have come to dominate the telecom infrastructure landscape in emerging markets, and around 50 percent of Africa's 3G networks and 70 percent of its 4G networks are built by Huawei (Hruby 2021).

With the lack of financial institutions and telecommunications companies to develop the Information and Communications Technology (ICT) infrastructure in Africa, China's engagement in the continent's ICT industry is mainly based on financed projects through loans from Chinese policy banks and projects run by Chinese telecommunications companies (particularly Huawei and ZTE) with 137 loans worth US$ 12.8 billion in 2019 (School of Advanced International Studies, China-Africa Research Initiative 2020). Even though China's finance in the ICT sector in Africa has been declining since 2017 to date, between 2011 and 2016, the amount of Chinese loans to the continent increased yearly following the slow inroad

of Chinese telecommunications companies in African countries between 2000 and 2010 (School of Advanced International Studies, China-Africa Research Initiative 2020).

Investments in services sectors also illustrate a broader case of the qualitative changes (with the diversification of investments moving from the resources sector to the services sectors) in China's African investment strategy. China is increasing its investments in Africa's services sectors, particularly in the finance and telecommunications sectors, which are key investment sectors (Chen et al. 2018). With China's "go out" policy (a strategic policy that encourages and supports Chinese companies, both private and state-owned, to go global), Beijing has shown a desire for its companies, including telecom companies, to venture abroad. Through China's 12th five-year plan (2011-2015), the Chinese government encouraged the building of global brands by Chinese companies. Consequently, Huawei and ZTE are increasingly targeting this business stream, not only in Africa but also globally.

China currently plays a major role in financing and supplying telecom and Information and Communications Technology (ICT) equipment in Africa. Specifically, mobile usage in Africa has experienced outstanding growth, with an annual growth of 4.6 percent and more than 130 million new subscribers expected to materialise by 2025 (Global System for Mobile Communications Association-GSMA 2019).

According to GSMA (2020), the mobile market in Africa will reach several important milestones over the next five years: half a billion mobile subscribers in 2021, 1 billion mobile connections in 2024, and 50 percent subscriber penetration by 2025 with 614 million mobile subscribers. O'Dea (2020) states: "Over the coming years, mobile phone users in Africa can also expect to see improvements in speed and reliability brought about by improved transmission technology and infrastructure. In 2019, 59 percent of connections were made over 2G, a figure that is expected to drop to 14 percent by 2025. Over the same period of time, 3G and 4G connections are expected to increase, and three percent of connections could be made using 5G spectrums". GSMA (2020) reports that mobile internet users in Africa have reached 272 million in 2019 (26 percent of the population) and by 2025, they will be 475 million with a 39 percent penetration rate.

In contrast to these recent and future developments and figures, the International Telecommunication Union (2013) cited the following ICT statistics: 16 percent of Africans were using the Internet; 7 percent of African households had Internet access; annual household Internet access growth stood at 27 percent; less than 10 percent of wired broadband subscriptions had speeds of then 2Mbps or more; mobile broadband penetration increased from 2 percent in 2010 to 11 percent in 2013. This interesting market development aligns with Beijing's "go out" strategy which supports Chinese companies to expand their operations in overseas markets.

Alongside the general internationalisation process of Chinese telecommunications companies abroad, and in Africa in particular, the paper mainly aims at exploring the relationship (partnership or/and competition) between African and Chinese telecom companies. Therefore, the study does not focus on the Chinese telecommunications companies' competitive advantages and different classical

motivations to venture into Africa. Previous papers (Cissé 2014; Cissé 2012) related to the topic have discussed the classical motivations and ties between Chinese companies and their governments (both provincial and central).

   Qualitative interviews were conducted:

- between 2012 and 2013 in Johannesburg and Cape-Town with South African telecommunications companies' employees (including managers) and Chinese managers at Huawei and ZTE.
- between 2012 and 2015 in Dakar with Senegalese employees at both Chinese telecom companies, Senegalese vendors of telecom devices, and representatives of telephone companies. The following paper explores the internationalisation of Chinese telecom companies in Africa, their relationship with African telecom companies based on the notions of partnership and competition.

1. Expansion of Chinese telecommunications companies abroad

   The telecom sector has been one of the fastest-growing sectors in China's economy during the last two decades (GSMA 2019). Many rapidly expanding Chinese companies have emerged to compete with foreign multinational companies. Chinese telecommunications companies' growth goes alongside China's economic growth trend and modernisation, which have been accompanied by the increased competitiveness of Chinese enterprises in global markets. The motivations for Chinese companies to go global include the search for new markets to export their products, the need to acquire advanced management and technology skills, and to secure natural resources (Wang 2017). Seeking new markets for growth is the main motivation for Chinese multinational companies to invest abroad. By going global, they are subject to less competition and higher profit potentials due to their price competitiveness and diplomatic, political, and financial support from Beijing's central government. Secondly, Chinese companies venturing abroad learn foreign management and technology strategies to be internationally competitive and to build innovative brands. Thirdly, Chinese companies going global follow Beijing's strategic policy by securing resources for China's modernisation and economic growth. To survive the intense competition in the global market, innovation remains a major challenge influencing the acceptance of Chinese companies abroad. Thus, the acquisition of new management and technological skills is needed for Chinese companies to enter the global market. Building global brands, as highlighted in China's 12th five-year plan, and the need to focus on research and development are major challenges affecting the competitiveness of Chinese companies in global markets. While many Chinese companies are developing management and technology capabilities to improve their global competitiveness, others are building strong global relationships and acquiring foreign businesses through mergers and acquisitions (He et al. 2019).

