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COMPETITION FOR DEVELOPMENT: CHINESE TELECOMMUNICATION COMPANIES IN AFRICA

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ABSTRACT

Following China's "go out" policy which promotes Chinese companies (state owned enterprises and private companies) to venture abroad, China's engagement in Africa has generated important investments in different sectors, including infrastructure, mining, oil and copper. Chinese investment has also been directed to the service sector. Africa's telecom industry is currently one of the thriving growth markets in the world for telecom investors. Africa has a large number of mobile handsets users and an apparent willingness of African governments to develop telecom networks in their respective country. Mobile phone technology provides access to rural areas previously not covered by landlines. A wide network coverage attracted more telecom services providers and equipment manufacturers to the continent. In the framework of Chinese investments in Africa, the analysis will focus on Chinese multinational telecommunication companies' investments and operations in Africa. It will examine the two Chinese giant telecom companies' (ZTE and Huawei) presence in Africa. The article will also explore the effects of China's "go out" policy strategies on Chinese multinational telecom companies, Africa's telecom industry including mobile phone business, Chinese telecom companies' entry strategies in African markets, their management and organization methods, and their implications for Africa countries.

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1. Introduction

The steep increase in demand for mobile phones in Africa in the last decade has attracted the attention of telecom companies. Africa has become a thriving market for the telecom industry and is among the world's fastest growing mobile phone markets. The fast growth has been facilitated by the liberalization of telecom policies in African countries which has allowed the creation of regulatory bodies and increased competition in Africa's telecom market. The presence of new operators in Africa's telecom industry has created much needed competition with state owned telecom services providers by positively influencing price competition and driving subscription growth rates. Linked to the mobile services growth in Africa, more and more telecom service providers are interested in increasing their operations in Africa. Specifically, the urban areas have been the targets for major telecom operators in Africa. However, more focus is currently given to rural areas in order to help residents access telecom networks, communicate and develop businesses, and increasingly bridging the gap between rural and urban areas. One major challenge for telecom operators is to ensure that remote areas in Africa can access tailor-made services such as cheap mobile handsets and wide network coverage. Investments in service sectors also illustrate a broader case of the qualitative changes in China's African investment strategy. Traditionally, Chinese investments in Africa are first and foremost driven by Beijing's quest for natural resources and they are concentrated in extractive industries to enable China to meet its resource needs and ensure its urbanization and modernization (Shenkar & Luo, 2004). This trend is currently less pronounced, and there is increasing diversification of Chinese investments. China is increasing its investments in Africa's services sector, particularly in fi-

nancing and telecommunications. China's presence in Africa is increasingly visible in different sectors. Chinese multinationals, following Beijing's "go out" strategy, need to invest and operate in global markets. Telecommunication is a key investment sector for China. With China's "go out" policy, Beijing would like Chinese telecom companies to venture abroad. The presence of Chinese telecom companies abroad has been motivated by Beijing's strategic policies for its companies to acquire foreign technology, break into new markets, and reinforce China's space and satellite development program (Executive Research Associates, 2009). Through the recent twelfth five-year plan, the Chinese government encourages the building of global brands by Chinese companies. Consequently, Chinese operators are increasingly targeting this business stream in Africa.

China currently plays a major role in financing and supplying telecom and information communication technology (ICT) equipments in Africa, one of the growth markets in the continent. Specifically, mobile usage in Africa has experienced an outstanding growth. The number of mobile subscribers has significantly increased from 280 million in May 2008 to 433 million in November 2011 (International Telecommunication Union, 2011). This interesting market development coincides with Beijing's "go out" strategy encouraging Chinese companies, both private and state owned, to go global. Chinese telecom companies benefit from financial support and political influence to tap into Africa's telecom industry. With this support, the two giant Chinese telecom companies (Huawei and ZTE) have successfully broken the monopoly of the telecom headset market in Africa, which until recently was held by their Western competitors such as Nokia, Siemens and Ericsson.

The remainder of this article explores the political economy of Chinese multinationals in Africa, the presence of Chinese telecom companies in Africa relative to their business strategies, the challenges and obstacles they encounter, and the developmental impact for African countries. This study will specifically examine the two major competitors from China, namely Huawei and ZTE. The study relies on policy documents by the Chinese government, as well as publications by ana-

lysts and own publications, including annual reports, by Huawei and ZTE.¹

2. The Globalization of Chinese Companies

In overseas markets, Chinese multinationals are building high profiles through their internationalization strategies. China's cultural context, market structures and resources may force us to change our views about the characteristics of Chinese multinationals. Looking at the motivations of Chinese multinational companies to increase their participation in the global economy, most scholars agree that classical motivations play a key role in the foreign investments strategies of Chinese companies. Chinese multinationals are to various extents resource seeking, market seeking and strategic asset seeking companies (Buckley et al., 2007). Over the last few years, the logical consequence of China's export-oriented policy is market-seeking motivations. Investments abroad mean an avoidance of trade barriers and the facilitation of exports of domestic products. China's need for resources to facilitate its modernization is in contrast to the poor availability of domestic resources. Chinese companies have thus developed activities in resource seeking FDI and executed them from the target country or region. Destinations for Chinese outward FDI in natural resources such as oil, coal, copper include African as well as central Asian countries. Due to the strategic importance of outward foreign investments, most active Chinese multinational companies are state-owned enterprises. However, with current fierce competition and the rise of production and labor costs in China, Chinese private enterprises are also seeking to penetrate foreign markets. Strategic asset-seeking motivations play a key role for Chinese investors abroad (Gu Jing, 2009). These different aspects (resource-seeking, market-seeking and strategic-asset seeking) seen in Chinese multinational companies 'going global' give them dif-

