

Who Wins? China Wires Africa: The Cases of Angola and Nigeria

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Abstract

In recent years, Chinese telecommunications companies, with the assistance of Chinese financial institutions and diplomatic backing, have successfully secured contracts to build infrastructure and wire Africa for the 21st century. The practical implications for economic development are important. But also important are the theoretical implications: what, for instance, is the relevance of such South-South linkages for how we think about globalization and the state? Our paper begins by considering China's broader foreign economic policy agenda in Africa. What role does this play in the headway that Chinese telecommunications companies have made across African markets? What does this mean for market players from other countries (both African and non-African)? Importantly, what impact does China's growing presence have on the relationship between state-building and market-building in traditionally weak states across the continent? To answer these questions, we take our study to the sector-level to investigate the growing presence of Chinese telecommunications equipment makers and service providers in Africa's telecommunication markets.

Keywords

China, Africa, Angola, Nigeria, Telecommunications

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I. Introduction

This paper explores the intersection of two important trends in Africa: a telecommunications revolution and the emergence of China as a major economic and political partner. More than 300 million Africans have signed new mobile phone subscriptions since 2000.¹ With increases of over 40 percent per year over the last decade, analysts expect the sector to continue to grow through at least 2020.² At the same time, China has increased its engagement with Africa. In 2000, China’s trade with the continent was less than the US, France, the UK, and even Italy. Today, it is Africa’s largest trading partner.³ China’s infrastructure investments in Africa have also increased significantly over the same period, 46.1 percent per year between 2001 and 2007.⁴ By some estimates, China’s infrastructure commitments in Sub-Saharan Africa have outpaced those of the World Bank since 2005.⁵ Scholars and policy-makers have paid significant attention to China’s search for energy and raw materials in Africa, and the infrastructure-for-resources bargains they have struck with African governments.⁶ Critics of China have suggested that these deals help support some of the worst regimes on the continent (in Sudan and Zimbabwe for instance), undermine the ability of the West to reform governance in Africa, and represent a new attempt to colonize Africa.⁷ Given these general trends and concerns, our central research questions are twofold: What political and economic factors are driving the aggressive entry of Chinese telecommunications in Africa? Does it matter for state-building and market-building in Africa that China and its firms are entering Africa’s telecommunications markets?

The next section of this paper discusses the telecommunications revolution in Africa and briefly introduces the selection logic of our two case study countries—Angola, one of China’s top oil importers, and Nigeria, the largest telecommunications market in Africa. The third section of this paper considers the broader claims that are being made about the role of China in state- and market-building in Africa. The fourth and fifth sections evaluate those claims in Angola and Nigeria. A final section draws together our analysis and conclusions, and provides suggestions for future research. Several key findings emerge from this study. First, we find support for the claim that the pace of the telecommunications revolution in Angola and Nigeria is enhanced by the participation of Chinese firms and the Chinese government’s

¹ McKinsey Global Institute, 2010.

² McKinsey Global Institute, 2010; ITU, 2009

³ IMF *Direction of Trade Statistics* accessed 2011.

⁴ McKinsey Global Institute, 2010, p. 48.

⁵ McKinsey Global Institute, 2010, p. 16.

⁶ A seminal piece of work that marked a turn towards recognizing the role of China in Africa was the Council on Foreign Relations’ 2005 report, *More than Humanitarianism: A Strategic U.S. Approach Toward Africa*.

⁷ Chris Alden has a nice summary of these themes in Chapter 4, “Between Hope and fear: Western reactions to China”, of his book *China in Africa*.

financial support. Second, the telecommunications sector is a strategically important sector for all of the countries involved and it is likely that China would have made many of these infrastructure investments in Angola and Nigeria to help its growing telecommunications industry tap markets abroad, even if those two countries had no resources, although its involvement in Angola would likely have been far less. Third, political leaders in Angola and Nigeria have sought to exploit these infrastructure deals to improve their political position, albeit in different ways, in part due to the different political circumstances that they confront. Fourth, there may be some differentiation in the roles that China's state-owned enterprises (SOEs) and private firms play. In particular, the SOEs tend to be more active in providing sensitive ICT technologies to African governments and militaries and may occasionally be more involved in infrastructure projects that have lower profit margins.

II. The Telecommunications Revolution in Africa

Globally, telecommunications as a sector grew considerably in the last decade. In developed countries, most of this growth has been driven by mobile phones and the use of (fixed and mobile) broadband to access the Internet. Fixed telephone lines use have actually declined. Set against that backdrop, Africa's very similar trends may not seem so remarkable. However, there are some important differences. Africa's starting position is remarkably different and the pace of change has been more rapid, on average, than in most of the rest of the world. In one of our case study countries, Angola, less than 1 percent of the population had either mobile or fixed telephone access in 2000. Ten years later more than 45 percent of the population has mobile phones.⁸ This type of change mirrors what much of the rest of the continent has experienced. Between 2003 and 2008, the compound annual growth rate for mobile cellular subscriptions in Africa was 47 percent; for the rest of the world it was 23 percent.⁹ Charts in Appendix 1 illustrate these trends. It is worth noting that there is room for continued growth on the continent.¹⁰

In many respects, this is a technology perfectly suited for infrastructure-poor Africa. Not only does it require less capital to connect individuals and businesses, but it also seems to require less of a country's political institutions. As Andonova and Diaz-Serrano demonstrate, the lower financial risks in cellular telephony make it easier for investors to ignore the political risks of investing in weak or even failing states.¹¹ Importantly, telecommunications is fundamentally about the flow of information. Changes in the flow of information can lead to new classes of political and economic winners and losers.

⁸ ITU, "World Telecommunications/ICT Indicators Database", Accessed September 2011.

⁹ ITU, 2009.

¹⁰ Williams et al., 2011.

¹¹ Andonova & Diaz-Serrano, 2009.

An entirely new class of literature has opened up in development circles on the ways cell phones are tools for development. Jenny Aker and Isaac Mbiti do a wonderful job identifying potential winners in Africa:

Mobile telephony has brought new possibilities to the continent. Across urban-rural and rich-poor divides, mobile phones connect individuals to individuals, information, markets, and services. In Mali, residents of Timbuktu can call relatives living in the capital city of Bamako—or relatives in France. In Ghana, farmers in Tamale are able to send a text message to learn corn and tomato prices in Accra, over 400 kilometers away. In Niger, day laborers are able to call acquaintances in Benin to find out about job opportunities without making the US\$40 trip. In Malawi, those affected by HIV and AIDS can receive text messages daily, reminding them to take their medicines on schedule. Citizens in countries as diverse as Kenya, Nigeria, and Mozambique are able to report violent confrontations via text message to a centralized server that is viewable, in real time, by the entire world.¹²

That last item in the above quote underscores the fact that, politically, the development of telecommunications contains both potential risks and rewards for African governments. The rewards are clear. Solid communications infrastructure is a prerequisite to modern development and there are increasing demands on the part of individuals and firms across the African continent to have access to such infrastructure. Providing this good can be a political “win” for governments. It may be a factor in electoral politics (something we see in Nigeria) as well as a form of patronage (Angola). In this respect, although market liberalization has aided China’s entry in African telecommunications, the impact of Chinese entry questions whether economic pluralization is necessarily always good for democratic consolidation.

However, unintended consequences are easy to identify. Recent events in North Africa demonstrate that telecommunications infrastructure can be an important tool for civil society and for opposition political groups. Many authoritarian regimes—Iran, Egypt under Mubarak, China, North Korea—have censored and monitored the flow of information between their citizens and the outside world, and among their citizens, precisely in the hope of controlling those potential opposing political forces. It is clear that the revolution in telecommunications in Africa is significant regardless of China’s involvement. It is also likely, given global trends, many of the developments we have seen in Africa would have occurred regardless of China’s presence. Our concern is whether China and its firms are affecting their shape or trajectory and what the Chinese are gaining from their participation in African telecommunications.