   The support of the Chinese government to companies going global with the related focus on the "go out" strategy is an important aspect in the internationalisation of Chinese multinational companies. The Chinese government, through its agencies, organisations, and financial institutions (China Exim Bank,

China Development Bank, China-Africa Development Fund), brings important support to Chinese companies overseas (Chen 2020). To achieve the "go out" policy and allow Chinese companies to venture abroad, the Ministry of Commerce (MOFCOM), the National Reform and Development Commission (NRDC), and the State Administration of Foreign Exchange (SAFE) have all developed strategies and policies to assist Chinese companies to expand their businesses abroad. In 2006, then Chinese Premier Wen Jiabao reaffirmed the Chinese government's commitment to supporting globalisation by offering various types of support, including new policies and services to coordinate overseas investments and manage risks (Xinhua 2006). To develop businesses and increase investments abroad, the Chinese government encourages and supports Chinese enterprises by providing them with preferential loans and buyer credit. To achieve such policies, financial institutions like the China Development Bank and the Bank of China decided to offer foreign exchange and insurance services to Chinese companies expanding overseas. For example, in 2009, the China Development Bank, through a five-year cooperation framework agreement, provided ZTE with a US\$ 15 billion credit line, including ZTE overseas projects financing and ZTE credit limits.

The global ambition of Chinese telecom companies is obvious: they want to go global and expand their business over China's borders. For example, Huawei during the last two decades has established research centres overseas. A Boston Consulting Group noted, "Huawei and ZTE were globalising fast and were determined to stay the course" (Li Cheng 2006). The internationalisation of Chinese telecommunications companies has contributed to change the performance of the sector by creating global competition and reshaping management strategies. Their participation in overseas markets has taken different forms, including research and development, project contracting, joint ventures, mergers and acquisition, and telecom management and operation. Africa's telecom market, which is an important market for the global telecom industry, plays a key role in the activities of Chinese telecom companies across the continent by allowing them to develop a partnership with local telecom operators. Chinese research and development centres participate to improve telecom technologies and solutions for network providers.

2. Chinese telecommunications companies in Africa

Since the 1980s, rapid economic growth has driven China's new interest in Africa (Dollar 2016). With resource security at the heart of China's engagement in Africa, the role of Chinese multinational companies in various investment sectors has become an important feature of the African investment and development landscape. However, China's late inroads (in the 1980s and 1990s) into Africa in terms of investments and its relative lack of experience in developing and managing large-scale projects abroad are major challenges for Chinese multinational companies. In the internationalisation strategy of Chinese companies, it is apparent that most companies have remained at the developing stage, where they see international business as an extension of their domestic market (Peng 2012).

In addition to construction, mining, and energy, telecommunication is one of China's key investment sectors overseas and plays a critical role in China's

economic development strategy (Executive Research Associates 2009). Investments in telecommunications go alongside strategic policies of China's interests abroad to find new markets to export its manufacturing products, develop its technology and acquire foreign technology. Within its strategic political considerations, the primary objective of China is to see the emergence of Chinese international competitive enterprises (Dumbaugh 2008). The two largest Chinese telecom companies (ZTE and Huawei) play key roles in the expansion of Chinese investments abroad and China's political economy strategy overseas, and Chinese telecom companies are operating following China's geo-strategic objectives.

This creates a challenge in Africa for effective strategies in dealing with Chinese telecommunications companies. The willingness of African governments to modernise and develop their telecom industry through the liberalisation of telecom policies in African countries in the 1990s and the early 2000s has made the African telecom industry attractive to foreign investors (Williams 2011). However, while urban areas benefited from such policies in the 1990s and early 2000s, rural and remote areas faced a lack of network coverage, access to telecom devices, and mobile handsets, which contributed to influencing the investment decisions of foreign telecom investors such as Huawei and ZTE to tap into Africa.

While efforts are being made to achieve growth in the telecommunications sector across Africa, it is important to highlight the divide between rural and urban areas, which is related to the lack of adequate infrastructure. In this regard, Africa lags far behind other regions of the world (See Table 1).

Table 1: Africa's telecommunications infrastructure development compared to other regions

Type	Africa	Other regions
Internet Access	16 percent access	± 80 percent in developed countries
Mobile Technology	40 percent overall, 95 percent in urban areas	53 percent East Asia and Pacific, 80 percent Latin America and Caribbean
Fixed Line Technology	3 percent in Sub-Saharan Africa (SSA)	19 percent Latin America, 16 percent Middle East and North Africa

Source: The African Development Bank 2010.