¹ Serious and repeated attempts were needed to have actors of both companies in Africa agree to interviews. It proved virtually impossible to get relevant people in key positions at both companies' management departments in South Africa to conduct interviews; the author would like to express his sincere gratitude to those interviewees available for his questions.

ferent characteristics when compared to investment strategies of Western multinational companies. A number of aspects seem to be particularly unique to Chinese multinationals. These aspects may be categorized as expertise and technology-based features, access to home country resources and features of cultural proximity.

Multinational companies with a western background tend to be experienced in investing in stable markets with transparent regulations, and they have less support from their home governments. In contrast, Chinese companies are more capable of dealing with troublesome regulations and navigating through opaque political constraints, given their greater experience with such institutional features. Such experiences may put Chinese firms, arguably, in a better position than many non-Chinese firms. The characteristics of China's home market also play an important role for Chinese firms. Chinese firms may have expertise in managing large, complex markets such as infrastructure projects in ICT. In a broader perspective, the involvement of the Chinese government in the operations of Chinese companies may be seen as an element of home country activities. In China, for example, SOEs are supported by the government through financial aid or political influence to overcome their late coming status in the international market (Alden and Davies, 2006). The motivations of Chinese multinational companies to invest abroad are not only linked to their operations in international markets due to local competition at home, but also Beijing's "go out" strategy that seeks to have more overseas Chinese investments through the SOEs and the private companies that benefit from political influence and financial support.

3. The "Go Out" Strategy of Chinese Telecom Companies

The telecom sector has been one of the fastest growing sectors in China's economy during the last two decades. A large number of rapidly expanding Chinese companies has emerged to compete with foreign multinational companies. Following the trend of China's economic growth and modernization which has been accompanied by the competitiveness of Chinese enterprises in global markets, the case of Chinese telecommunication companies remains evident. 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 (Beebe et al., 2006). 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 the Chinese government. Secondly, Chinese companies venturing abroad need to learn about foreign management and technology strategies in order to be internationally competitive and to build innovative brands. Thirdly, Chinese companies 'going global' follow Beijing's strategic policy to secure resources for China's modernization 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 focus on R&D are major challenges affecting the competitiveness of Chinese companies in global markets. While a large number of Chinese companies are developing management and technology capabilities to improve their global competitiveness, others build strong global relationships and acquire foreign businesses through mergers and acquisitions (Beebe et al., 2006; Bonaglia et al., 2007; Salidjanova, 2011).

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 internationalization of Chinese MNCs. The Chinese government, through its agencies, organizations and financial institutions (China Exim Bank, CDB, CADF), brings important support to Chinese companies overseas (Beebe et al., 2006). 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, Chinese Premier Wen Jiabao reaffirmed the Chinese government's commitment to support globaliza-

tion by offering various types of support including new policies and services to coordinate overseas investments and managing 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 mentioned through a five-year cooperation framework agreement that it would provide ZTE with a US\$15 billion credit line, including ZTE overseas projects financing and ZTE credit limits.

The global ambition of Chinese telecom companies has been a secret. They wanted to go global and expand their business over China's borders. For example, Huawei during the last decade established its research centers overseas. A Boston Consulting Group has noted, "Huawei and ZTE are globalizing fast and are determined to stay the course" (Li Cheng, 2006). The presence of Chinese companies in the telecom industry will change the performance of the sector by creating global competition and reshaping management strategies. Their participation in overseas market has taken different forms, including R&D, project contracting, joint ventures, mergers and acquisition, and telecom management and operation. Africa, 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 enter into partnership with local telecom operators. Chinese R&D centers participate to improve telecom technologies and solutions for network providers.

4. The Presence of Chinese Telecom Companies in Africa

Since the 1980s, China's new interest in Africa has been driven by its rapid economic development and growth. With resource security at the heart of China's approach to the continent, the role of Chinese multinationals in various investment sectors has become an important feature of the African investment and development landscape. Howev-

er, China's late inroads into Africa for investments and its relative lack of experience in developing and managing large scale projects abroad are major challenges for Chinese MNCs. Through Beijing's "go out" strategy, Chinese multinationals benefit from the central government's political influence and financial support. In the internationalization strategy of Chinese companies, it is apparent that most companies remain at the developing stage where they see international business as an extension of their domestic market (Peng, 2011).

China's increasing presence in the African telecommunication industry is part of a multi-dimensional engagement in the continent to serve its broader strategy to enhance its global standing, counter western influence and to obtain resources and new export markets to feed its rapid economic expansion (Executive Research Associates, 2009). In addition to construction as well as 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 telecommunication go hand in hand with the strategic policies of China's interests abroad to find new markets to export its manufacturing products, develop its technology and acquire foreign technology. With its strategic political considerations, the primary objective of China is to see the emergence of Chinese international competitive enterprises (Dumbaugh, 2008). The two Chinese giant telecom companies (ZTE and Huawei) play a key role in the expansion of Chinese investments abroad and in China's political economy strategy overseas. Chinese telecom companies operate following China's geo-strategic objectives. This makes the need for effective strategies in dealing with Chinese telecommunication companies a challenge in Africa.