Angola and Nigeria

We chose to evaluate our claims with respect to China’s interactions in two countries: Angola and Nigeria. Table 1 (below) provides some of the key background statistics on these two countries. Both are well-known as major oil exporters; they have seen significant economic growth over the last decade,

¹² Aker et al., 2010, p. 207.

including dramatic growth in their telecommunications sector; and they have seen similar levels of investment in these sectors relative to their populations. There are important similarities in terms of governance as well. One of the more significant trends in global telecommunications over the last two decades is regulatory reform, especially liberalization (and occasionally privatization). Waverman and Koutroumpis, noting this trend, have attempted to create a Telecommunications Regulatory Governance Index (TRGI).¹³ Unsurprisingly, African states rank relatively low on the TRGI. However, the authors note something unique about Africa. African countries are more likely than countries in any other region to have higher relative standards for regulatory governance in telecommunications than they do for general governance. This includes both Nigeria and Angola which perform well on the TRGI by African standards, with index score of .4 and .46, respectively, but whose levels of political transparency are far below global averages.¹⁴

However, there are also some important differences between Angola and Nigeria. One of the more striking differences involves oil. Angola is more dependent on oil than Nigeria is.¹⁵ Oil is a slightly smaller percentage of Nigeria's GDP and, as shown in Table 3, has contributed less to Nigeria's GDP growth than it has for Angola. Also, for our purposes it is highly significant that China is not importing a significant portion of Nigeria's oil. Angola, on the other hand, counts China as its most important oil partner. Indeed, both China and Angola are sensitive to any changes in their relationship with each other as Angola has emerged to share the spot of top source for China's oil imports with Saudi Arabia.¹⁶ From the perspective of China's telecommunications firms it likely matters that Nigeria is Africa's largest telecommunications market.¹⁷ Nigeria also appears to have a policy and market environment that is more favorable to competition. Angola has been slower to privatize and liberalize its telecommunications sector (see Table 2) and it lacks private mobile operators. Finally, one of the most significant differences for our purposes is that Angola may have provided a level playing field for China, which allowed China to gain not only markets but also explicit commitments to resources. When China began to focus its economic energies on Africa in the late 1990s and early 2000s, Angola was emerging from a civil war and new opportunities for foreign investors in all sectors of its economy presented themselves. In contrast, when

¹³ Waverman & Koutroumpis, 2011. Their index considers five general components: regulatory transparency, independence, resource availability, enforcement on licensees, and per capita income

¹⁴ There may be good reasons for prioritizing this sector for governance reform. Mohammed and Strobl note that telecommunications often involves long-term investments that "carry the risk of expropriation and of having investments taken hostage in terms of the government's ability to force utilities to charge unprofitable rates for their services" (Mohammed & Strobl, 2011, p. 93). Indeed, they find some evidence that improvements in regulatory governance can encourage private investment and growth of the telecommunications sector.

¹⁵ According to the U.S. State Department, "Crude oil accounted for roughly 50% of GDP, 95% of exports, and 72% of government revenues in 2010". (<http://www.state.gov/r/pa/ei/bgn/6619.htm#econ>).

¹⁶ US Energy Information Administration, "China", 2011.

¹⁷ Williams et al., 2011, p. 3.

China entered the Nigerian telecommunications market, it confronted competition from other foreign players, including those from Europe, India, and South Africa. As a result, the types of deals China makes with Nigeria are different from the ones witnessed in Angola. China’s engagement in Nigeria focused less on infrastructure-for-resources; rather, Chinese players secured market entry and foothold and Nigerian political leaders maximized electoral benefits with promises of infrastructural development (with a major boost from China).

Table 1: Background Statistics on Angola and Nigeria

		Angola	Nigeria
General	Population ^a	19 million	158.4 million
	GDP (current \$US) ^a	\$84.4 billion	\$193.7 billion
	GDP per capita (current \$US) ^a	\$4,423	\$1,222
	Oil Exports (barrels/day) ^h	1.6 million	2.4 million
	Oil, % of GDP	50%	40%
	External Debt (current \$US) ^a	\$14.2 billion	\$5.9 billion
Telecommunications	Number of Mobile Cellular Subscriptions (2010) ^b	8.9 million	87.3 million
	Number of Mobile Cellular Subscriptions (2000) ^b	25 thousand	30 thousand
	Internet Users (2010; % of total population) ^b	10%	28.5%
	Mobile Network Coverage, Urban Areas ^j	78%	100%
	Mobile Network Coverage, Rural Areas ^j	2%	51%
	Number of Mobile Operators (2009) ^c	2	5
	Herfindahl-Hirschman Index ^c	5,638	3,527
	Investment in Telecom Infrastructure, 1998 – 2008 ^c	\$1.1 billion (0.4% of GDP)	\$12.7 billion (1.3% of GDP)
	Investment in Telecoms with Private Participation (current \$US) ^a	\$354 million	\$3 billion
Governance	Polity IV score	-2 (anocracy)	4 (anocracy)
	Regulatory Quality (2010; Percentile Rank) ^d	17.2	23
	Rule of Law (2010; Percentile Rank) ^d	9.0	10.9
	Control of Corruption (2010; Percentile Rank) ^d	3.8	15.8
	Telecommunications Regulatory Governance Index (Score (Global Rank)) ^e	0.46 (45)	0.4 (78)
China Relations	Exports to China, 2010 (China’s rank) ^f	\$20.7 billion (1)	\$971 million (15)
	Imports from China, 2010 (China’s rank) ^f	\$2.2 billion (2)	\$7.3 billion (1)
	Oil Exports to China, 2010 (% of total) ^h	45%	<1%
	China FDI Flows, 2010 ⁱ	US\$ 101 million	US\$185 million

Sources: ^aWorld Bank Data; ^bITU; ^cWilliams et al., 2001; ^dWorld Bank Worldwide Governance Indicators; Policy IV; ^eWaverman et al. 2011; ^fIMF *Direction of Trade Statistics*; ^gWorld Bank *World Integrated Trade Solution Database*; ^hUS Energy Information Administration; ⁱChina Ministry of Commerce; ^jWilliams et al. 2011.

Table 2: Competition Policy in Angola and Nigeria

Country	Local services	Domestic fixed long dist	Inter-national fixed long dist	Wireless local loop	Data	DSL	Cable modem	VSAT	Leased lines	Fixed Wireless Broadband	Mobile	Fixed sat	Mobile sat	GMPCS	IMT 2000	Internet services	Inter-national gateways
Angola(1)	C	C	C	M	C	C	M	..	C	M	C	M	C	..	C	C	M
Nigeria	C	C	C	C	C	C	..	C	C	C	C	C	C	C	C	C	C

(1) pre-2009 data

Note: This table reflects what is legally permissible; therefore it may not reflect the actual number of operators in the market.

M - Monopoly; P - Partial competition; C - Full competition; ... - Not available

Source: ITU World Telecommunication Regulatory Database

Table 3: Real GDP growth by industry sector, 2002 – 2007, % of total

Country	Resources	Agriculture	Manufacturing	Services
Angola	86	8	1	5
Nigeria	35	27	1	37

Source: McKinsey Global Institute, 2010, p.31.

III. China in Africa

China has become a major player both in global telecommunications and in terms of its more general economic linkages to Africa. While almost all Chinese firms are considered to receive varying degrees of state support, some Chinese firms are official State-Owned Enterprises (SOEs) while others are classified as private. Huawei (private) is by some measures China's largest telecommunications firm and has been involved in projects in 40 different African countries, with major involvement in at least 16 countries.¹⁸ Zhong Xing Telecommunication Equipment Company Limited (ZTE) is a SOE and has offices in at least 26 African countries. Both ZTE and Huawei are involved in major infrastructure development (laying fiber optic cables, for instance) as well as producers of consumer products such as handsets. A third Chinese firm, Alcatel Shanghai Bell (ASB) is a unique partnership between the Shanghai government and a foreign company (Alcatel Lucent), and is primarily involved in infrastructure development. China Mobile and China Unicom are both major wireless operators in China that are reported attempting to break into Africa's markets. Why is China in Africa? Why are its telecommunications firms so engaged in building infrastructure, selling handsets, and selling services on a

¹⁸ See: <http://www.huawei.com/africa/en/catalog.do?id=521>. Corkin (2011, p. 10) states that Huawei was the biggest Chinese overseas contractor in 2009 in terms of total overseas turnover.

continent with the highest poverty rates in the world? What differentiates China’s engagement in telecommunications from the activities of other countries (and their firms)?