According to Ghanem (2020):
- Internet penetration, quality, and affordability in Africa are very low compared to the rest of the world: Internet penetration in 2019 averaged 39.6 percent in Africa compared to 62.7 percent in the rest of the world.
- In 2017, Africa used only 1 percent of the world's total international Internet bandwidth. The median mobile broadband download speed in Africa is 2.7 megabits per second (Mbits/s), roughly half the global median of 5.2 Mbits/s, and the monthly cost of a fixed broadband connection is 36.6 percent of

gross national income, compared with 14.5 percent globally.

With their emerging partners (China, India, Brazil, Malaysia, Turkey, and Russia), African countries have seen a shift with new major infrastructure projects in a wide range of sectors and a surge of interest in the rehabilitation and the recovery of abandoned projects by some of the traditional partners due to the lack of funding, political and economic unwillingness, and political unrests. Building adequate infrastructure, including in the telecommunications sector, has always been a major challenge for development in African countries.

Telecommunications is a key sector for economic development, and it contributes to services trade, the most dynamic element of the global trading system, while the sector also has an important role to play in offering innovative solutions to traditional development challenges. In recent years, African governments have shown an interest in developing their telecommunications environment. The boom in Africa's mobile phones market is related to the high costs of building landline phone networks when compared to mobile phone base stations. The high costs of establishing telephone wires have not been viable for most of the African population living in poverty and rural areas. Before the boom in mobile phones in Africa, most areas were effectively isolated. Increased demand for mobile phones and their access to people in rural areas have motivated more mobile phone manufacturers to supply African customers with low-cost mobile telephone handsets and wide telecom coverage.

By focusing on the growing demand in the mobile phone business in Africa, Chinese multinational telecom companies operate in the continent and are changing the telecom industry by increasing cost pressure on their main competitors with low-cost mobile handsets and telecom equipment. Globally, Huawei's market share was around 18.6 percent of unit sales in the third quarter of 2019, up from 14.6 percent in 2018 (Holst 2020). Improving technical capacities, linked to low costs of production, access to state funding, and state political support provide Chinese telecom companies (Huawei and ZTE) with a competitive advantage that is not available to independent telecom companies.

The process of globalisation has opened markets for trade and investments. Once the largest recipient of FDI, China is currently investing abroad, and expansion through foreign markets has become a strategic growth pattern for China. The internationalisation of companies has driven foreign investments in different regions of the world. Social, political, economic, and technological factors have always influenced and continue to be important factors influencing the strategic decisions of companies to operate overseas. These economic, political, and social environments in host countries attract multinational corporations (Kyove et al. 2021). Chinese telecom companies possess strategic advantages, including political and financial support from China's central government and competitive prices, when investing in the telecom sector in Africa, and African countries represent a potential market for their business. Countries are attractive if they have large markets, significant natural resources, low-cost labour, trainable or well-trained human resources, good communication systems, and infrastructure (Wattanasupachoke 2002). Africa arguably possesses all the important factors needed to attract foreign investments but lacks the necessary physical infrastructure (Kaur et al. 2018). To

operate in Africa's telecom industry, Chinese telecom companies are interested in technological factors. Countries with adequate technological background (the type of technology in use, the level of technological development, and the speed of adoption or diffusion of new technologies) and reliable infrastructure are the first destinations for Chinese telecom companies. Due to the lack of adequate infrastructure and technologies in Africa, the telecom industry has lagged. Chinese telecom companies (ZTE and Huawei) tapped into Africa to develop the telecom infrastructure and network and thereby bridge the telecom divide (Chanakira 2010 b). The following section analyses Chinese telecommunications companies' business strategies in Africa.

3. Business strategies of Chinese telecommunications companies in Africa

While investing in Africa, Chinese telecom companies are more focused on the needs and requirements of customers (Tong 2021). Good service based on Huawei and ZTE's customer-oriented strategy is the main element for the success of both companies in Africa (Pawlicki 2017). A better understanding of the local population's needs and rapid responsiveness to satisfy such needs, competitive prices, intra-governmental relations, and partnership with local telecom operators help Chinese telecom companies in Africa to win the trust and reliance of customers. To achieve tremendous margins, Huawei's pricing strategy has been to ensure lower prices than most of its competitors: 5 to 15 percent lower than its main competitors (Roll 2018).

ZTE, on the other hand, prices 30 to 40 percent below its European competitors. Rapid responsiveness by personnel and high customer service are also key elements in their strategies to operate in Africa. Chinese telecom companies always operate in collaboration with their African telecom partners to set up base stations in rural zones in Africa. To satisfy local populations' needs, they also control the effectiveness of these base stations placed in rural areas. After providing customers with telecom network equipment, Huawei and ZTE offer long-term maintenance services to ensure the reliable operation of local networks (Pawlicki 2017).