The telecom sector in Africa has experienced significant growth during the last decade and has attracted an increasing number of investors. The willingness of African governments to modernize and develop their telecom industry, through the liberalization of telecom policies in some African countries in the 1990s and in early 2000, have made the African telecom industry attractive to foreign investors (Berg and Hamilton, 2001). The lack of telecom network coverage in rural and remote areas and the high costs of establishing landline networks across vast

and often sparsely populated territory are among the major factors influencing the investment decisions of foreign telecom investors such as Huawei and ZTE to tap into Africa. From traditional messaging and calls to money transfer and social networks access, mobile phone usage in Africa is growing and making Africa the world's fastest growing mobile phone market (See Tables 1 and 2).

Table 1: Total and Penetration Rates of Mobile and Fixed Telephone Lines Subscriptions in Africa

Year	Millions				Per 100 Inhabitants			
	2008	2009	2010	2011*	2008	2009	2010	2011*
Fixed Telephone Line	11	12	12	12	15	16	15	14
Mobiles Cellular Subscriptions	246	296	360	433	32.4	38.0	45.2	53.0

Source: International Telecommunication Union, 2011. Updated on November 16, 2011. Note: *Estimate

Table 2: African Countries' with High Mobile Cellular Subscription Growth – (Subscriptions in Millions)

Country	2007	2008	2009	2010	Growth (2007-2010 in Percentages)
Nigeria	40,395	62,988	74,518	87,297	116
Egypt	30,093	41,286	55,382	70,661	135
Morocco	20,029	22,815	25,310	31,982	60
South Africa	42,300	45,000	46,436	50,372	19
Kenya	11,349	16,303	19,364	24,968	120

Source: International Telecommunication Union, 2010- Growth based on own calculation

The number of African mobile phone subscribers has grown by almost 20 percent for each of the past five years, and it is expected to reach 735 million by the end of 2012 (GSMA Report, 2011). Telecommunication is a key sector for economic development, and it contributes to services trade, the most dynamic element of the global trading system. Telecommunication 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 telecommunication environment. The continent's mobile phone use has increased at an annual rate of 65 percent, which is twice the global rate (International Telecommunication Union, 2010). The boom in Africa's mobile phones market is related to the high costs of building landline phone network equipments when compared to mobile phone base stations. The large costs of establishing telephone wires have not been viable for the majority of the African population living in poverty and in 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 provide more mobile phone manufacturers to supply African customers with low cost mobile telephone handsets and wide telecom coverage. According to Nokia's President and CEO Olli Pekka Kallasvuo, for many mobile telephone providers like Nokia, strong economic growth is expected to occur while operating in Africa (Ahmad, 2007).

Focusing on the great and growing demand in 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 equipments. According to Raushan Sagalbayeva (2011), "Not only is Huawei closing in on Ericsson in terms of worldwide revenues (US\$28.1 billion and US\$28.4 billion, respectively, in 2010), but Ericsson also saw a steady decline in the volume of sales it generated in Sub-Saharan Africa last year". Improving technical capacities, linked to low costs of production, access to state funding sources 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 globalization has opened markets for trade and investments. Once the largest recipient of FDI, China is currently investing abroad, and the expansion through foreign markets has become a strategic growth pattern for China. The internationalization 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. The economic, political and social environments in host countries attract multinational corporations (Diaconu, 2008). Chinese companies, propped up by Beijing's "go out" policy, need foreign markets to expand their manufacturing products. Chinese telecom companies possess strategic advantages, including political and financial support from China's central government and competitive prices to invest in the telecom sector in Africa. African countries also represent a potential market for their business. Countries are attractive if they have large markets, significant natural resources and high-skill, low-cost and human resources with potential for training or well-trained local labor and good communication systems and infrastructure (Wattanasupachoke, 2002). Africa, arguably, possesses all the important factors to attract foreign investments, but the region lacks the necessary physical infrastructure. To operate in Africa's telecom industry, Chinese telecom companies are interested in the technological factors. Countries with the 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 behind. Chinese telecom companies (ZTE and Huawei), which are telecom equipment manufacturers, tapped into Africa to develop telecom infrastructure and network and thereby bridging the telecom divide (See Table 3).

Table 3: Examples of Chinese Telecom Investments in Africa

Country	Company	Winner	Description	Year	Value (US\$ Million)
South Africa	Cell C	ZTE	GSM/#G Expansion	2010	378
South Africa	Telkom SA	Huawei	W-CDMA Expansion	2008	211
Libya	LPTIC	Huawei	Submarine Cable	2010	N/A
Ethiopia	ETC	ZTE/ Huawei/ CITCC	Fiber Optic Transmission/ GSM Network Expansion	2006	1,500
Ghana	Ministry of Communication	ZTE	Transmission Network	2010	70
Algeria	Mobilis	ZTE	3G Network	2005	N/A
Angola	Angola Telecom	ZTE	Optic Fiber Backbone	2008	1,200
Nigeria	Zain	Huawei	NGN Mobile Softswitch	2010	N/A
Nigeria	Multi Links	Huawei	CDMA	2006	N/A