Reasons for Engagement

The current literature tells us that China covets Africa’s resources, desires to open up markets for its exports, wishes to gain support for its “one China” policy, and is looking for partners in key international institutions. As with the rest of Africa, trade with both Angola and Nigeria has increased rapidly over the last decade (see Table 4). But while the conventional argument about China, that it is scrambling for Africa’s resources, might appear to hold true in the case of Angola, it does not seem to hold true with Nigeria, which is actually importing far more from China than it exports to China. Would China and its firms be involved in Africa’s telecommunications infrastructure if there were no oil or mineral resources? At the level of the continent, the answer is a tentative yes, with Nigeria as an important example. There is both a supply-side and a demand-side logic to this. Many African states desire development of their telecommunications infrastructure, but a solid telecommunications infrastructure also facilitates resource extraction. China clearly is eager to expand the business opportunities for its firms. As Huawei’s experiences demonstrate, the growth of Chinese firms can greatly benefit from exploiting their expertise in development-appropriate technologies in these parts of the world. This is an opportunity to grow a business without the additional challenge of breaking into more developed and tightly controlled Western markets. The good will that the increasing economic exchange provides, also improves China’s standing in the world. As observers of global politics have noted, many African countries find it easy to side with China on contentious issues that they may otherwise have ignored.¹⁹

Table 4: Angola and Nigeria’s Trade with China (IMF *Direction of Trade Statistics*)

Angola	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Exports	656.21	988.23	2004.50	4288.78	5982.44	9937.16	11713.3	20336.4	13327.8	20736.2
							6	4	5	9
Imports	50.48	67.43	160.34	212.68	410.15	983.81	1364.69	3223.88	2623.84	2204.08
Total:	706.69	1055.66	2164.84	4501.46	6392.59	10920.9	13078.0	23560.3	15951.6	22940.3
						7	5	2	9	7
Nigeria										
Exports	127.007	73.083	123.463	420.524	479.147	252.502	488.627	463.562	816.568	971.333
Imports	526.790	739.256	1067.28	1891.20	2535.80	3141.23	4180.21	7433.94	6025.33	7364.04
			6	0	1	8	1	5	6	5
Total:	653.797	812.339	1190.74	2311.72	3014.94	3393.74	4668.83	7897.50	6841.90	8335.37
			9	4	8		8	7	4	8

Finally, some have argued that China may be interested in entering these markets to pursue more sensitive security interests. One set of analysts has argued that China may be concentrating on coastal

¹⁹ Tull 2006.

states in Africa because they “strategically straddle... strategic choke-points—known in military parlance as sea lanes of communications (SLOCs)” which would help China track shipping in a time of war.²⁰ Some governments are concerned about the security implications of doing business with China’s telecommunications firms. The Australian Security Intelligence Organization, the Indian Government and the United States’ Open Source Center have all issued reports alleging ties between Huawei and China’s civilian and military intelligence.²¹ They cite concerns about the potential of the Chinese government to utilize these firms in their intelligence gathering activities. US senators, concerned with those ties, have used their influence to block Huawei from purchasing American companies like 3Com.²² Huawei, for its part, denies such claims and has made efforts in the past year to increase transparency.²³ These concerns do not seem to be expressed by African leaders and commentators.

Modes of Engagement

Is the participation of China and its firms in Africa’s telecommunications sector different from that of other countries and their firms? It appears that the answer to this question is a tentative yes for several reasons. First, the Chinese government has played a key role in enabling its firms to do business into Africa by reducing the risk. This is evident in the complementary roles played by Chinese participants in telecommunications projects.²⁴ One is financing, which involves the diplomatic involvement of the Chinese government. Chinese government investors, such as policy banks and the PRC Ministry of Commerce (MOFCOMM), and Chinese telecommunications equipment makers and service providers, together with African counterparts negotiate conventional concessional financing for infrastructure projects. In many cases—where financial guarantees are largely unavailable—natural resource supplies are exchanged for infrastructure. This is the so-called Angola Mode of investment.²⁵ The other role is infrastructure implementation, and includes MOFCOMM and a broader range of Chinese contractors, working with African partners.

Second, for both Angola and Nigeria, it matters that Chinese firms are present because they deliver what they promise: telecommunications technologies that are more appropriate and affordable for

²⁰ Executive Research Associates, 2009, p.53.

²¹ Fitsanakis, Joseph. “US report links telecoms company to Chinese spy service.” *Intelligence News*. Available online at: <http://intelligencenews.wordpress.com/2011/10/14/01-845/>. See also: US-China Economic and Security Review Commission Staff Report.

²² Einhorn, Bruce. “Huawei’s 3ComDeal Flops.” *Bloomberg Businessweek*. 21 February 2008. Available at: http://www.businessweek.com/blogs/eyeonasia/archives/2008/02/huaweis_3com_de.html.

²³ See, for instance: Kirchgassner, Stephanie. “Huawei goes on attack against US restrictions.” *Financial Times*. 16 October 2011.

²⁴ Chen, 2010.

²⁵ Chen, 2010, 13.

the developing world than what the West delivers. This means that more African consumers have cell phones than would otherwise have them, both because of extended coverage and cheaper handsets. This likely matters more for Angola—which started from a low base position—than it does for Nigeria, which due to its market size would have likely attracted foreign investment regardless. For Nigerian firms, “China” likely matters because it is having an impact on their competitive position. For the same reasons China’s presence is good news, it is likely bad news for these firms. Globally, the competitive nature of Chinese firms has sparked controversy. In Europe, concerns have been raised about whether China is subsidizing its telecommunications industry, and in particular, ZTE and Huawei.²⁶

Both the reasons for China’s engagement in telecommunications *and* its mode of engagement set it apart from Africa’s traditional Western partners. The implications of this are now explored further in our two case studies of Angola and Nigeria.

IV. Angola Case Study

It is difficult to miss how quickly China became an important economic partner to Angola. In 2001, total trade amounted to approximately US\$700 million. Just two years later it had more than doubled to more than US\$2 billion. And in 2010, total trade was 32 times as great at almost US\$23 billion, making China Angola’s biggest trading partner (see Table 4, above). Most of this trade can be accounted for by petroleum, and in some recent years Angola has risen to be the number one foreign source of petroleum for China.²⁷ This has put China and its petroleum companies in direct competition with Western interests in the region. But it was China’s growing financial ties to Angola that grabbed the attention of the foreign policy establishment in the United States. China rapidly increased the aid and financial credit it provided Angola over the past decade. A story began to circulate about how Angola, desperate for cash but unwilling to make the governance reforms demanded by Western creditors such as the World Bank, ran into the illiberal arms of China. China’s eye-catching US\$2 billion line of credit to Angola, some observers began to fear, was not just competing with the economic influence of the West but also undermining the West’s attempts to improve political and economic conditions in Africa. There

²⁶ “EU Finds China Gives Aid to Huawei, ZTE.” *Wall Street Journal*. 3 February 2011. Available online at: <http://online.wsj.com/article/SB10001424052748703960804576120012288591074.html>. Hsueh (2011a) contends that the Chinese government has regulated Chinese telecommunications with “deliberate reinforcement,” a dominant pattern of government-business relations in strategic industries that combines liberal and nonliberal governance mechanisms to increase the national technology base, achieve industrial development, and retain internal political stability.

²⁷ US Energy Information Administration, “China”, 2011.

are a number of problems with how this story is told, better recounted elsewhere.²⁸ For instance, aid and credit from the West was still being made available to China in similar amounts and it is unclear whether conditional aid actually has its intended impacts on governance reform in countries. Some say China's method of aid delivery even reduces opportunities for corruption.²⁹ Nevertheless, Angola began to take on symbolic significance for the West: China is not just competing for oil, but also for influence. A closer examination of Angola-China relations in the telecommunications sector reveals a more nuanced story, one which recognizes the agency of both China and Angola—and their firms—in structuring recent investment and trade deals.

The next section provides an overview of the telecommunications sector in Angola, including the government's interests. The third section considers the specific activities of China and its firms. A final section concludes.

Angola's Telecommunications Sector

As recounted earlier, in a relatively short period of time nearly half of Angolans have obtained their first phones. Such dramatic changes are directly tied to the recent political history of the country. The key recent turning point for both sector and country was the end of a civil war that had started in 1975. The *Movimento Popular de Libertação de Angola* (MPLA) and its leader, President Dos Santos, was the *de jure* government since at least the late 1990s but attempts at building the Angolan economy were sidelined by the on-going war.³⁰ For almost the entire civil war, telecommunications were run by the state, which meant that the MPLA was in charge. Under the rule of the MPLA there were a few periods of re-organization which included the consolidation of international and domestic services and the separate of telecommunications from postal services. From 1992 until April 2001, Angola Telecom had a monopoly in the sector.³¹ But in 2001, Angola followed much of the rest of the continent of Africa and adopted regulations liberalizing that sector. Those attempts at liberalizations were helped along when the war officially came to a close in 2002, following the death of opposition leader Jonas Savimbi. The government could now focus more of its efforts on reconstruction, and it began to attract foreign investors.