China's engagement in Africa's telecom industry can be seen as a win-win strategy if we are to consider the improvement and growth in the ICT sector across the region in the last two decades. Chinese telecom companies, by leveraging their expertise and experience in their home and overseas markets, help bridge the digital divide and offer people the opportunity to join the information and communication era despite their location. During the 2010 World Cup in South Africa, for instance, Huawei developed solutions to meet customers' demand for telecommunications. The company achieved customised solutions to offer people in remote areas better information access. Through technological innovation, Chinese telecom companies reduced communication fees for African mobile subscribers. In Nigeria, for instance, Huawei built Code Division Multiple Access (CDMA) networks to provide telecom services that cover one-third of the population. During the Thirteenth Nikkei Global Management Forum in Tokyo, Deputy Chairman of Huawei, Ken Hu, argued: "innovation in emerging markets means practicality and adapting to local

requirements, whether it requires adopting cutting-edge technology or just thinking outside of the box. Our goal is to work together to develop innovative products and solutions that enrich lives of those in emerging markets" (Nikkei Global Management Forum 2011). The strategy of Chinese telecom companies in Africa is to partner with local telecom service providers by providing telecom infrastructure and equipment to offer mobile phone users the benefit of low communication fees. They develop strategic partnerships with the main African network providers such as MTN, Orange, Algeria Telecom, and Maroc Telecom. Such partnerships with local telecom operators in host countries allow Chinese telecom companies to gain their technical expertise, networks, customer base, and other resources. Huawei and ZTE's partnership with MTN of South Africa is already a strategic approach for both companies to gain new markets in the continent as MTN operates in more than 20 African countries. The establishment of research and development centres in Nigeria and South Africa by Huawei contributes to Chinese telecom companies' technological innovation policies. Paul Wu, co-founder and CEO for Huawei South Africa (2009-2011), argued:

> "*our Research and Development Centers are the engine of our business. We are looking forward to bringing our international expertise to pioneer local, customized solutions to South Africa's telecommunications industry*" (Huawei South Africa Press Office 2009).

This new trend is to assist in positioning Africa's telecom technology innovation drive to be on par with the global telecommunication innovations. Huawei, in its collaboration with the local telecom providers, aspires to ensure service innovation and design solutions to address telecom challenges in Africa. Huawei's research and development centres aim at bringing global telecommunication innovation to operators in Africa with customised solutions for Africa's telecom industry.

However, in the African telecom sector, China's contribution comes with preferential loans to governments to acquire Chinese telecom equipment and infrastructure. Financially supported by Beijing's central financial institutions (China Exim Bank, China Development Bank, China Africa Development Fund), Chinese telecom companies' operations in Africa also involve tied loans between the Chinese and African governments (Grimm 2011). The Chinese financiers provide African governments with loans to buy only equipment from Chinese telecom companies to develop their telecom equipment and services. Such loans, called vendor-guaranteed loans, come directly from the Chinese companies which receive credit lines from Chinese financial institutions to invest in Africa. As in the other investments sectors, mining, infrastructure, and construction, China also provides loans to its telecom companies to operate overseas.

With strong government backing, loans from governments, and operators to buy Chinese equipment, China's "no strings attached" policy and low-cost technology supply have facilitated the competitiveness of Chinese telecom companies in Africa. China's state-backing of Huawei and ZTE allowed these companies to seize global market share from more innovative international

competitors, reducing their growth in sales and investments in research and development (Atkinson 2020).

For their global expansion, Huawei and ZTE secured credit facilities from Chinese policy banks and state-owned banks. China provides direct and indirect subsidies (guaranteed market share, cheap credits from Chinese state banks) that reduce Chinese telecommunications companies' operational costs, speed time to market for their products, and allow them to price their products well below prices set by their competitors (Hart and Link 2020).

There are strong linkages between the China-Africa strategy and Chinese telecom businesses. Chinese telecom companies have seen opportunities in Africa and can use their competitive price advantage to operate not only in Africa but also in other regions of the world. China, through its overseas political economy agenda, always integrates business and political objectives. The role of the Chinese government in the telecom sector is clear: *China will further expand telecom cooperation with African nations in line with mutual benefits and common development.*

BRICS, the Belt and Road Initiative, and the Forum on China-Africa Cooperation are platforms that drive strategies by China's government and aim to contribute to Africa's infrastructure development based on bilateral, regional, or multilateral cooperation and co-financing. During the 2015 Forum on China-Africa Cooperation (FOCAC) which took place in Johannesburg, South Africa, the African Union (AU) has committed to supporting and funding infrastructure development across the continent based on a collaboration with China.

Such a commitment and collaboration with China was highlighted in the FOCAC 2015 action plan (2016-2018) as follows:

> *The two sides agree that underdeveloped infrastructure is one of the bottlenecks hindering the independent and sustainable development of Africa.*
> *The two sides will take concrete measures and give priority to encourage Chinese businesses and financial institutions to expand investment through various means, such as Public-Private Partnership (PPP) and Build-Operate-Transfer (BOT), to support African countries and the African flagship projects, in particular, the Programme for Infrastructure Development in Africa and the Presidential Infrastructure Championing Initiative, in their efforts to build railroad, highway, regional aviation, ports, electricity, water supply, information and communication, and other infrastructure projects... and facilitate infrastructure connectivity and economic integration in Africa...China and Africa will develop transnational and transregional infrastructure... as well as cooperate on the joint development of ICT infrastructure in telecommunications.*

Prior to FOCAC 2015, in the FOCAC 2012 action plan (2013-2015) as follows:

> *China committed to supporting Africa in achieving connectivity and integration and developing more integrated infrastructure within the*

framework of the Programme for Infrastructure Development in Africa and the Presidential Infrastructure Championing Initiative ... and continue to encourage capable Chinese enterprises and financial institutions to participate in transnational and trans-regional infrastructure construction in Africa and provide preferential loans to support infrastructure building in Africa.