Source: Chanakira, 2010

4. 1. Chinese Telecom Companies' Business Strategies in Africa

While investing in Africa, Chinese telecom companies are more focused on the needs and requirements of customers. Good service based on Huawei and ZTE's customer-oriented strategy is the main element for the success of both companies in Africa. According to Shi Weiliang, head of Huawei Cameroon branch, in an interview with Yan Weijuan in China Today, Huawei occupies a large market share in West Africa despite the fierce competition from the major telecom equipment manufacturers, Alcatel and Ericsson (Yan Weijuan, 2011). 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 reliability among customers. Wilson Yang, Huawei's former head of operations in West Africa, men-

tioned at the University of Pennsylvania Wharton School's case study regarding the company that Huawei manages to achieve tremendous margins pricing itself only 5 to 15 percent lower than its international competitors (Chang et al., 2009). ZTE, on the other hand, prices 30 to 40 percent below its European competitors. Rapid responsiveness of the 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. In order to satisfy local populations' needs, they also control the effectiveness of these base stations placed in rural areas. After providing customers with telecom network equipments, Huawei and ZTE offer long-term maintenance services to ensure the reliable operation of local networks (Yan Weijuan, 2011).

China's engagement in Africa's telecom industry can be seen as a win-win strategy if we were to consider the improvement and growth in the ICT sector across the region in the last decade. Chinese telecom companies, by leveraging their expertise and experience in their home and overseas markets, help bridge the digital divide and offer residents 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 telecommunication. The company achieved customized solutions to offer people in stricken areas better information access. Through technological innovation, Chinese telecom companies reduced communication fees for African mobile subscribers. In Nigeria, for instance, Huawei builds Code Division Multiple Access (CDMA) networks to provide telecom services benefiting 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 in order 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 partnership with MTN in South Africa, which is operating in more than 20 African countries, is already a strategic approach for both companies to gain new markets in the continent. The establishment of R&D centers in Nigeria and South Africa by Huawei contributes to Chinese telecom companies' technological innovation policies. Paul Wu, CEO for Huawei South Africa, 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 R&D centers aim at bringing global telecommunication innovation to operators in Africa with customized solutions to Africa's telecom industry.

However, in the African telecom sector, China's contribution comes with preferential loans to governments to acquire Chinese telecom equipments 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 only buy equipments 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, construction, China also provides loans to its telecom companies to operate overseas. With support from their govern-

ments, Chinese telecom companies have competitive advantages. With strong government backing, loan attributions to governments and operators to buy Chinese equipment, China's no strings policy and low-cost technology supply have facilitated the competitiveness of Chinese telecom companies in Africa. In the last two years Huawei and ZTE secured at least US\$55 billion in credit facilities from Chinese policy banks and state owned banks to support their expansion into overseas markets (Sagalbayeva, 2011). 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 its telecom cooperation with African nations in line with mutual benefits and common development. Moreover, the Chinese government will support its telecom enterprises to run more telecom services in Africa (Chen Jian, 2004). Chinese telecom companies enter the African market and establish partnership with governments to build e-government networks for ministries and organizations in order to provide information and services for African citizens. Huawei and ZTE have built national fiber-optic communications networks and e-government networks for more than 20 African countries (Zhang Zhongxiang, 2011). In addition to network equipment and telecom infrastructure, Chinese telecom companies have the advantage to sell 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 enter the African market (Chanakira, 2010). 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 reliability from a huge number of African mobile phone users and governments (ZTE White Paper, 2011).

4. 1. 1. Political and Economic Advantage

Based on the precept of non-interference in the domestic affairs in any state, China is willing to invest in Africa regardless of its international standing (Alden and Davies, 2006). While operating overseas, Chinese multinationals have competitive advantages compared to western companies. In the case of Chinese multinational telecom companies ZTE and Huawei, they operate in rural and remote areas in Africa which are sometimes difficult to access due to bad road infrastructures, unreliable and even dangerous, by building telecom network equipment and base stations to allow local residents to benefit from wide network coverage in contrast to their western competitors. In general, this situation is the same for Chinese MNCs engaged in oil, infrastructure, and mining industries in Africa. The companies are involved in more projects with high risks in the different sectors mentioned above than their western counterparts who are less inclined to invest in some remote and inaccessible places in Africa.

4. 1. 2. Comparative Economic Advantage

Costs for product development, taking into account R&D, manufacturing, distribution and sales, are generally lower in Chinese companies than their western counterparts. Huawei deserves more credit in Africa for elevating its customer service to a high priority and also considering their pricing strategy in the region. Chinese companies are able to transfer savings in labor and other resources to low prices and use it as leverage in emerging markets like Africa. It should be noted that Chinese multinationals while investing abroad and especially in Africa use a low cost bidding strategy.