State-owned Angola Telecom remains one of the most significant players in Angola and today has a number of subsidiaries, including Movitel and Multitel. However, following liberalization the new entries into the market included other state-owned firms as well as private firms. Mundo Startel Telecom, for instance, is a subsidiary of the state-owned petroleum company, Sonangol Group. According to the

²⁸ Brautigam, 2009.

²⁹ Orr & Kennedy, 2008.

³⁰ Soares de Oliveira, 2011, p. 291.

³¹ Southwood, 2008, p. 7.

Angolan National Institute of Telecommunications (INACOM, Angola's primary regulator), there are currently five fixed-line operators: Angola Telecom (state-owned), Mercury, Nexus, Mundo Startel (owned by Sonangol), and Wezacom. There are two mobile service providers: Movitel (partly privatized) and Unitel (owned by Sonangol). Internet service is either provided by Multitel (Angola Telecom) or a number of much smaller private ISPs.³² As suggested above, it can be difficult to determine where the "state" ends and the "private" begins. Furthermore, as Southwood notes, Unitel even counts among its shareholders the President's daughter.³³

In Angola's approach to the telecommunications sector, it is difficult not to find evidence of what Ricardo Soares de Oliveira is calling "illiberal peacebuilding"..³⁴ Soares de Oliveira developed this concept to recognize that post-war peace-building in Angola differs from the model that we frequently see in other parts of Africa given the far lower levels of involvement from major international organizations. Peace-building in Angola, he argues, is driven by local elites without regard to the norms the international community has sought to develop in places such as Sierra Leone, Mozambique and Liberia. He suggests that we can see this in the country's reconstruction efforts. First, there is rent-seeking by elites who are connected to the President. Indeed, Angola Telecom has been called a "family concern" of the President's.³⁵ Sonangol is also often referred to as being "under presidential control".³⁶ This sector also plays an important role in the modernist agenda that President Dos Santos and others in his ruling clique appear to have. As Soares de Oliveira and a host of other observers have noted, Angola's development mission appears to be focused on the meeting the needs of the elite, of foreign firms, and of a new "national bourgeoisie", rather than the poor.³⁷ This also would seem to best describe the prioritization of geographic areas for building telecommunications infrastructure in Angola: cities and locations near important resources. One thing that is unclear in considering Angola's approach to telecommunications, is the extent to which there is a concerted effort to make its own firms competitive. This differs from the petroleum sector where some observers speak of a "Luanda-Beijing" axis, where cooperation in that sector is being used as a springboard to develop investments in Guinea and other places in Africa.³⁸

³² This is all according to their website.

³³ Southwood, 2008, p. 11.

³⁴ Soares de Oliveira, 2011.

³⁵ Legat, John. (November 20, 2006). "Are we living next door to the new Kuwait?" *Business Day (South Africa)*.

³⁶ Legat, John. (November 20, 2006). "Are we living next door to the new Kuwait?" *Business Day (South Africa)*.

³⁷ Soares de Oliveira, 2011, pp. 296-7.

³⁸ See, for instance: Power, 2011..

China in Angola

It was not obvious that China would become a major economic partner for Angola when its civil war ended. During much of Angola's civil war, China supported the FNLA and UNITA, the two groups that ultimately lost.³⁹ In 1983 China opened diplomatic relations with the Angolan government (MPLA) and in 1988 they created a Joint Economic and Trade Commission.⁴⁰ However, it would take another 10 years before the two countries would actively court each other. In 1998 President Dos Santo visited China and in 1999 their commission finally met for the first time. From that point, it was clear that Angola was interested in receiving China's assistance in rebuilding the country's infrastructure, including its telecommunications sector. In 2000 Jose Lourenco, the secretary-general of the MPLA, visited China and noted:

economics is the cornerstone of relations between the two countries. During our eight-day tour of four provinces, we visited a number of important companies, notably a high tech telecommunications enterprise in the city of (?Changchun). This company is involved in Angola's mobile telephone system, working through our ministry of telecommunications and private enterprises.⁴¹

When one reads through official statements and announcements made throughout the 2000s, only three sectors are referred to on a regular basis as important to the relations between Angola and China: oil, construction, and telecommunications. In 2002 and 2003, even before the famous large-scale Chinese loans, China was providing financing for rebuilding Angola's telecommunications sector. The first deals included funding for Alcatel Shanghai Bell and ZTE to begin laying down fibre optic cables. In 2004, the first year when China agreed to extend multi-billion dollar credit to Angola, Huawei was included. The Angolan Finance Minister reported that 13% of that initial credit was used for telecommunications.⁴² Since that first major deal, every deal between Angola and China has provided for further development of telecommunications infrastructure. Each of those deals, in turn, has been backed by credit based on access to Angola's oil. Indeed, for China, Angola appeared as a new market opportunity near the beginning of its search for external energy supplies as it was only in the early 1990s that Chinese consumption exceeded its domestic production.⁴³ However, telecommunications infrastructure is not just a "swap". Creating such infrastructure facilitates China's access to the oil and other resources (China is involved in a number of

³⁹ Ferreira, 2008, p. 297. Remnants of that war continue to haunt China. Chinese-made PMN-2 mines, buried throughout the Angolan countryside during the civil war, are now a threat to Chinese and Angolan workers. *Newsweek* reported that in 2007 a Chinese laborer for Huawei was killed while digging a trench for fiber-optic cables in just this way. (Johnson, Scott. (December 3 2007). "China's African Misadventures." *Newsweek*).

⁴⁰ Ferreira, 2008, p. 297.

⁴¹ BBC. (June 10 2000). MPLA secretary-general discusses economic ties on visit to China. *BBC Monitoring Service: Africa*.

⁴² Angola Press Agency. (April 11, 2008). "Energy Takes Much of China Loan." *All Africa*.

⁴³ U.S. Energy Information Administration, 2011.

mining operations). As Canadian-Chinese businessman Edmond Yao noted, "infrastructure problems" often have to be resolved in order for investments in other sectors to move forward.⁴⁴

This was not just an opportunity to meet China's energy needs. Chinese telecommunications companies, Alcatel Shanghai Bell, Huawei, and ZTE, had just started to establish their global brands. These firms have slightly different interests than their government sponsors and their varying relationships with the Chinese government also impact the roles they play in some of the infrastructure deals the Chinese government made with Angola. ZTE is state-owned and Alcatel Shanghai Bell includes a major interest on the part of the Chinese state (it is part China-owned, part foreign owned). It is significant to note that most, of the major telecommunications infrastructure deals that the Chinese government has supported via its credit facilitated, state-owned ZTE or Alcatel Shanghai Bell have been the first firms (usually ZTE). This can have important consequences for the firms. In the DRC, for instance, Gregory Mthembu-Salter has noticed that in some ways ZTE was burdened by the political-motivated obligations the resources-for-infrastructure agreements China makes include. Huawei, which arrived in the DRC four years after ZTE was much "freer".⁴⁵ In Angola as well, it seems ZTE is doing a lot of the heavy lifting. News accounts report that ZTE has been responsible for providing fixed line construction, constructing a mobile phone factory, and providing training for Angolan workers. They are also involved in the most politically and strategically sensitive part of that sector: military telecommunications. In 2008, ZTE was chosen to head operations of Movitel.⁴⁶ This echoes what Kaplinsky and Morris find at a general level for China's SOEs across all sectors: "Central government SOEs tend to operate under formal state-to-state agreements and hence are expected to take the government's strategic objectives into consideration".⁴⁷ However, ZTE clearly gains from these partnerships; this is not a simple act of obedience to the Chinese state. Angola and other African countries also serve as sites for innovation and testing. In 2005, ZTE deployed their first Africa commercial WiMAX network in Angola, for instance.⁴⁸ They reportedly have tested their new LTE technology there as well.

Huawei is the other major Chinese player in Angola. It is one of the largest telecommunications firms in the world and one of the most innovative, filing more patents than any other telecommunications firms in some recent years. The timing of market entry into Angola fit in well with the "take off" of

⁴⁴ Paxton, Robin. (October 28, 2004). "China investor develops African copper mines." *Reuters News*.

