

Supporting Infrastructures Provisions: A Ownership or Location Advantages for Resources seeking Chinese firms in Developing Markets

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Abstract

Supporting infrastructures such as power, road, and telecommunication are considered as essential requirement for internalization of ownership advantages of resources seeking firms in both developed and developing countries. Besides availability of natural resources, supporting infrastructures such as transportation exist to fulfill needs for mobility, power to provide energy and power for the machines and telecommunication fulfill the need for information exchanges. This study looked into whether resources seeking Chinese firms support to host government drive to improve infrastructures and/or outright provision of essential supporting infrastructures required for their operations in Nigeria should be considered as location advantages or ownership advantages of resources seeking Chinese firms. The complete shift from the consideration of supporting infrastructures as location factor evidence from recent phenomenon and developments in emerging markets involving multinational enterprises on the provision of required supporting infrastructures offer avenue for testing existing international business theories.

Introduction

Asiedu, (2002) and Kirkpatrick, Parker, and Zhang, (2006) claimed that supporting infrastructures as essential services, are necessary requirement for foreign direct investment. Kinishita and Campos, (2002) claimed that availability of resources, cheap and skilled labor, and physical infrastructure are the main attractors of resource-seeking FDI. Dunning (2002) eclectic theory, the platform used for this study specifically listed infrastructures services such as transportation and telecommunications as needed services to sustain resources seeking firms day to day operations in resource endowed countries. In developing countries, an essential requirement for economic growth and sustainable development is the provision of efficient, reliable and affordable infrastructures services such as transportation and telecommunications (Dunning, 1993, 2002; Luiz and Stephan, 2001; Lydon, and Williams, 2005; Kirkpatrick et al. 2006; Nwankwo, 2006; Demirbag, Tatoglu,

and Glaister, 2009). These essential services are necessary antidote for foreign direct investment (Kirkpatrick, Parker, and Zhang, 2006, Asiedu, 2002).

Also, the avoidance of cross-border transportation and other transfer cost are not only important determinants but necessary factor for resources seeking MNEs (Dunning, 2002). Khadaroo and Seetanah, (2010) also agreed that an improved facilities help to aid the investment climate and in determining the attractiveness of the country towards FDI. Developing countries are noted to have abundant labour at low cost. But, the level of infrastructures in most developing countries compared to the standard in advanced markets is not adequate for resources seeking MNEs FDI. For example, power generation was considered problematic in nature (Babatunde, 2011, Aliyu, Ramli, and Saleh, 2013; Vincent and Yusuf, 2014) while provision of water, telecommunication facilities, level technology and transport networks are generally below the standard to be considered as country specific factor in Nigeria. The inadequacy associated with level of infrastructures in Nigeria has direct relationship with cost of these infrastructures. There is an argument that the costs of transportation and telecommunication in these countries are high. This high cost is able to reduce the positive effects or gains associated with low labour cost (Ali and Guo, 2005).

The inadequate in the level of necessary infrastructures are not direct deterrent to the increase in number of resources seeking Chinese firms in Nigeria. When notable MNEs from advanced nations are relocating their businesses to other countries, Chinese firms are collaborating with Nigerian government to provide important infrastructures. In the current development plans and program to increase the level of infrastructure development in Nigeria, many Chinese firms and multinationals such as Wempco Groups, China Civil Engineering construction corporation (CCECC) , ZTE, Huawie, China-Putia, Alcatel-Shanghai, Sepco to mention a few, are actively involved and collaborating in provision, construction, building and financing of different infrastructural projects in Nigeria.

Sino-Nigeria Infrastructural Development initiatives

Nigeria government declared a state of emergency to upgrade the infrastructural facilities throughout the country (Lydon, and Williams, 2005 and Nwankwo, 2006). Some sectors such as Transportation, Communication, Education and Power that are vital to Nigeria climbing economic ladder as the 20th largest economy in 2025 are receiving adequate attention from the government. In 2008, the government set up infrastructure Concession Regulatory Commission (ICRC) to develop a clear framework for private sector participation via finance, construction, development and operation of public infrastructure projects (Barclay, 2000 and Kaplinsky, McCormick and Morris (2007).

This clear aim of improving infrastructures and expanding capacity provided resources seeking Chinese firms the opportunity to exercise their intention in Nigeria. They collaborated with Nigeria government to modernize some specific facilities necessary to achieve their goal in Nigeria. Nigeria on the other hand profited from measures exercised by resources seeking Chinese firms of the added advantages to the location as they use their ownership advantages in Nigeria (Dunning, 1993, 2002; Lydon, and Williams, 2005; Demirbag, Tatoglu, and Glaister, 2009).