4. 1. 3. Political and Economic Diplomacy

The diplomatic attention given to African countries by the Chinese government, coupled with support for big projects and development assistance, is an important feature for Chinese multinationals bidding process. Chinese telecom companies operating in African countries develop strong political and diplomatic ties with African policy-

makers in order to have advantages for their operations compared to their Western counterparts. Huawei and ZTE have political ties with the Chinese government and also with host countries' governments. Fang Lee Cooke (2011) argued: "When Chinese government leaders visit other developing countries, they are often accompanied by the senior management team of Huawei and ZTE". Both companies utilize opportunities provided during these visits to build political and diplomatic relationships with host countries' policymakers in order to gain influence and reliability, and have more important business operations. Furthermore, China has launched public diplomacy in order to rebuild its traditional mutual relations and trust with Africa. Currently, the Chinese government and investors are working hard to build more schools, hospitals, create jobs that involve local communities in Africa by using public diplomacy strategies. The Chinese official doctrine of "non interference" in the internal and political affairs in the countries where they invest has increasingly been shaping China-Africa economic relations (Taylor, 2006). In this context, Chinese multinational companies have more access to African markets regardless of the controversial political system or regime in some African countries. China's economic diplomacy relative to Chinese multinationals investments in Africa is based on China's "no strings" policy.

5. Challenges and Obstacles for Chinese Telecom Companies in Africa

Chinese investments in Africa are subject to obstacles, risks and challenges. Chinese telecom companies, like other Chinese companies engaged in various sectors in Africa, face barriers and constraints to adequately develop their businesses. Chinese companies venture abroad without assessing host countries' investments risks. Among the main obstacles to Chinese multinationals investments in Africa, physical infrastructure is cited as the most immediate source of high cost of doing business in Africa. Among the dimensions of infrastructure-related constraints, the poor quality of power services is the leading bottleneck, causing interruptions in production and thus revenue losses.

5. 1. Obstacles

The main obstacles that telecom companies face in Africa are the lack of a telecommunication infrastructure, low human capital level and inadequate regulatory institutions (Kria-Chaker, 2002). In order to bridge the telecom divide and be on par with the latest telecom development scale, Africa needs to adjust the different aspects mentioned above to make the telecom industry more attractive for future development. Although the telecom industry in Africa has experienced a steady growth, more needs to be done in terms of physical infrastructure modernization, regulatory framework and human resources. Obsolete network equipments and saturation, due to poor network coverage, do not facilitate telecom investments in Africa, particularly for telecom operators and network providers (Kria-Chaker, 2002).

The lack of technological infrastructures in many African countries does not allow Chinese telecom companies to modernize and develop telecom material and network for a better interconnection between urban and rural areas and also national and international levels. Power supply also remains a critical issue in many African countries. Telecom companies increase their investments costs to overcome power shortages by using generators. Power distribution in major African cities is limited. The rural areas, which are the main targets for Chinese telecom companies, lack power installations to facilitate telecom infrastructure expansion. This represents a major barrier for telecom investors in Africa. The expensive costs of fiber optic and satellite links make it difficult for Chinese telecom companies to invest in landlocked countries and remote islands with complex telecom access.

The weakness of institutional bodies to regulate the telecom sector in Africa creates difficulties for telecom companies (local and foreign) to acquire authorizations to develop their activities across the continent (Kria-Chaker, 2002). Flexible regulations and policies to promote competition and reduce communication fees can bring more investments in the telecom sector and affordable prices for telephone subscribers. Bureaucracy, taxation and insufficient regulation are also barriers to Chinese telecom companies operating in Africa. In many

African countries, telecom companies cannot directly deal with network operators. Governments also use mobile networks to make profit.

The ratio of mobile-related tax to operators' revenues in Sub-Saharan Africa was 30 percent (GSMA, 2009). Currently, the share is probably even higher. For instance, regulators often limit competition by failing to license radio spectrum to new telecom companies entering the African market. This means that mobile communications are unnecessarily more expensive.

Furthermore, human resource development regarding the telecom industry and ICT technology has been a problem for Chinese telecom companies in Africa. This problem is very acute in relation to the availability of skilled personnel to work in telecom projects. In some countries, efforts have been made in this regard to invest in ICT by creating training centers and institutions. Technological skills acquisition in all levels of education, especially the broadening of knowledge in informatics, is essential for attracting investment and sustaining entrepreneurship, which are both crucial for economic development (Kria-Chaker, 2002). For Chinese companies venturing abroad human resource management constitutes a major obstacle. Chinese telecom companies in some host countries outsource their human resource management in order to include local cultural and religious values and to develop an adequate human resource strategy. Such a policy helps Chinese companies to cope with local norms and practices in investing countries. Cultural differences and language barriers in the overseas operations of Chinese companies are also constraints affecting communication and mutual understanding between Chinese employers, local employees and policymakers. The multicultural dimension in Chinese overseas companies has to be taken into account for a better presence in host countries. The important role of cultural values in the strategic human resource management in multinational companies is well recognized (Zhang and Albrecht, 2010). Understanding the local culture and effective management of local employees are keys to success for Chinese telecom companies in Africa. Political and economic uncertainties in Africa because of conflicts in many countries provide major risks for Chinese investments in the continent. In 2011, for instance, the *jasmine revolution* in Northern Africa created a decline in Chinese investments

in countries such as Libya and Tunisia (The African Economic Outlook, 2010).

5. 2. Challenges

Most Chinese multinationals are going abroad with a minimal international experience. In addition to the Chinese government's support, Chinese companies 'going global' have to develop imperative strategic methods to succeed overseas. While one of their main motives is to explore foreign markets, Chinese multinationals need to overcome a number of challenges. The key challenges are human resources, branding, and global operations.