⁴⁵ Mthembu-Salter, 2010, p. 14.

⁴⁶ Macauhub. "Angola: China's ZTE takes on operational management of Movitel." 30 October 2008. Available at: <http://www.macauhub.com.mo/en/2008/10/30/5992/>. This occurred just prior to splitting ownership of Movitel among new partners. The government still retains a stake but so too do two important Angolan generals.

⁴⁷ Kaplinsky and Morris, 2010, p. 2.

⁴⁸ Executive Research Associates, 2009, p. 64.

Huawei's own internationalization strategy, which Yutaka Nakai and Yoshitoshi Tanaka have called a "Sideward-Crawl Crab Strategy". Rather than attempt to compete in developed country markets, as some Chinese firms such as Lenovo have done, Huawei seems to have concentrated its efforts on developing countries with similar or lower standards of living to that of China.⁴⁹ They go on to suggest that Huawei has done three things that rivals failed to do: compete on price, trained and employed local workers, and use power-saving equipment that is more appropriate to the needs of Africans.⁵⁰ However, that is not the end of the story for Huawei. Huawei also supports a strong culture of innovation. Nakai and Tanaka, Zhang, and others all agree that key to Huawei's recent success has been its active patent filing. Their patents have primarily been focused on technologies that improve the affordability and effectiveness of telecommunications in developing countries. In Africa, cost is still a significant factor. However, in Angola it is even more so than in the rest of the continent, according to a recent World Bank Report.⁵¹

China makes a difference in Angola, and Angola makes a difference for China

The current phase of Chinese engagement with Angola began at a unique moment for both countries. Angola needed development assistance and had oil at just the time when China realized it needed oil and could provide development assistance. But would anything be different for Angola or China had China's telecommunication firms stayed out of Angola?

The first striking feature of their interaction is the context: a post-conflict country that provided almost a blank slate for both governments. While foreign firms were already present in a number of sectors in Angola, their role had been muted by the long civil war. With so many new opportunities for growth across both resource and infrastructure sectors, China faced a very different competitive environment than it did, say, in Nigeria (see below) where Western firms were far more entrenched in the sectors of the economy that were of interest (especially oil). Because China could access Angola's oil, it was able to institute its "Angola Model" swap of infrastructure for resources. This leads to the second characteristic of their interaction, which is that China's involvement enhanced the telecommunications growth in the sector. Its willingness and ability to make the swap for resources meant that it was able to commit more resources, earlier, to develop telecommunications infrastructure in Angola. The timing of the first deals with Alcatel Shanghai Bell and ZTE in the early 2000s (see Appendix 2) coincide with a period when Western investors were still wary of Angola, considering it too high of a risk.

Third, it is clear this is a strategically important sector for both China and Angola. For both countries, the state is a major driving force in creating commercial opportunities for firms; market forces

⁴⁹ Nakai & Tanaka, 2010, p. 1.

⁵⁰ Nakai & Tanaka, 2010, p. 652.

⁵¹ Williams et al., 2011.

are secondary. For both countries, state-owned (or partially-owned) enterprises are a major part of the business environment. After that, the strategic similarities end. China is using telecommunications as part of a larger infrastructure package that secures access to Angolan oil, and to support the development of its major telecommunications firms. Lucy Corkin has argued that many of its firms, especially the SOEs, are actually risk adverse and would not get involved in countries like Angola were it not for the support of China's government.⁵² However, she also notes that African countries serve as a useful "practicing ground" for Chinese firms that are trying to become competitive globally.⁵³

The strategic objectives for Angola and its government are different. As Maundeni notes, Angola is a developmental state that in the 2000s, following devastating civil war, finally began to realize its need for infrastructural power.⁵⁴ To develop its economy and to attract new business partners, telecommunications would be needed. Arguably, the deals with China are focused on resources and on the components of infrastructure that facilitate access to those resources; developments in telecommunications could be seen as supporting the needs of an extractive enclave economy and not the Angolan people, most of whom are still primarily engaged in agricultural production. Indeed, most rural areas are still relatively neglected by the major infrastructure developments of the past decade. As Table 1 shows, Angola has just 2% cellular phone coverage in rural areas. It seems clear that China facilitates the illiberal model of state-building that Angola has embarked on. But we have to be wary of overstating the case. There are no signs, for instance, that Angola has become less democratic or more corrupt with China's involvement. In fact, the opposite may be the case (see the indicators of governance in Table 1).

Fourth, seen within a broader web of growing economic and political linkages, it is clear that China's participation in Angola's telecommunications sector contributes to China's attempt to gain influence in the region. In the case of Angola, it is useful to note that this includes numerous visits of China's heads of state and top political officials, participation in the Forum on China-Africa Cooperation, and participation in a Forum for Economic and Trade Cooperation between China and Portuguese-speaking Countries.

Finally, it worth adding a note of caution about the role of China in Angola. China is one of many business partners in Angola and in terms of overall investment dollars, it is still not the most significant. Not only does China face severe competition from traditional Western interests, but Brazil and Russia have also been courting Angola. In the case of Russia, there has also been assistance in providing satellite telecommunications services. Also, there are still challenges to the overall relationship between China and

⁵² Corkin, 2011, p. 32.

⁵³ Corkin, 2007, p. 318.

⁵⁴ Maundeni 2010.

Angola. Angolan workers have complained about their treatment. According to *Newsweek*, state-owned Chinese companies, such as ZTE, prohibit fraternization between their employees and Angolans. *Newsweek* also reported on how unhappy Angolan workers are:

At one Chinese-run construction site NEWSWEEK visited, hungry workers begged for food, saying their Chinese bosses never fed them. (The bosses say that's not their responsibility.) Angolans laying fiber-optic cable for Huawei near Benguela say they must dig 16 feet a day, or else they won't be paid their \$5 daily wage. They claim their Chinese bosses only use one Portuguese word, *cavar*, which is repeated again and again: dig, dig.⁵⁵

More stories can be found in the news media of low-quality construction of hospitals and airports by Chinese firms in Angola. So far, concerns about quality in the area of telecommunications have not surfaced. Huawei and ZTE are known for having products of quality that can compete with any other major global firms. But the overall reputation of "Brand China" could suffer.

What sets China apart is the overall strength of the economic relationship with Angola. Both are sensitive to a change. China has come to rely on Angolan oil to a certain extent and Angola would appear to have benefitted greatly from China's development assistance. This case reminds us that China's strategy is not entirely monolithic. While the general "Angola model" of swapping infrastructure for oil is clearly defined, we see that Chinese firms are also making good use of these swaps to develop their own business strategies. What Nakai and Tanaka identify to be a sideward-crawl crab strategy may also be identified as a piggy-backing strategy. Building a global brand is much easier when your government is opening the door in so many places at once

V. China Wires Nigeria: Implications for Power and Money

Nigeria's contemporary relationship with the People's Republic of China dates back four decades. The two countries resumed diplomatic relations in February 1971, ahead of Richard Nixon's visit to China and the normalization of U.S.-China relations. Between the early 1970s and the turn of the 21st century, economic and political relations centered on oil and commodities, including textiles and clothing. China imported oil from Nigeria, through agreements to supply crude, licenses to drill, and equity stakes in Nigerian oil and gas fields, and Nigeria imported textiles and other consumer goods from China, which competed with domestically produced goods. Importantly, Nigeria's transition to democracy in the 2000s witnessed intensified Chinese involvement in Nigeria's internal economic and political developments. Developments in the telecommunications industry exemplify how Chinese companies' increasing participation in Nigerian markets, backed by Chinese government diplomacy and finance, have influenced the political and economic landscape of this oil producing country.

⁵⁵ Johnson, Scott. (December 3, 2007). "China's African Misadventures." *Newsweek*.