The improved state of infrastructures in telecommunication, transportation, power and energy sectors or actual generations of these important infrastructures reduce cost of Chinese resources seeking firms' operations in Nigeria. Some of important contributions to infrastructural development by Chinese firms as well as Nigeria government drive to upgrade infrastructure facilities are outline below.

a. Telecommunication Sector

Studies have shown that technology advances, notably in telecommunications is a significant determinant of FDI into developing countries (Dunning, 1993, 2002, Kirkpatrick et al. 2006, Nwankwo, 2006; Lydon, and Williams, 2005 and Luiz, et. al. 2001). For instance, an improved telecommunication infrastructure through series of reforms notably deregulation exercises reduces the cost of resources seeking Chinese firms search for information in Nigeria. This strengthens the institution framework that motivates Chinese firms to make high scale investment decision by using their ownership specific factors in Nigeria.

The deregulation of telecommunication sector in Nigeria has witnessed enormous growth of its economy. The investment in this sector is huge and it is closely behind oil and gas sector in attracting FDI (Nwankwo, 2006). As a result, telecommunication is one of the potent sectors singled out for attention (Lydon, and Williams, 2005 and Nwankwo, 2006). It is strategic to improving socio-economic activities and human condition. This sector has contributed immensely to development of most advanced countries in term of gross domestic product (GDP), employment and income generation and foreign exchange earnings (Dunning, 2002 and Lydon, et. al. 2005). Nigeria government has recognized the importance of this sector and it has taken initiatives with Chinese government using notable resources seeking firms to step the idea of positioning the sector as hamburger of social and economic transformation. The Nigeria government has taken the following initiatives.

- a. Launching of Nigeria Communications Satellite (NIGCOMSAT) into orbit in May 14, 2007 by Chinese military managed space agency from Xichang space center in southwestern Sichuan province of China.
- b. The Glo 1 submarine optic fiber cable built by telecoms giant, Globacom, is now ready for commissioning.
- c. National local Telephone Project by ZTE Nig. Ltd.
- d. Provision of connectivity to global information infrastructures using SAT3/WASV/SAFE submarine fiber optic digital communication cable (17,380km) to link Europe, Africa and Middle East.
- e. Data Protection Bill and the Freedom of Information Bill are currently before the National Assembly which will aid the protection of Intellectual property rights pertaining to ICT products.

Nigerian Communication Commission (NCC) under the supervision of Federal Ministry of Communication unveiled five-year strategic master plan (SMP) that will help to improve investment in communication sector in Nigeria (Report of the vision 2020 on communication, 2009)

b. Nigeria Transportation Sector

Nigeria has a total road length of 193,200 kilometers, 3,505 kilometer railway network, inland navigable waterway of about 3,000 kilometers, 21 domestic and international airports and 62 airstrips, 13 major ports, 11 oil terminals and 128 private jetties (“Report of the vision 2020 on transportation”, 2009 and Wheatley, 2013). These figures are alarming and give the picture of Nigerian transport sector. There are many problems in the sector which are as a result of a lack of long term planning and many years of negligence, poor investment, and inadequate participation by private sector; also resulting in obsolete plan and equipment. These factors have contributed negatively to the achievement of national objective of attracting foreign direct investment to the country (Kirkpatrick, Parker, and Zhang, 2006, Asiedu, 2002). Recently, there have been undivided attentions on the part of the government (Barclay, 2000 and Kaplinsky, McCormick and Morris (2007). Some of the moves initiated by the government are outlined below.

- a. Transfer of responsibility of major port terminals to private firms under concession agreements.
- b. Construction of rail road line between Lagos to Kano in 2009 at the cost US\$8.3 billion by China Civil Engineering Construction Company (CCECC)
- c. N\$8.4 billion Light Rail project in Lagos State by China Civil Engineering Construction Corporation.
- d. Rehabilitation of existing narrow gauge railway and purchase of 25 new locomotives in 2009.
- e. Dredging of the lower River Niger from Warri in Delta State to Baro in Niger State.
- f. Construction of new port at Lokoja and rehabilitation of Onitsha river port.