5. 2. 1. Human Resources

Chinese companies are struggling to develop a senior management team with the skills necessary to operate effectively on a global scale – such as familiarity with African markets, foreign language skills and experience managing global operations. Companies can adopt three main strategies to overcome such challenges. First, companies can internally groom a Chinese management team by providing appropriate training and development to acquire the skills needed to manage a global business. Second, companies can recruit overseas Chinese or foreigners, but it is often difficult to integrate these experienced managers into the culture and daily operations of the parent company. The third option is mergers and acquisitions (M&A), which, despite significant integration challenges, can dramatically shorten the time required for Chinese companies to build a critical mass of management talent capable of running a global enterprise (Beebe et al., 2006).

To enter the global market, Chinese multinationals face important human resources challenges. Investing abroad, mostly through M&A, Chinese MNCs need good training and skills to make their entry into foreign countries. Management, organizational, communication (foreign languages) skills are aspects that Chinese multinational companies have to take into account while interacting with foreign managers, employees and politicians in host countries. They need well-

trained and experienced managers to become successful in host countries (Cooke, 2011). To have managers at all levels who can master the range of tasks related to establishing a company abroad is a challenge that Chinese multinationals have to address relative to their global strategy. Chinese multinationals, which mainly use M&A to establish business abroad, will increasingly have to consider such challenges.

5. 2. 2. Global Brands Building

Telecommunication, arguably, also fits another strategic policy goal. As one of the main highlights of China's Twelfth five-year plan, building global brands for Chinese companies is encouraged by the Chinese government (New Zealand Trade and Enterprise, 2011). In order to promote and establish a better image of Chinese products and to benefit from the value added to products in the world market, Chinese companies aspire to create their own innovative brands. Steady progress by Chinese companies has a major impact on the global economy (Woo, 2004). Yet, very few Chinese multinationals have developed international brands. They need to constantly build their brands to overcome unique challenges. In order to develop a long-term development strategy, Chinese multinationals will need to focus on brand building.

However, a strong commitment from executives of Chinese multinationals is needed to achieve such goals. Without attention from the leadership team, it will be difficult to build global brands. To make their global brands accessible and accepted in the world market, communication is another aspect Chinese multinationals will have to integrate in global brands building across their international operations so that their brands will develop more globally consistent standards (He, 2011). Many Chinese companies consider brand ownership critical to their success overseas, but they may not fully appreciate the sustained investment required for brand building and management.

In many cases, Chinese companies will need to adapt the branding practices they use in China to appeal to consumers in African markets. Chinese companies must realize that brands are much more than just a logo. Brands require sustained investment in marketing and,

of course, resonate with customers who trust the company's products and services (Beebe et al., 2006).

5. 2. 3. Globalization Strategy for Development

Before venturing into Africa, Chinese multinationals need a globalization strategy to determine how they will differentiate themselves to capture and enhance value, identify the right business model for African expansion and prioritize target countries for market entry (Beebe, et. al., 2006). As an institutional and political force, the Chinese government has played at the same time a positive and negative role in the expansion of Chinese multinationals abroad. Until the 1990s, in an effort to conserve foreign exchange, the Chinese government had severely restricted overseas foreign direct investment (OFDI). It started to play a more positive role by being more supportive of OFDI from the late 1990s (Luo, Xue and Han 2010).

In 2000, with policies such as low interest financing, favorable exchange rates, tax reduction, the Chinese government has supported OFDI. A large number of Chinese companies have responded to these incentives and invested overseas. The global strategy of Chinese multinationals started in 2000. This strategy is driven by three factors: support from the Chinese government as an institutional and political force, the challenges of going abroad due to the lack of high technological and managerial resources and the adoption of acquisitions which is known to be one of the key aspects in Chinese multinationals' strategy to enter the world market. To enter new markets, multinational companies are required to have high technological and managerial resources. However, for Chinese multinationals venturing overseas, this is a challenge. Although Chinese multinationals are looking for overseas markets and investments, they typically do not own better technology and their management capabilities are usually not world class (Barnard, 2010).

Considering the lack of high level technology and low managerial skills, Chinese multinationals in their quest for new markets abroad should focus on linkage, leverage and learning. They should focus on their abilities to identify and bridge the gaps. In China, Chinese multi-

nationals are known to have engaged in an important networking that allowed them to have new opportunities and better performance (Peng, 2011). In terms of leverage, they should take advantage of their unique capabilities that can be a comparative advantage relative to their competitors. For example, although Chinese phone makers may not have world class technologies or brands such as those possessed by Motorola, Nokia, Samsung, the capabilities of some Chinese firms in rapid imitation and creative packaging (such as leather skin phones) have enabled them to win markets overseas (Peng, 2011).

Contrary to multinational companies from other developed countries, for Chinese multinational companies 'going global', learning constitutes a major area of focus. However, it is mainly organizational learning that will allow them to know how their competitors in the global market are organized and managed in order to develop new markets and achieve high performance. Acquisition is not the only mode for Chinese multinationals to enter new markets, but it is the main entry mode for Chinese multinationals in the global business environment. Three reasons arise while asking why Chinese multinationals focus more on acquisitions. Fast market entry, acquisition of existing world-class brands such as IBM and Volvo, and empire building are three aspects that Chinese multinationals consider among their strategies while venturing abroad.