Moreover, the Chinese government supports its telecom companies to run more telecom services in Africa (Yeophantong and Wang 2019). Chinese telecom companies enter the African market and establish partnerships with governments to build e-government networks for ministries and organisations to provide information and services for African citizens. ZTE and Huawei have built national fibre-optic communications networks and e-government networks for more than 20 African countries (Zhang 2011). In addition to network equipment and telecom infrastructure, Chinese telecom companies have the advantage of selling cheap mobile handsets to mobile subscribers in Africa. This allows them to expand their products into the African market and gain value among customers. Compared to their competitors, Huawei and ZTE operate in different segments of the telecom industry in Africa.

From fixed and mobile networks, data communications, optical networks, software, services, and terminals, Chinese telecom products have entered the African markets (Chanakira 2010a). Furthermore, cutting-edge technology, reliable equipment for local telecom operators, service response capabilities, and efficient project management offer Chinese telecom companies in Africa more markets and from the reliance of a huge number of African mobile phone users and governments (ZTE 2011). Alongside making forays into African telecom infrastructure building, Huawei and ZTE always invest in global brand awareness, including in African markets.

Even though Huawei and ZTE are big telecom players in the telecom industry, their brand names are not well known. To deal with the lack of awareness of Chinese telecom brands, Huawei, for instance, has targeted the global market through investments in branding, advertisement, marketing, sponsoring, public relations, and lobbying. Such an approach falls under the Chinese telecom companies' global branding and their long-term strategy to build brand awareness and expand globally.

Through co-branding, Chinese telecom companies achieve brand extension, global branding, and a bigger market share. The combination of telecom brand names (for instance, the combination of MTN and ZTE through co-branding) is a way for Chinese telecom companies to be known globally. The partnerships and collaborations Chinese telecom companies establish with African telecom companies enable them to penetrate the African market by extending their brands to a degree based on the African telecom companies' market shares. It is an opportunity for Chinese telecom companies to access new markets and reach new customers. Chinese telecom companies work with African telecom companies to combine resources (i.e. technologies, distribution networks, telecom solutions, telecom infrastructure, and networks) in order to leverage core competencies. Such an idea contributed to a growth strategy in which Chinese and African telecom companies benefit from their combined strengths, and the product or service offered leverages

the companies' brand names (Roll 2005).

By co-branding handsets and mobile devices through their collaboration with MTN, ZTE aimed at building a strong brand in the South African marketplace and beyond. Brand building is one of the key strategies developed by Chinese telecom companies to become competitive in the global telecom industry. Building competitive brands and internationally renowned companies falls under China's 12th five-year plan which has encouraged innovation by the Chinese multinational companies. Co-branding also contributes to global brand awareness of Chinese telecom brands among customers in Africa who know little about ZTE or Huawei.

It is important to mention that all these business strategies by Chinese telecom companies are supported by China's overseas political-economic policies. For instance, when operating in the African telecom industry, they benefited from the political advantage, the economic advantage, and political diplomacy established through China's engagement in Africa, using these benefits to access more markets and at times win contracts. Economic diplomacy is another political-economic strategy that Huawei and ZTE use in African countries by building telecom network equipment and base stations in rural and remote areas, which are sometimes difficult to access due to bad road infrastructure, unreliable, and risky to invest in. Economically, the low cost of product development, considering research and development, manufacturing, distribution, and sales have allowed ZTE and Huawei to acquire more markets than their competitors. Such business practices enabled Chinese telecom companies in Africa to win a positive image and reliance from African customers and governments, a positive image which enabled them to run state-to-state as well as private projects.

Furthermore, diplomatically, not only telecom companies but also other Chinese multinational companies are strongly backed in their overseas operations by Beijing's central government. The diplomatic attention paid to African countries by the Chinese government helps to support state-to-state projects and development assistance and constitutes an important feature for Chinese telecom companies' bidding processes. Chinese telecom companies develop political capital in Africa; for instance, Huawei and ZTE have political ties with China's government as well as with host countries' governments. "*When Chinese government leaders visit other developing countries, they are often accompanied by the senior management team of Huawei and ZTE*" (Cooke 2012, 1842). Both companies gain influence and reliability and have more important business operations by building political and diplomatic relationships with host countries' policymakers through visits by Chinese officials. It is worth noting that public and economic diplomacy strategies are common strategies (not only Chinese practices) used by political officials to enable their countries' companies to gain economic influence in places where they invest.