c. NIGERIA POWER SECTOR

Nigeria has large amount of resources to revamp this sector. It has 187 trillion cubic feet of gas, 4 billion metric tons of coal and lignite, 14,750 megawatts of hydroelectricity, 3.5-7.0 kilowatt-hour/m square of solar radiation per day, 150,000 terra joule wind energy and 144 million tons of biomass per year (“Report of the Vision 2020 on power, 2009). Despite the availability of vast natural resource in Nigeria (Asiedu, 2006), the country is still faced with acute power problem which is hindering its drive to bring foreign direct investment (Nigeria Economic Scorecard (2012). The total installed capacity of electricity generation is about 7,941 Megawatts as at the end of 2008, the actual generation is between 2000 megawatts to 3000 Megawatts due to gas constraint. The demand for electricity in Nigeria is greater than the actual generation (Nigeria Economic Scorecard, 2010) but the government has stepped up its drive to address the challenges of the Power sector. It has introduced some of the key initiatives, although, most of these initiatives have however not yielded the desired results. The initiatives are as listed below

- a. Government initiated structural and legal reforms in the power sector through Electric Power Sector Reform Act (EPSRA) of 2005 to encourage private sector investment in generation and distribution.
- b. Massive rehabilitation of existing power generating plants and development of new power stations to meet up presidential target of 10,000 megawatts by the end of 2011.
- c. A memorandum of understanding with Russia through its state owned company (Rosatom) to build nuclear energy infrastructure in Nigeria.
- d. The development of Uranium fields in Jos area which is an important ingredient in development of nuclear energy in the country.

- e. State governments to build 5-10 megawatts electricity (Maximum of 370 megawatts) and become involved in minor solar projects in rural areas, communities and schools.
- f. Government contractual agreement with Capital Investment Group to build 4,000 megawatts of power across Nigeria in 2010.
- g. Construction of 5 megawatts pilot wind turbine/generation at SayyaGidan-Gida village in Sokoto State

A. NATIONAL INTEGRATED POWER PROJECT

According to report of Vision 2020, national technical working group on energy sector, the Nigerian Government initiated the National Integrated Power Project (NIPP) to further boost the power generation capacity (Report on the vision 2020 on power, 2009). It also encouraged joint venture partnership to embark on independent power projects (JV IPPs).

ELEMENTS OF THE NIPP PROJECT

- a. Five Greenfield natural Gas fired plants (2,250 MW¹ total) in the Niger Delta region comprised of 18 GE Gas turbines are under construction
- b. One 2,600 MW hydroelectric power plant in Mambila, Taraba State
- c. 22 power transmission sub-projects including 17 new substations and expansion of 32 existing substations are under construction
- d. 250 power distribution projects are part of government initiatives
- e. Several new Gas pipelines and other related equipment and infrastructures are receiving government attention

Some of these IPPs have been commissioned but they are yet to start generating power due to the unavailability of gas. Once these projects are completed, they will definitely boost the effectiveness of the solid and mineral resources sector to adequately perform its roles in attracting FDI. Provision of improved infrastructures such as power is positively related to improve investment climate in key sectors of any economy. In Nigeria, it will lead to creation of jobs, stimulation of private sector growth and contribute to transfer of technology.

d. NIGERIAN ENERGY SECTOR²

The Nigerian energy sector is expected to play an important role in realization of the government policy to attract foreign investment (Asiedu, 2006 and Nwanwo, 2006). Currently, the sector has attracted attention from the government because of its strategic importance to Nigerian economic development. Apart from its microeconomic roles, it is vital to reduce and alleviate poverty, improving productivity and enhancing the general quality of life ("Report of the on energy", 2009 and Nigeria Economic Scorecard, 2010). Recently, government has taken the following initiatives so that the sector will continue to play its critical roles in the industrial, technological, economic and social development of the country. The government favoured the

¹A megawatt (MW) is a unit for measuring power that is equivalent to one million watts

² Power and energy ministries in Nigeria are separated because they are key sectors that demand attention.

following initiatives.

- a. The sector has braced up in meeting the demand of energy in all sectors of the economy by building additional three refineries and expanded the capacity of four refineries from 385,000 (bpd) to 485,000 (bpd) per day with the assistance of Chinese firms.
- b. Submission of Petroleum Bill to Nigeria Upper house to initiate a reform that will address the ineffectiveness of the institution arrangement in the oil and gas sector.
- c. Government contractual agreements with China's CMEC and Sepco to build three 335-MW *gas*-fired plants are been put in place.
- d. Federal government annual investment projection of 12 billion US dollar in the next ten year to facilitate the necessary energy capacity expansions.
- e. China and Nigeria signed a US\$4 billion agreement on oil and infrastructure projects in 2006
- f. China and Nigeria signed a US\$23 billion agreement for China to build three oil refineries and a fuel complex in 2010.