Background: political and economic relations

The 1999 democratic elections, after decades of military rule, which led to the Olusegun Obasanjo's second presidency, is often characterized as marking the beginning of the contemporary tenor of China-Nigerian relations, where economic relations expanded to other sectors of the economy, as Chinese equipment and infrastructural companies nurtured under China's brand of developmentalism began to invest abroad with government assistance.⁵⁶ Chinese participation in Nigerian markets actually began earlier in the decade as "high expectations of China's participation in Nigeria's economic transformation predated the Obasanjo presidency"⁵⁷ China and Nigeria drew closer in 1995 with the onset of Western sanctions, imposed following the execution of Ken Saro-Wiwa and his eight Ogoni environmental and human rights' activists in the Niger Delta. A series of bilateral investment agreements, including the rehabilitation of Nigeria's railway through the supply of trains by the China Civil Engineering Construction Corporation, and cooperation in the oil, steel, and electric power industries, followed China's preaching of the importance of state sovereignty and noninterference. Some analysts find that in spite of China's preaching, Chinese national oil companies emulated Western counterparts as they controlled oil-producing areas.⁵⁸

Began under government of the late General Sani Abacha, intensified relations continued and flourished under the Obasanjo government, which allowed China to hold the "purse strings" to enhance the chances of "more efficient delivery, rather than entrusting the disbursement of funds to Nigerian government functionaries."⁵⁹ It was also during the Obasanjo administration, when in 2003, Nigeria purchased fifteen f-7NI multi-role combat trainer aircrafts and in 2006, coastguard/ patrol boats for use by the Nigerian Navy from China.⁶⁰

As one of three most populous countries in Africa, Nigeria presented market opportunities for Chinese companies now that they have grown of age. High-level political dialogue and ready financing from Chinese state-owned banks facilitated Chinese investment, especially Chinese companies entering into capital intensive sectors with heavy state regulation, including telecommunications.⁶¹ In 2006, Chinese president Hu Jintao issued a white paper on China's relations with Africa, which addressed

⁵⁶ See Hsueh (2011a) for more about the strategic logic of market liberalization and sectoral reregulation as key to China's industrial development and global integration.

⁵⁷ Ampiah and Naidu, 2008, p. 200.

⁵⁸ Taylor, 2009, p. 45-50, 56.

⁵⁹ Ampiah and Naidu, 2008, p. 200.

⁶⁰ All the same, Western countries have traditionally provided Nigeria with equipment and personnel training for its armed forces, except during the 1967-1970 civil war, when Beijing had allegedly supported the secessionist republic of Biafra to counter Soviet backing of Lagos, and there is no indication that this is about to change (Ampiah and Naidu, 2008, p. 203).

⁶¹ Alden et al., 2008, p. 308.

economic relations in Section IV, in particular China promised to "increase Chinese investments in Africa, to make available increased financing for investment...to encourage Chinese construction endeavors in Africa as part of Chinese efforts to help upgrade the continent's infrastructure." Following up on the White Paper, the P.R.C. Ministry of Foreign Affairs, ahead of Hu Jintao's visit to Africa, signed a memorandum of understanding with Nigeria, highlighting four aspects, including to deepen and expand economic and trade cooperation" in major areas, including infrastructure, communications, and satellites.⁶²

As one of the largest telecommunications markets in Africa, the Nigerian telecommunications sector has become the largest generator of foreign direct investment (FDI) after the country's oil and gas industry. The biggest mobile providers in Nigeria have been South Africa's MTN, Kuwait's Zain, India's Bharti Airtel, and Globacom, the only domestic company among mobile leaders.⁶³ The French telecommunications equipment maker Alcatel also historically had a foothold in African markets, particularly South Africa.⁶⁴ But it is the state-market alliance of Chinese telecommunications equipment makers and Chinese state-owned banks and Nigerian service providers, which has had the most profound influence on Nigeria's economic transformation and infrastructural development and politics. The rest of this section characterizes the role of Chinese telecommunications in Nigerian politics and telecommunications privatization; and Table 1 in Appendix 2 lists the extent and nature of China's involvement in Nigerian telecommunications.

Chinese telecommunications and the politics of Nigerian elections

In 2000, at the beginning of the presidency of Obasanjo, Nigeria had 400,000 active telephone lines, and in 2011, it has over 90 million active fixed and mobile telephone lines.⁶⁵ Taking advantage of China's interests in tapping into Nigerian markets and expanding governmental purse strings to make it possible, the Obasanjo government, to solidify electoral support, announced on World Telecommunications and Information Society Day on May 17, 2002 a rural telephony project, launched with soft loans provided by the Chinese government which entailed telecommunications equipment purchases from Chinese companies, to integrate the rural population with the rest of the country as well as to meet the minimum teledensity recommended by the International Telecommunications Union (ITU).

⁶² Taylor, 2011.

⁶³ India's Bharti Airtel inked a \$10.7bn deal for the African assets of Kuwait-based Zain, which operates in Nigeria, among other African countries. See "Bharti seals deal for Zain networks," *Financial Times* (March 30, 2010). In addition to Bharti Airtel, Indian companies Airtel and TATA, also invest in Nigeria. These companies wield considerable influence in the Nigerian market and Nigeria is the third biggest importer of Indian goods and services on the African continent. See Cheru and Obi, 2010.

⁶⁴ Alden, Large, and Soraes de Oliveira, 2008, p. 194.

⁶⁵ "Exclusive: NCC selects operator for mobile number portability in Nigeria, says Juwah," *Technology Times* (September 10, 2011).

This followed the National Telecom Policy released in 2000 (a revised version was drafted for approval in 2011 after the Minister of State for Information and Communications formed a committee in March 2010), and licensed a second national telecoms carrier in 2002 to provide long-distance and international services.

Under autocratic rule, Nigeria, a founding member of the World Trade Organization in 1995, introduced competition in telecommunications in 1997 when it granted Multilinks Communication Nigeria (MCN) access to the national grid to provide services in competition with Nitel, the incumbent state-owned carrier. The Nigerian Communications Commission Decree (NCCD) 75 of 1992 created the regulatory commission and corporatized Nitel and separated it from the telecommunications ministry. The NCCD 75 also liberalized various telecommunications activities, including allowing private operators to provide mobile services using the VSAT technology; but Nitel and Mtel, mobile operator founded in 1992, served as government owned duopoly, until 1997, when the government began licensing six operators offering fixed-line services and eight VSAT service providers, with the exception of Nitel, which will remain exempt from licensure, including fees. In the late 2000s, the NCC introduced a unified licensing regime when the exclusivity period of the main GSM network providers expired, allowing service providers to increase their range of services, from fixed to mobile telephony, to Internet and broadband access.

Chinese state-owned companies ZTE and Shanghai Alcatel Bell, a joint venture between the Shanghai Municipal government and France's Alcatel, and quasi-privately owned Huawei established offices in Nigeria shortly after telecommunications liberalization and the democratic elections. Since then Chinese equipment makers have frequently won bids in supplying backbone infrastructure of Nigeria's growing number of telecommunications CDMA and GSM networks. ZTE and Huawei regularly engage in equipment giveaways and hold key advantages in low prices and soft loan support for buyers through one of China's development banks.

In addition to the rural telephony project, the Obasanjo government also initiated the construction of the Nigeria First Communication Satellite (NigComSat-1) in 2004 to meet growing demands for telecommunications, broadcasting, and broadband multimedia services. The National Space Research and Development Agency, with the help of \$200 million in concessional loans from the China Ex-Im Bank, contracted the China Great Wall Industry Corporation to built NigComSat-1 with Chinese technology (Donagfanghong-4 Satellite platform). With Chinese resources and technical expertise the project completed on time and launched into orbit directly before the end of Obasanjo's presidency in 2007.

China's as game changer in telecommunications privatization

China's role as game changer in telecommunications expanded beyond elections when Chinese operators also entered the Nigerian market by pursuing collaboration with Nigerian service providers. That the Nigerian government, with its frequent changes in government between 1992 and 1997 and 2007 and 2011, has sought since 1992 to privatize Nitel to no avail has enabled Chinese stakeholders to solidify China's standing. In 2011, Nitel's privatization hung on the balance when an investment consortium, with the backing of China Unicom's British subsidiary, secured the winning bid, only to lose it when it failed to present the 30 percent security bid imposed on it by the government of President Goodluck Jonathan.