6. Impact on African Development

Chinese telecom companies have contributed to the development of Africa at different levels, including socio-economic development and technology and skills transfer. Huawei and ZTE have positive spillover effects such as employment, human capital development, enterprise development, and corporate social responsibility in African countries (Cooke, 2011). For Africans, the surge in low cost consumer goods, quite often of varying quality, is the most important impact of Chinese involvement in the region. These products are being replaced by the importation of higher value added products: household equipments (refrigerators, air conditioners...) and even Chinese manufactured vehicles that middle class consumers can afford. Huawei and ZTE

have not only created employment, opened training centers in many host countries in Africa, but they have also brought a long awaited communication solution by bringing or making mobile phones more accessible to Africans through their low-cost equipment and products strategy.

With foreign investments in the telecom industry, Africa has shown a remarkable growth in mobile phone usage. Combining local insights and consideration with their global efforts, Huawei will capitalize on market opportunities. According to Peng Song, CEO of Huawei Africa: “ In South Africa, Huawei has already had a considerable progress in this regard through a number of interventions such as enterprise development, skills and technology transfer, partnerships with local business and accelerated recruitment of locals” (Huawei South Africa Press Office, 2011). China’s engagement in Africa’s telecom sector has contributed a lot to the development of African countries. With the presence of Huawei and ZTE in the African telecom market and a strong focus on customers' requirements, Africa can benefit from up-to-date technologies and faster services at affordable costs. Both companies training centers in Africa allow staff members and local network providers to benefit from skills/technologies transfer. The collaboration and partnership built with major African telecom operators have contributed to the improvement of telecom technologies in many African countries. In Cameroon, for instance, Huawei and Cameroon Telecom have both introduced the CT phone service which allows mobile phone connections all over the country (Yan Weijuan, 2011). This contributes to the country’s telecom development and modernization. African governments and telecom operators have welcomed Chinese investments in the telecom industry because of the dire need for infrastructure development and investment in the continent. The presence of Chinese telecom companies in Africa contributes to the development of the continent in several ways. The establishment of telecom networks and equipment by both Chinese giant telecom companies has modernized the telecom technology in Africa. Allowing wide telecom network coverage, ZTE and Huawei have contributed to transmission technology innovations. Thus, Chinese companies are playing a key role in modernizing and expanding the telecom infrastructure in Africa (See Box).

China's footprint in Africa's telecom industry has also contributed to the training of local personnel in telecom solutions and engineering. Chinese companies are dedicated to the needs of their personnel to acquire the latest telecom technologies and engineering solutions. Huawei, in this regard, has established six training centers across Africa (Nigeria, Angola, Kenya, South Africa, Egypt and Tunisia) and ZTE has set up four centers (Egypt, Ethiopia, Algeria and Ghana). In collaboration with governments and telecom operators, excluding skills transfer, these centers focus on technology promotion, professional consultation and academic research.

However, although Chinese telecom companies have had an impact on Africa's development in various areas, problems exist, and several steps need to be taken to adjust the telecom environment with the presence of Chinese enterprises, despite generally high-glossy promotion materials. Governments and telecom operators welcome Chinese investments in Africa's telecom industry. However, problems have developed relating to the activities of Huawei and ZTE in the continent. In Kenya, for instance, contracts between local telecom operators and Chinese companies have been cancelled because of delays noticed in equipment and infrastructure supply (*The Globe and Mail*, November 24, 2011). Telecom investors in African countries mention that Chinese telecom companies have access to markets by using intra-governmental relations between China and Africa. In Kenya, one of the most thriving telecom markets in Africa, Chinese investments in the ICT sector are allegedly distorting important investments decision. With the competitive prices that benefit Chinese companies, African ICT vendors notice the fierce competition created by the Chinese presence in the sector. Chinese telecom companies' traditional foreign competitors in the telecom industry already complained about the low pricing system of ZTE and Huawei in the global market. The attribution of tied loans to telecom network providers and governments to only buy Chinese equipment according to ICT vendors is a way to lock up contracts that give large opportunities to Chinese telecom companies (Marshall, 2011). Chinese loans not only in the telecom sector but also in other China's investments sectors in Africa go hand in hand with the contracts (Taylor, 2006). For its ICT development, Zimbabwe received loans from

China Exim Bank to only buy telecom technologies and services from China (Malakata, 2011). In Zambia, the competition between Ericsson and ZTE for a contract with Econet Wireless to upgrade its telecom services has been in favor of the Chinese company which attributed loans to Econet (Malakata, 2011).

Access to subsidized funding sources from China gives Chinese telecom companies a competitive advantage, thus the competition with local and foreign telecom operators in Africa. Although China contributes to development assistance in Africa, African governments face difficulties with Chinese companies operating in the continent because of corruption, lack of transparency and cost inflation, among other factors. In Uganda, for instance, problems appeared between the government and Chinese telecom companies. Recently, allegations of corruption around contracts with ZTE have been mentioned in Uganda (Malakata, 2011). Last year, Safaricom in Kenya purchased equipments with Huawei but experienced problems getting the entire order delivered. Huawei only supplied half of the equipment promised in the contract. This situation has led to the cancellation of the contract from the Kenyan telecom company (Marshall, 2011). In their operations in Africa, concerns have been raised about ZTE and Huawei because of security issues relating to power and water distribution and the possibility of embedding malware in equipments installed by water and power supply companies. Chinese investments projects in Africa have always been attached to a lack of transparency relative to governments, local companies and populations. For example, Michael Joseph, director of Safaricom in Kenya, made a similar observation in a report about Kenya's efforts to build FONN, a new terrestrial national fiber-optic network. However, the agenda is driven by Chinese companies with "footprints" in Kenya's telecom industry. (*The Globe and Mail*, November 24, 2011). The network will cross many neighboring countries and allow them to benefit from the fiber optic installations.