The roles of infrastructure availability particularly transportation, energy, power and telecommunication are key factors in determining the location of MNEs. Improved supporting infrastructures are the priority of both Nigerian government and resources seeking Chinese firms. These supporting infrastructures provide the Chinese firms unhindered access to the natural resources in Nigeria. It is a sort of advantage to Chinese MNEs in Nigeria operating in Nigeria. It is now imperative to investigate this concept of supporting infrastructures to understand how it stimulates Chinese MNEs investment in Nigeria. Based on these new revelations, we therefore state the research issues to guide in considering supporting infrastructures as ownership advantage to resources seeking Chinese firm in emerging markets.

Research Issue 1: How do resources seeking Chinese firms supports host country in modernizing essential supporting infrastructures required for their operations in Nigeria?

To support the scope of this study, Chinese presence in provision of supporting infrastructures in other developing countries were load and evident. Besides Nigeria which is the main country for this present research, recent studies have shown that China had helped other developing countries build 442 economic infrastructure projects in countries such as Tanzania, Zambia, Somalia, Malta, Botswana, Myanmar, Laos and Bangladesh. These infrastructures projects handled by Chinese firms on behalf of their government include³:

Devonshire-Ellis, C. and Solstad, S.U. (2013)China – The Great Infrastructure Developer Retrieved from <http://www.china-briefing.com/news/2013/03/27/china-the-great-infrastructure-developer.html#sthash.4sPy2ysi.dpuf>

³China had helped many developing countries to build up to 442 economic infrastructure projects, including as 2009

- The Sana'a-Hodeida Highway in Yemen
- The Karakoram Highway and Gwadar Port in Pakistan
- The Tanzania-Zambia Railway
- The BeletUen-Burao Highway in Somalia
- The Dry Dock in Malta
- The Lagdo Hydropower Station in Cameroon
- Nouakchott's Friendship Port in Mauritania
- Railway improvements in Botswana
- Six bridges in Bangladesh
- One section of the Kunming-Bangkok Highway in Laos
- The Greater Mekong Sub-region Information Highway in Myanmar
- The Shar-Shar Tunnel in Tajikistan
- The No.7 Highway in Cambodia
- The Gotera Interchange in Addis Ababa of Ethiopia

The motivation from provision of supporting infrastructures in most of the above locations enhances the attractiveness of these locations and as well increase the possibility of resources seeking Chinese firm's investment. Using Nigeria in this regard, it is important to investigate if the outright provision of necessary infrastructures by Chinese firms through the assistance from Chinese government in developing countries is enough to consider this concept as ownership advantage to Chinese firms. The above issues lead us to the development of the second research issue:

Research Issue 2: In what ways do provision of basic supporting infrastructures by resources seeking Chinese firms help in their operations in Nigeria?

Methods

The study on supporting host government and outright provision of supporting infrastructures by resources seeking Chinese firms in Nigeria applied two-stage qualitative methodology. The method of data collection was due to difficulties associated with using quantitative survey instruments with Chinese firms operating in emerging markets. A total of 34 in-depth exploratory interviews with Chinese firms home and abroad were used as the main tool to conduct this present research. 14 of the interviews used as "supporting interviews" were resources seeking Chinese firms' competitors, stakeholders in the industry and Nigerian government officials. These "supporting interviews" across the industry were utilized to support and enrich information into whether the actions of Chinese firms should be considered as firm's specific advantage or location advantage. The interviews and discussions involved top management personnel of resources Chinese firms in Nigeria and Beijing, government officials and domestic resources firms in Nigeria. The data collected were guided by two research issues as stated above.

Findings

Most of the interviewees indicated that supporting infrastructures is a concern for Chinese MNEs in Nigeria. It was not considered as determinant of resources seeking Chinese MNEs investment in Nigeria. Power

generation was considered problematic in nature while provision of water, level technology and transport networks are generally below the standard to be considered as country specific factor. Resources seeking firms need supporting infrastructures for mining purposes before sending it to China as material input to several Chinese manufacturers. The fact that Chinese MNEs such as ZTE, CCECC and WEPCO Group with the help of home government do help Nigeria government to improve dilapidated infrastructures and outright power generations, provision of water and roads construction are clear indications that they are important supporting facilities required to achieve their goals.