"Unhealthy stakeholders' interests," including the management of Nitel's "attempt to block its privatization by the government," have led to the recurring failure to privatize Nitel.⁶⁶ Political wrangling led to the rejection of the bid of Egypt's Orascom in 2005 and a partial sale to Transcorp, a Nigerian conglomerate, with BT as its technical partner, negotiated under the Obasanjo regime in 2006 was reversed in 2009 by the Umaru Yar'Adua administration. The Bureau of Public Enterprises (BPE) terminated the privatization process for the fifth time in 2011 when the reserve bidder Omen International Consortium could not revalidate its bid bond of \$105 million.⁶⁷ The preferred bidder, New Generation Consortium (made up of the Hong Kong listed China Unicom, Minerva Group of Dubai, and Nigeria's GiCell Wireless Ltd.), had failed to pay 30 percent security bid of its \$2.5 billion bid offer, which the Nigerian government imposed after deciding to accept the offer in October 2010, shortly after Jonathan came into office, after the death of Yar'Adua.

New Generational Consortium's bid of \$2.5 billion for Nitel, whose top end valuation had been between \$400 million and \$500 million with its a few thousand mobile customers and 100,000 fixed line users, offered \$1.5 billion more than Omen, the second-placed bidder. China Unicom, the second largest of China's three integrated carriers, initially denied claim that it was the consortium's technical partner, but later acknowledged that its London-based subsidiary had communicated with potential bidders and would consider potentially taking a 20 per cent equity stake in Nitel.⁶⁸ China Unicom's about face came after Nigerian officials released an undated letter signed by William So, president of Unicom's European arm; but it insisted that no substantive and legally binding agreements have been made with parties to the proposed privatization.⁶⁹ With concerns raised over the Chinese SOE's internal communication, China

⁶⁶ Oyejide et al., 2001.

⁶⁷ "BPE terminates NITEL sale," *Nigerian Newsservice* (June 16, 2011)

⁶⁸ "Nigeria approves \$2.5bn bid for Nitel," *Financial Times* (October 12, 2010).

⁶⁹ "Nitel and China Unicom: yes, no, maybe, err..." *Financial Times* (February 23, 2011).

Unicom faced falling shares in the Hong Kong and Shanghai stock exchanges, earning slides and shrinking market share in the domestic market. Minerva Group was alleged to be the financial backbone of the offer.

After the failure of New Generation and Omen consortiums' bids, the media reported in early September 2011 that the Jonathan government is considering the bid of Globacom, the only Nigerian-owned operator among the mobile leaders, to acquire Nitel.⁷⁰ After over a decade of foreign domination in telecommunications, at once used by successive Nigerian democrats and at once, playing the game changer, this may be a sign of Nigerian nationalism catching up to Chinese, Middle East, and Indian scrambles for market, and thereby economic and political, power.

The significance of China's activities in Nigeria

China's important role in supplying the equipment and expertise for constructing rural telephony and satellite communications, critical achievements of Nigeria's first government after transition to democracy, as well as its part in the privatization saga of the laggard incumbent operator, show that China's impact in Africa is not simply resource extraction and trade. These developments reveal China's potential influence and question African sovereignty on state- and market building in Africa. What is more, China's increasing influence on power and money in Nigeria in the era of democratization calls into question the conventional wisdom that pluralization would necessarily lead to greater degrees of political freedom and economic equality.

VI. Analysis and Conclusions

In this paper we take our study of China's role in Africa to the micro-sectoral level. By doing so, we gain analytical leverage in understanding the precise nature and scope of China's role in Africa and the impact that such interactions have on internal developments within Africa and external relations between China and Africa. Who wins? The picture that emerges is complex but our cross-country, micro-level industry case studies reveal that both China and its African partners are winning from this relationship. Market liberalization in telecommunications across African states in the 1990s and 2000s have clearly created a competitive playing field, which includes players from Africa, China, India, and the Middle East. In the market landscape that has emerged in Angola and Nigeria, the headway made by Chinese telecommunications vis-à-vis other market players from other countries (both African and non-African) has become apparent. China's activities in Angolan and Nigerian telecommunications show that

⁷⁰ "NITEL - FG Brainstorms on Globacom's Offer," *AllAfrica.com* (September 8, 2011).

China's budding telecommunications industry is successfully expanding abroad and winning markets in developing countries; and that these efforts, a partnership between Chinese companies, from private Huawei to state-owned ZTE and Great Wall and foreign-invested Shanghai Alcatel, and Chinese state development banks, have helped China guarantee its continued access to Africa's resources. Each of the bargains between Angola and China to secure Chinese government financing for the construction of Angola's telecommunications infrastructure, for example, has included specific terms on credit based on access to Angola's oil.

This exemplifies the microfoundations of China's a grand strategy of infrastructure-for-resources, as well as revealed important cross-national differences in types of bargains that emerge.⁷¹ In Angola, the Chinese government and its telecommunications industry confronted a political and economic vacuum when it entered Angola shortly after civil conflict, which allowed China to more explicitly swap communications networks for natural resources. Nigeria's more competitive telecommunications market and transition to democracy left more room for Nigeria's political leaders to benefit electorally with the assistance of the Chinese in their promises to modernize Nigeria's communications infrastructure. China, in turn, gains significant market share in an increasingly crowded market.

Importantly, taking our study to the micro-level, we have shed light on the impact of China's growing presence on the relationship between state-building and market-building in traditionally weak states across the continent. African governments, taking advantage of economic and infrastructural resources secured through negotiating the terms of participation of Chinese telecommunications service providers and equipment makers, are winning influence over their populations. Africans are using market access in telecommunications to achieve political ends, whether it is to gain an upper hand in elections or increase patronage rents. Our case studies reveal that if bringing in Chinese investment, which in telecommunications translates into modern infrastructure with spillover effects across the economy, becomes important, then that becomes part of a politician's claim. African governments have also used Chinese investment as foil for the messy politics that come hand in hand with efforts to privatize telecommunications. In Nigeria, China Unicom's peripheral yet murky role in the New Generation Consortium which initially won the bid in the fraught ridden process of privatizing the incumbent telecommunications service provider Nitel eventually made way for the Jonathan government to promote domestic industry by considering the bid of Globacom, the only Nigerian-owned operator among the mobile leaders.

⁷¹ Hsueh (2011b) contends that an analysis of "microfoundations" is incumbent before any conclusions can be drawn about China's grand strategy in foreign policy.

Not to be overlooked, African consumers are winning greater access to mobile communications and, increasingly, the Internet. Consumers and industrial users alike are also benefiting from the competitive prices, training, and employment offered by Chinese telecommunications equipment makers in effort to secure markets and good will toward their market presence. After all, the activities and quality of products of Huawei, ZTE, and other Chinese telecommunications companies in Africa influence China's brand image. The losers may be other foreign competitors and, occasionally, African companies which are trying to develop independently but who have little hope of competing with the Chinese private and state-owned companies alike, whose market entry are backed by Chinese government finance and diplomacy.

These developments beg the question that grapples scholars and observers of democratization alike, does pluralization, in the form of market liberalization and elections, lead to greater freedom and economic equality? In both Nigeria and Angola, we find political entrepreneurs maximizing the benefits of Chinese investments for personal economic and political gain, on the one hand; and on the other hand, not so successfully minimizing the costs, including allowing the Chinese to increasingly gain market share at the expense of African upstarts and committing valuable assets through infrastructure-for-resource bargains. To address these issues, as well as the related questions of how and with what the Chinese gain an upper hand in achieving its goals of resource extraction and market penetration and the African counterparts achieve their electoral and rent-seeking goals, we intend to bring our study to the company-level. This micro-micro investigation will allow us to explore potential variation in the precise types of bargains that emerge may be attribute to Chinese or African characteristics and the impact that these bargains have on the political and economic well-being of peoples of Africa.