However, the project was allegedly poorly planned and apparently low assessments regarding the operations were made to allow Chinese companies to acquire huge contracts (Malakata, 2011). With China's political influence and financial support, more opacity surrounds its companies' venture overseas, as is the case for Chinese in-

vestments and aid transparency in Africa (Grimm, 2011). To the detriment of local investors and companies, China is supporting the “political agenda” of African governments. In Kenya, the expansion of the CDMA fixed wireless services managed by Telkom Kenya because of its state-owned status, instead of being declared for public tender, has benefited Huawei (Malakata, 2011). The Kenyan government unilaterally and quietly allocated the project to Huawei. Such practices raised concerns in the telecom sector in many African countries.

The ZTE presents the milestones of its engagement in Africa as the following:

In 1998, ZTE provides Kenya with the industry leading Multiple Client Video Conference System

In 2001, in collaboration with the Office Congolais des Postes et des Telecommunications in DRC, ZTE set up Congo Chine Telecom to provide high quality, low cost mobile and fixed telephone service.

In 2003, ZTE built the largest CDMA (Code Division Multiple Access) communication network in Algeria

In 2004, ZTE realized Africa’s first UMTS (Universal Mobile Telecom System) call in Tunis. The system is based on GSM (Global Systems for Mobile Communications) standard and is a third generation mobile cellular technology

In 2006, ZTE launched Africa’s biggest 3G network in Libya

In 2006, the first African public trunking network based on ZTE’s GoTa (CDMA) based was established in Sudan

In 2007, in Morocco, ZTE established and put into use the biggest African CDMA EV-DO Rev.A which gives lower speed for download and upload

In 2007, in Ghana, based on ZTE’S GoTa trunking system (Solution for public security system), the biggest public security system was put into use.

In 2007, in Zambia ZESCO National Optical Fiber Transmission Backbone Network, the first national information superhighway, was established by ZTE

In 2007, a ZTE training centre was established in Algeria

In 2008, ZTE establishes the first TD-SCDMA (Time Division Synchronous Code Division Multiple Access) network in Ghana

In 2009, ZTE deployed the first CDMA EVDO (Evolution Data Optimized) Rev.B commercial trial network for WANA(Telecom operator) in Morocco. The network allows high-speed internet access.

In 2009, the first African CDMA 2000 3G network based on ZTE's SDR (Software Defined Radio) was operated in Tanzania

In 2010, Cell C launched the First 900MHz HSPA (High Speed Packet Access) +Network in Africa based on ZTE Uni-RAN Solution (innovative solution that ensures smooth evolution and easy Operations and Maintenance without affecting existing services).

Source: ZTE press center (http://www.zte.com.cn/en/press_center/news/)

7. Conclusion

Chinese investments in Africa, which have been invariably related to resources and the extractive industries, are currently changing, and they are more directed to the services sector. The South-South cooperation has changed investments patterns in Africa and other developing economies. The new trend of cooperation has brought emerging economies (China, Brazil, India) to invest in Africa. Chinese investments have been expanding from traditional sectors (oil, mining...) into services (telecommunication, finance and banking). China, following Beijing's "go out" policy to have more overseas foreign investments, is allowing developing economies to benefit from its outward FDI. In this context, the willingness of African governments to liberalize the telecom industry in the 1990s and early 2000 and to achieve economic development has attracted Chinese telecom companies supported by state owned banks, financial institutions, and state agencies to operate in the continent and break the telecom sector's monopoly.

The low cost of telecom equipment and infrastructure, interest in making telecom network accessible to rural and remote areas at affordable prices, cheap mobile handsets for many Africans who cannot afford expensive branded phones and the willingness of African governments to develop their ICT sector in order to achieve economic development have given Chinese telecom companies a positive advantage to enter the African market. Africa has benefited from Chinese telecom investments through telecom network and infrastructure build-

ing, skills transfer, capital and technology acquisition for telecom operators, and technical expertise. Such investments have allowed African countries to bridge the telecommunication divide and modernize the telecom sector. The flow of inward investments, combined with favorable government policies that encourage economic development, has enabled African countries to attain high economic growth rates, so much so that within some short period enterprises in some of these countries have amassed sufficient capital, knowledge, and expertise to invest outside their own countries (Tung and Luo, 2007).

However, although Chinese telecom companies have brought opportunities to Africa, there are specific risks for local telecom operators and ICT vendors relative to competition. Governments' policies relating to Chinese investments in the telecom sector should have critical role. More transparency is needed in allocating tenders to telecom companies operating in Africa. Policies to liberalize the telecom market, which in some countries is still monopolized by state owned companies, should be implemented in order to allow more investments. Chinese investments in the telecom sector should generate more benefits for the local population rather than the governments. Compared to the willingness of African governments to welcome Chinese investments because of Beijing's no strings and non-interference policies, local populations do not always share in the benefits of the Chinese presence. For a better sustainable economic development in Africa, good governance, as measured by populations, is needed to make business and investments succeed.

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