In the literature discussed above, availability or improved supporting infrastructures such as power, water, transportation, telecommunications and technology are critical the operations of resources seeking Chinese firms in Nigeria (Dunning, 1993, 2002; Luiz, et. al., 2001; Lydon, and Williams, 2005; Kirkpatrick et al., 2006; Nwankwo, 2006; Demirbag, Tatoglu, and Glaister, 2009). The research found that the state of supporting infrastructures in Nigeria was really bad. The inadequate infrastructures pose some form of complications in operating business in Nigeria. For example, inadequate supporting facilities caused a company loss of properties, time and lives. Also Chinese firms have wasted so much money on power generation, boreholes and roads constructions. Therefore, Chinese firms and Nigerian government recognize the importance of quality supporting infrastructures; they entered into agreements to upgrade basic infrastructural facilities to facilitate investments and also reduce cost of operations.

In the first instance, lack of quality supporting infrastructures in Nigeria should have discouraged Chinese firms from investing in solid mineral sector as most of the respondents indicated. But the decision or agreement by resources seeking Chinese firms to join forces together with Nigeria government in order to improve the standard of supporting facilities provide access to natural resources in Nigeria. There were many instances as indicated by most of the interviewees that support the first research issue on how resources seeking Chinese firms support Nigeria in modernizing essential infrastructures necessary for their operations in Nigeria. The most current and talked example is the conclude Abuja-Kaduna railroad that was jointly funded by Nigerian government-CCECC-Chinese government. Another example is 700 –MW Zungeru hydroelectric project hugely funded by CNEEC-Sinohydro with the government of Nigeria in 2012.

In the literature discussed above Kaplinsky, McCormick and Morris (2007) indicated that the relationship between China and African countries is complementary. For example, Chinese firms build and upgrade social infrastructures in Nigeria in an anticipation of getting material inputs for their growing domestic manufacturing industries. Therefore the decision of resources seeking firms to continue operations in emerging market with lack of supporting infrastructures is greatly influenced by the provision of quality general infrastructures by the resources seekers (Barclay, 2000).

This research finding confirmed with what is in the literature. The research found that Chinese firms knew that the state of supporting infrastructures in Nigeria is inadequate to source for material inputs. But, they decided to create, upgrade, build and generate the infrastructures in order to achieve the larger objective. Nigerian government was serious to provide these important supporting facilities. But, the research found that Chinese

State owned institutions were involved and most responsible and active in provision of funds for putting required basic infrastructures in place. There was a particular mention of a Chinese firm by most of the interviewees that put in place a 50 MW Turbine in Ibafo Industrial Estate along Lagos/Ibadan expressway, Ogun State and share with the local communities within the area.

In addition, the main and supporting respondents indicated the methods adopted by resources seeking Chinese firms in provision of basic supporting infrastructures to support their operations in Nigeria. The research found that Nigerian government entered into agreements with Chinese firms and encouraged them to work with public institutions to provide the supporting infrastructures. The provision of these infrastructures brought twin-fold benefits to Chinese and Nigeria. It was found from the research that the provision of good roads, efficient power and energy sector, world class communication facilities and host of other important and basic amenities reduced the cost of sourcing for raw materials

Availability and access to natural resources gives Chinese firms the opportunity to provide these unavailable basic infrastructures in Nigeria. The research found that Chinese resources seeking firms turned inadequate supporting infrastructures to an opportunity in emerging countries. For instance, supporting infrastructures is country specific advantage; but, it is seen as resources seeking Chinese firm's specific advantage in this context. This is *high level contribution* because the specific finding that Chinese provided what ought to be country's specific advantage has not been made in any literature. Also, the influence access to natural resources on creation, generation, construction and building of infrastructures by Chinese resources seeking firms in Nigeria is *high level contribution* to international business and marketing literature. It demonstrates the importance of supporting infrastructures provisions to generate solid investment drive in emerging markets.

Conclusion

The findings from the study indicated that supporting infrastructures were not considered as determinant of resources seeking Chinese MNEs investment in Nigeria. This is complete diversion from previous findings from FDI research on resources seeking MNEs in developed country. The findings from the case study research ascertained and categorized supporting infrastructures as ownership advantage specific to Chinese resources seeking MNEs.

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