4. Competition or partnership between Chinese and African telecommunications companies in Africa?

Often China's engagement in various sectors of African economies is seen as competition against African companies, as well as foreign companies which operate in African countries. But beyond the Chinese competition which is often

pointed out in Africa, collaboration and cooperation drive the partnership between Chinese and African companies and are part of Chinese companies' business strategies to access markets and to adjust their managerial and technological skills to African countries' needs. Through the partnerships established, opportunities emerge for African companies as well as Chinese companies.

Such a strategy for partnership and collaboration is not unique to the Chinese companies in the telecommunications industry but is expanded to other sectors, too: mining, oil, construction, and finance. It enables Chinese companies to adjust to the local market dynamics and explore consumers' needs to later cater to such needs. It is a long-term strategy but is beneficial in the long run as it enables Chinese companies to acquire expertise, develop new techniques and solutions and expand their operations to other markets by tapping into the local companies' networks.

In the African telecom market, compared to their western counterparts, Chinese telecom companies have seized a considerable market share of Africa's telecom industry, thus leading to competition for other telecom investors as well as African telecom companies. Building telecom infrastructure in rural areas in Africa through telecom projects with financial support from the Chinese government through access to credit and loans that enable African governments to benefit from concessional or preferential loans, price competitiveness (low-bidding contracts, cheap telecom devices, and mobile handsets) and contributions to developing e-networks for African governments are strategies implemented by Chinese telecom companies to expand their businesses in Africa.

Chinese telecom companies' forays into Africa's telecom industry have created competition for African telecom companies, with major telecom companies having lost contracts to their Chinese counterparts investing in Africa. Such competition in the telecom infrastructure development sector is fueled by tied development projects supported by the Chinese government, which require that the Chinese companies build the project with Chinese telecom equipment.

At the same time, through partnerships established with major African telecom companies in Africa, Chinese telecom companies explore market and distribution networks already established by the latter. Therefore, it is quite common to find Chinese telecom devices and mobile handsets in telecom shops across the continent. Such an approach contributes to marketing Chinese telecom products to African customers and increasing the Chinese telecom companies' market share in the African telecom industry to the detriment of African local telecom companies.

Chinese telecom companies, particularly Huawei and ZTE in our study, have established partnerships with major African telecom companies which operate and have expanded their businesses across the continent. Such partnerships enable Chinese telecom companies to access different markets and develop their businesses across the continent. For instance, with the MTN-Huawei partnership, Huawei can tap into the African market where the South African telecom company has established business and consolidated market and distribution networks. In 2014, MTN awarded Huawei with a five-year contract for managed services. According to the terms of the contract, Huawei delivered managed services, including managed network operations, network performance management, and spare parts management

in Ghana, Cameroon, Guinea, and Benin (Huawei 2014).

The partnership and collaboration between Chinese and African telecom companies can lead to competition for development between Chinese and well-established African telecom companies in the African telecom market. While with its tailored technological approach to customers' needs (including African telecom operators' needs), Huawei wins managed services contracts, African telecom companies could fully benefit from the Chinese telecom companies by developing such technologies that they would themselves provide to their customers across Africa. Even though limited, such a collaboration exists to some extent. In South Africa, for instance, MTN engineers sit in ZTE's offices and jointly develop telecom solutions with their Chinese colleagues at ZTE. Joint projects are developed for local telecom solutions and technologies tailored for the South-African telecom market. In addition, Huawei and ZTE also collaborate with Telkom SA which is the main landline network provider in South Africa. However, issues related to Telkom SA's 'unfair' bidding process for network updates arose between ZTE and Telkom SA and severed ties between both companies (Mawson 2012). Huawei and ZTE's collaborations with Telkom SA include the development of landline networks as well as broadband networks and devices. "Huawei has been Telkom's only strategic partner for its 21st century (21CN) integrated access network which includes voice, IP and video" (Executive Research Associates 2009, 65). Huawei also provides Vodacom with 3G terminals and Cell C with high-end IP networks.

Through its telecom companies' work, China contributes to enhancing broadband communications in Africa. But, Telkom stores, like MTN and Vodacom stores, across South Africa serve as sales points for Huawei and ZTE's devices and handsets. In other African countries, both companies have developed partnerships with local companies (which particularly do not operate in the telecom industry) to establish showrooms to display and sell their devices and handsets. In Senegal, for instance, Matforce Technologies (which is a branch of Matforce CSI) operated as a sales representative of Huawei. As Matforce Technologies' sales of Huawei products did not yield the expected results for Huawei's objectives to place and make its products known in the Senegalese market, the partnership between Huawei and Matforce Technologies was suspended. Huawei approached other companies (Midcom and Fall Distribution) which operate in the distribution of telecom products (devices and mobile handsets) in the Senegalese market. While the negotiations between Midcom and Huawei were not successful due to Huawei's conditions and offer, Fall Distribution has become the sales representative of Huawei products in Senegal. As such, Fall Distribution ensures the communication and marketing of Huawei products to the Senegalese customers, with the support of Huawei's staff in field marketing. Huawei also offers after-sales services to customers who purchase its products from Fall Distribution.