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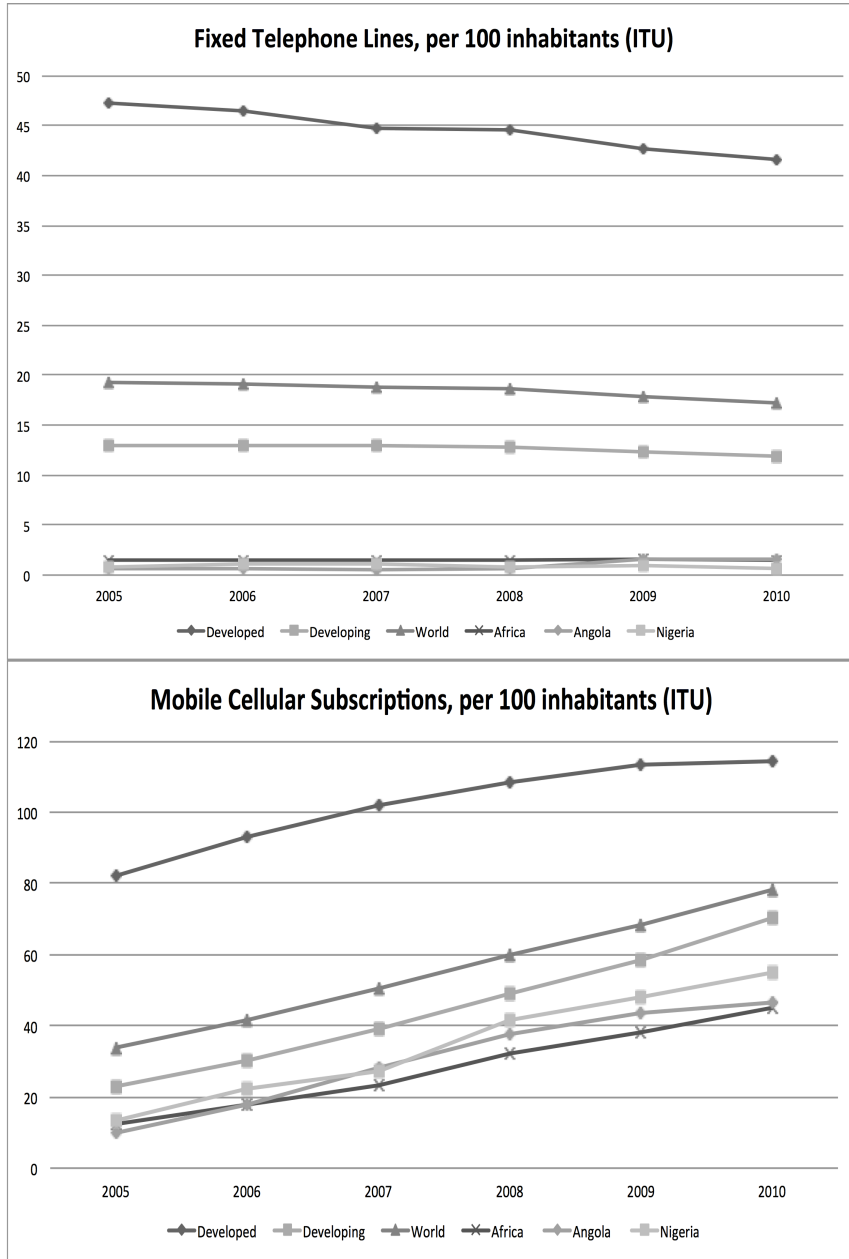
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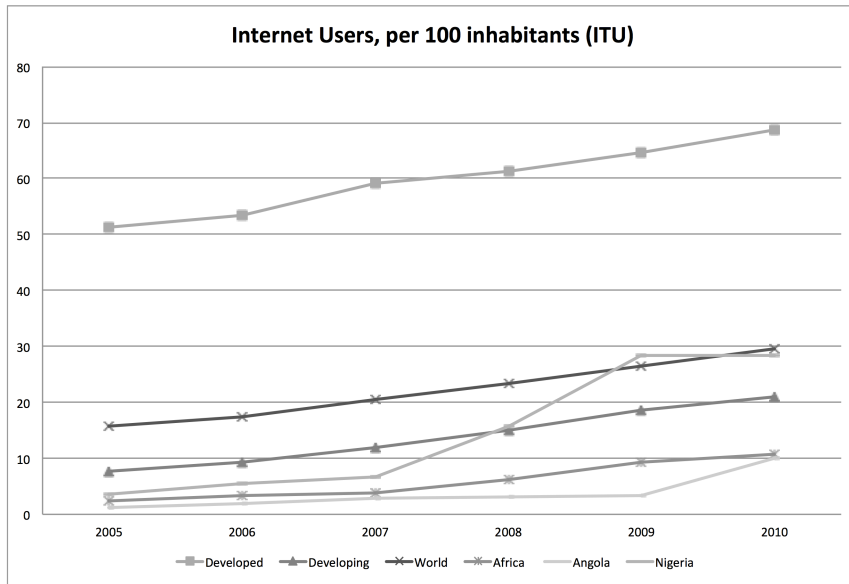
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Appendix 1: Trends in Telecommunications





Appendix 2: Chinese Telecommunications Projects in Angola & Nigeria

Table 1: Chinese Telecommunications Projects in Angola

Year	Project	Chinese Financier	Contractor	Added Capacity (thousands of connections)	Project cost (\$ million)	Chinese commitments (\$ million)	Status
2002	Angola Telecom Network Expansion Project in the Province of Namibe, Huile, Cunene, and Lunda Norte, Phase 1 ^a	China Eximbank	Alcatel Shanghai Bell (ASB)	-	60	-	Completed
2003	"Two projects... rebuilding the telecommunications network in three Angola provinces" ^{ad}	"Chinese government"					
2004	Telecom portion of the second phase of 2004, \$2 billion loan from China Eximbank ^a	China Eximbank	Unknown	-	-	200	Completed
2005	An arrangement between ZTE and Mundo Startel to install a new fixed-line network in eight states across Angola ^a	China Eximbank	Zhong Xing Telecommunication Equipment Company Limited (ZTE)	-	69	38	Completed
	ZTE agreement with Angola Telecom, fixed lines, ADSL, and other ^c		ZTE		300		
2006?	Angola Telecom soft-switch agreement with Huawei ^c		Huawei				
2008	ZTE granted operational control of Movitel		ZTE				
	Arrangement between ZTE and Angola Telecom to provide optic fibre backbone ^b		ZTE		1200		
2011	ZTE training in Angola		ZTE				

Sources: ^aWilliams et al., 2011, p. 240; ^bChanakira, 2010, p. 8; ^cSouthwood, 2008, 9; ^dXinhua News;

Table 2: Chinese Telecommunications Projects in Nigeria: Stakeholders, Financing, and Outcomes

Year	Project	Sector	Chinese stakeholders (contractor and financier/ US\$ millions in commitment)	Nigerian stakeholders	Project costs US\$ millions
2002	National Rural Telephony Project (initiated by Nitel in 1990s but Nigerian government took over when Nitel became privatized)	Basic Services (Fixed Line Exchange System and CMDA mobile) Direct Access Rural Telephone technology by the National Poverty Eradication Programme (NAPEP)	Huawei (2004; 109 lines) and Alcatel Shanghai Bell (2004) signed contract with the Ministry of Communications in 2004 to construct 218 exchanges; Ex-Im Bank China/ \$200 concessional loan	Olusegun Obasanjo (1999-2007)/ Phases 1 & 2; led by Nigerian Ministry of Communications; Phase 1: 218 locations across country; turned over to five private telecommunications operators (PTOs) (54 bids) in 2008: Key Communications Limited, Suburban Broadband Limited, Voicewares Network Limited, Gicell Wireless Limited and Hezonic Limited; Phase 2: Huawei 15% of mobilization fees	\$400
2004	Nigeria First Communication Satellite NigComSat-1	Based on the Donagfanghong-4 Satellite platform (to meet demand for telecoms, broadcasting, and broadband multimedia services)	China Great Wall Industry Corporation/ Ex-Im Bank China/ \$200	National Space Research and Development Agency; completed on time and launched into orbit before end of Obasanjo's presidency in 2007;	\$200
2004	Vmoile	Mobile network, including 3g products and solutions	Huawei		
2005	Nitel, incumbent national operator	Mobile services (CDMA network): (voice, data, Internet, SMS and ZTE's Global open Trunking architecture-based (GoTa) Push-to-talk services	ZTE (has also won GSM bids)	Seven states in northeast Nigeria: Adamawa, Bauchi, Borno, Gombe, Plateau, Taraba and Yobe	
2005	Nitel	Dense Wave Division Multiplexing (DWDM)/ fibre optic wide band transmission on the Nitel network	Huawei donation/ \$2.7	To increase/ improve bandwidth on backbone infrastructure/ voice and data traffic along the Lagos, Enugu and Port Harcourt route	
	Reliance Telecommunications (RelTel)	CDMA, GSM	Huawei; China Development Bank/ \$20	RelTel incorporated in 1998, taking advantage of deregulation in late 1990s	
	GV Telecoms Nitel	Telecoms equipment Digital lines	Huawei Huawei; has invested in \$7 million to establish multi-product training center; trained over 150 Nigerians	250,000 digital lines through Lagoas	\$250