However, it is convenient to mention that despite efforts by Huawei to sell its products (mainly devices and mobile handsets of good quality), the Senegalese market remains difficult for the company due to the Senegalese customers' interests in other brands (Samsung, Apple, Tecno, and Itel) and the competition from Samsung, Apple and Tecno Mobile (a Chinese company which makes both Tecno and Itel brands). According to the author's interviews in 2015 with salesmen, distributors,

and customers in the Senegalese market, Huawei faces issues related to ensuring good marketing and communication for its products, mainly due to the low budget the company allocated to these services. Perhaps as a telecom equipment manufacturer and more focused on building telecom infrastructure, Huawei invests more in its core activities where it makes more revenues rather than in the sales of its devices and mobile handsets.

Even though the telecom sector is liberalised in a number of African countries, the telecom industry falls under the control of the state, with a state telecom regulating agency. Therefore foreign telecom companies which invest in Africa need to establish cooperation and partnership with local telecom companies across Africa in order to have access to telecom networks that remain entirely controlled by state telecom service providers.

Alongside collaboration in managed services, Chinese and African telecom companies engage in building and improving the telecom infrastructure across Africa. Huawei and ZTE have strong expertise in building telecom infrastructure, but when operating in African countries' telecom industries, they partner with local African telecom companies to have access to telecom networks as well as operate in areas which need improvement for communications, network coverage, and telecom equipment installations.

With the presence of Huawei and ZTE, which operate in Africa, it is important to mention the expansion of the competition between those two giant Chinese telecom companies, a competition that is fierce in China's telecom industry. Both companies have their headquarters located in Shenzhen and are major competitors in China. While on the one hand, Huawei is a private company with strong ties with China's government (due to the political affiliation with the Chinese Communist Party); on the other hand, ZTE is a state-owned enterprise and receives more political and financial support from Beijing's political and financial state agencies. Like in China, both companies are also big players in international markets, not least so in African telecom markets.

In competition with Huawei, which is a leading player among Chinese telecom companies in Africa, in recent years, in South Africa, ZTE won contracts with MTN, Cell-C, and Vodacom, all South African telecom services providers. In August 2014, the company won a contract with MTN to build a national fibre-to-the-home (FTTH) network. Alongside its involvement in telecom infrastructure building (by supplying telecom equipment and services to South African telecom services providers), ZTE targets the broader information and communications sector, which involves broadband, transportation, and public sector telecom solutions. The ZTE-MTN partnership also covers telecom solutions which include voice, data, and data for social networks. More importantly, ZTE aims at increasing its market share in the South African telecom industry through mobile handsets and devices sales. In October 2014, ZTE's then newly appointed chairman mentioned that the Chinese telecommunications company intended to expand its market share within the South African telecom market by 10 percent through aggressive marketing campaigns by tapping into MTN's market share (Phakathi 2015). Such a move was made to increase ZTE brand awareness among South African telecom products' customers.

Conclusion

Chinese telecom companies' foray into the African telecom industry is motivated by several factors:

- Liberalisation of African countries' telecom industries.
- African governments' policies to improve the telecom sector in their respective countries.
- Need for better access to telecommunications and access to overseas markets for Chinese companies, among others. In this context, the willingness of African governments to liberalise the telecom industry in the 1990s and the early 2000s has attracted Chinese telecom companies (which are following a globalisation path) into the African telecom industry.

The arrival of Chinese telecom companies across the continent fueled competition between themselves, the African telecom companies, and the other foreign telecom companies which operate in Africa, thus breaking telecom sector monopolies in African countries.

Lower cost of telecom equipment and infrastructure, interest in making telecom networks accessible to rural and remote areas at affordable prices, access to affordable mobile handsets, and African governments' policies to develop the ICT sector across the continent have been positive advantages for Chinese telecom companies entering the African market. Alongside access to affordable mobile devices and handsets for customers with low purchasing power, African countries benefited from Chinese telecom investments through telecom network and infrastructure building, skills transfer, capital, and technology acquisition by African telecom operators.

However, even though there is a growing interest from African governments towards having Chinese telecom companies' investments in the telecom infrastructure, investments which are based at times on partnership and collaboration with African telecom companies, there are specific risks for the latter and ICT vendors with regards to competition.

China's investments in the services sectors in Africa are increasing and receiving positive attention due to the diversification of sectors of investment out of the traditional resources sector. However, Chinese telecom companies' engagement in Africa has brought concerns related to ICT security through spying and internet censorship exerted by officials, particularly in countries which lack freedom of speech and with either controversial or authoritarian governments, with the assistance of Chinese companies. More often and visibly, though, competition from Chinese telecom companies has been echoed by African telecom providers, vendors, and local officials (for instance in Kenya and Nigeria). Although China's investment in the continent is diversifying, attention should be paid to not exclusively have Chinese companies operate in sensitive services sectors. In China, although the government welcomes foreign investments, sectors such as telecommunications and banking, among other key sectors, remain closed to foreign investors and entirely controlled by the government and state-owned enterprises.

The development of the telecommunications industry in Africa is seen by

many governments as the foundation of sustainable development. While there have been growing efforts to bridge the telecommunications divide by increasing access to networks and mobile handsets, more focus should be put on broadband connectivity as many areas and people in both rural and urban areas across the continent remain without internet access. Limited, insufficient, or lack of access to wider telecommunications services is a barrier for a large majority of people across the African continent, thus creating social exclusion. Wide access to telecommunications tools and services plays an important role by mitigating socio-economic disparities between communities and societies. The development of ICT and telecommunications infrastructure should provide access to information, communication, and opportunities for social inclusion. Therefore, increasing access to broadband connectivity should be a dire priority for African governments to reduce the broadband gap nationwide, regionally, and globally. Regional imbalances in ICT and telecommunications infrastructure across Africa reflect the fragmentation of potential continental connectivity and raise challenges to achieve common projects between African countries on the one hand and with their global partners on the other hand. African governments in their various partnerships and platforms for infrastructure development need to clearly differentiate national, regional, and international projects in order to meet targets based on their policies and plans.

Regional and global partnerships could contribute to mitigating the lack of high-capacity backbone networks which impedes reliable continental broadband connectivity. Besides, interests in submarine fiber optic cables versus wireless networks on which the focus is when it comes to telecommunications infrastructure should be developed. In early February 2020, during the breakdown of submarine cables that has temporarily jeopardised regional connectivity by slowing down internet connection in South Africa for instance, regional internet sharing based on available capacity with more submarine cables connecting parts of the continent has proven important and efficient for solutions. More efforts should be done to support regional initiatives for connectivity across Africa via communication and telecommunications cables: submarine fibre optic cables, mobile networks cables, data centres cables, telephone cables, LAN cables, and coaxial cables. To achieve regional initiatives and integration in the telecommunications sector, African governments need to focus more on the harmonisation and the standardisation of telecommunications policies across the continent which will contribute to fully integrating African countries and their populations through Information and Communications Technology (ICT).

African countries could take advantage of their partnership with China in the telecommunications sector to develop such interests for faster and more reliable connectivity across the continent. Chinese companies have a comparative advantage in submarine fibre optic cables as most of the related projects were undergoing in Greater China, including Hong Kong and Taiwan, a decade ago. China was already involved in such submarine cables projects in 2018 to provide high-speed internet traffic between Africa and Asia as probably a flagship corridor of the Belt and Road Initiative. Such a project aims at enabling better digital infrastructure and services for countries on both continents. Furthermore, the Digital Silk Road as part of the Belt and Road Initiative is a platform that can contribute to strengthening partnership

and cooperation between African countries and China in the telecommunications sector for the development of the digital economy in Africa. The Forum on China-Africa Cooperation (FOCAC) has played an important role in fostering such partnerships in the telecommunications sector between China and African countries. African and Chinese companies, alongside governments' involvement could develop cooperation in the digital economy, broadband connectivity, and ICT infrastructure. Coordination between Africa and China to establish a strong cooperation agenda could yield benefits in the modernisation of the telecommunications infrastructure in Africa and be catalysers for other sectors such as trade, transport, agriculture, financial technology, education, and electricity. There are already bilateral, converging interests between China and several African countries to meet the market demand and learn from each other in sectors related to ICT and telecommunications. Under the various platforms (FOCAC, Belt and Road Initiative, BRICS, among others) African countries should join forces with China for practical and sustainable projects. Huawei and ZTE have partnered with companies across the continent for ICT innovation, communication networks, artificial intelligence.

Even though the Digital Silk Road could bring opportunities to Africa's telecommunications industry and digital economy, it could present risks and challenges related to cybersecurity, governance, IT freedom, and control of citizens. African governments' commitment to develop the ICT and telecommunications sector should not raise suspicions among their populations for a controlled internet but rather should enhance regional and global connectivity, contribute to the socio-economic transformation of people and the economy. Modern and adequate telecommunications infrastructure could contribute to improving the lives of millions of Africans across the continent through education, business, and social contacts. Such an approach to enhance regional and global connectivity among Africans in the continent and between Africans and the rest of the world is a means to facilitate and improve people's social interactions worldwide.

However, protective measures to avoid data cyber-attacks, networks failure, data losses should be highly considered for better and improved regional network security. The African Union is aware of the numerous security challenges and risks that the development of the digital economy could pose to African countries, even though it could provide great opportunities for the continent. With China at the heart of the Digital Silk Road initiative, changes in partnership and policy for many African countries could translate into many risks to deal with: political risks, lack of transparency, governance, and renegotiation. Besides, African governments should tackle political instability, mismanagement of funds, corruption, lack of an adequate regulatory framework that could hinder and affect investors' confidence in the short and long term for sustainable investments. The partnership between African countries and China through the Belt and Road and the Digital Silk Road initiatives should involve private companies for expanded investments in a wide range of industries and for a more inclusive sustainable development that consider job creation, education, training, skills, and technology transfer for the majority of the African youth. However, African countries individually as well as through the regional and continental organisations need to elaborate mechanisms to fund their projects to avoid over-reliance on foreign funding and mitigate debt risks. For

instance, the establishment of sovereign funds generated from sectors in which countries have comparative advantages or levy-based funding could reduce the reliance of African governments on foreign funding and debts.

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