

Chinese Outward Investment in Oil and Its Economic and Political Impact in Developing Countries

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Due to the rising demand for oil, China has been actively investing abroad in oil producing countries. This paper examines the impact of Chinese oil investment, focusing on the economic and political effects in the recipient countries in the developing world. By building on the existing FDI literature, I argue that the presence of Chinese oil investment may be helpful to the recipient countries' economies but harmful to the quality of governance. The case studies of Sudan and Chad illustrate this dilemma. Using quantitative data on Chinese oil investment and on economic and political development, I find that in countries where Chinese oil investment is present, the economy is growing faster, but the level of corruption is heightened and the level of political accountability is reduced. Western oil investment also has a helpful economic effect, but does not carry a harmful political effect.

KEYWORDS: China; oil; foreign direct investment; CNPC; multilevel models.

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Due to its rapid economic growth and huge population size, China's energy consumption has been dramatically increasing. In 2013, the average daily oil consumption in China was 10 million barrels, almost double the consumption just a decade before.¹ While largely relying on imported oil, China has put efforts into investing in overseas oil production and being an active actor in the global oil market. This "going-out" policy and China's growing outward oil investment fit the global trend of "internationalization" of national oil companies (NOCs), with China National Petroleum Corporation (CNPC) being the principal outward investor.

Meanwhile, global foreign direct investment (FDI) has skyrocketed.² Almost every country in the world is a recipient of FDI. Scholarly attention in international political economy (IPE) has thus been directed toward the impact of such FDI on the host countries. There is also an expanding literature that looks at China's oil security and oil investment, most of which focuses on China's energy policy or how China is influenced by increasing oil demand. Little attention, however, has been paid to the recipient countries. Although the majority of global FDI is flowing out of OECD countries, especially the United States, capital from China is substantially growing and competing. How does Chinese FDI, specifically in the oil sector, affect the domestic economy and politics in the recipient countries? From an outside-in perspective, this paper examines the economic and political effects of Chinese oil investment.³

I borrow theories from the existing FDI literature, and argue that the effect of Chinese oil investment is mixed. On the one hand, many recipi-

¹See the U.S. Energy Information Administration, at <<http://www.eia.gov>> (accessed November 8, 2014).

²According to the World Bank's data, total FDI in the world in 2013 was 1.6 trillion dollars, which was 10 times the total FDI in 1992.

³Note that this paper only considers Chinese investment in oil projects, and not in other energy projects such as natural gas pipeline construction.

ent countries of Chinese oil investment are economically less developed and are in the initial stage of developing oil industries, such as those in Africa. The presence of Chinese oil companies therefore generates opportunities for their economies to grow. On the other hand, due to the culture of Chinese state-owned enterprises (SOEs), the “non-interference” policy, and the prior weak governance in these recipient countries, oil investment from China may not promote good governance but only aggravate corruption and authoritarianism.

To test my hypotheses, I conduct two case studies on Sudan and Chad and a large-N analysis of 134 developing countries from 1993 to 2012. The information on the recipients of Chinese oil investment is gathered from the CNPC website, and the data on economic and political indicators are from publicly available sources. The empirical results show that the presence of CNPC has dual effects. The economic effect is beneficial, but the political effect is harmful or neutral. Countries that are recipients of Chinese oil investment have a higher level of economic growth, a lower level of corruption control, and a lower level of political accountability. I also compare these effects with the effects of Western oil investment, and find that although having no particular political effect, Western oil investment helps the recipient countries’ economies as well. While there is a growing literature paying attention to Chinese oil investment, to the best of the author’s knowledge, this is the first work that empirically tests the economic and political effects of Chinese oil investment. These findings also provide important implications to our understanding of international development.

The rest of this paper proceeds as follows. The next section discusses the increasing importance of oil to China and China’s oil policy. The third section reviews the FDI literature and I draw my hypotheses from there. I also discuss the cases of Sudan and Chad in the section that follows. The fifth section introduces the research design to test the hypotheses. The sixth section presents the results of the empirical analyses. The final section concludes.

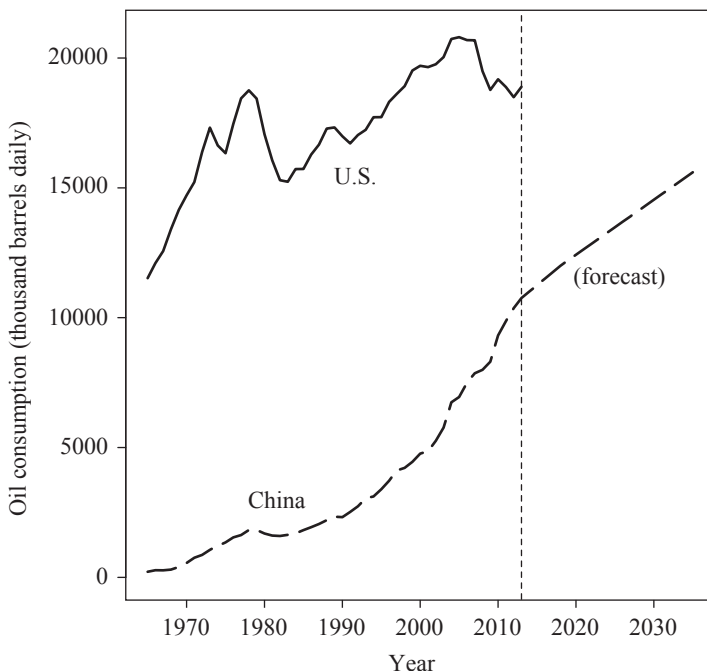


Figure 1. Oil consumption in the United States and China. Sources from *Statistical Review of World Energy 2014* by British Petroleum (BP), 2014 and *Update on Overseas Investments by China's National Oil Companies* by International Energy Agency, 2014.

China's Quest for Oil

China's demand for energy has been rapidly increasing in the last decade and a half. In 2003 China overtook Japan to become the world's second largest oil consuming country, and the International Energy Agency (IEA) expects China to replace the United States as the largest in the early 2030s.⁴ Figure 1 shows the oil consumption in the United States and

⁴See the IEA's *World Energy Outlook 2014*, at <http://www.worldenergyoutlook.org/media/weowebsite/2014/141112_WEO_FactSheets.pdf> (accessed November 8, 2014).

China since 1965. The data for China after 2013 are based on the IEA's forecasts. As can be seen, China's oil consumption has increased dramatically since the 1990s, while the oil consumption in the United States started to fall in the late 2000s. It is foreseeable that China's demand for oil will exceed the United States' in 20 to 30 years.

Meanwhile, recent years have witnessed an important change in the global energy market that may remarkably reshape the geopolitics. Due to its advanced techniques of extracting shale oil, the United States outpaced Saudi Arabia in 2013 to become the largest oil producer in the world. As a result, while remaining the world's second largest oil consumer, in 2014 China became the world's largest oil importer. Both the increase in domestic oil consumption and the changing pattern of the global energy market heighten China's need to enhance energy security.

The development of China's oil industry has gone through several stages (Zhang, 2011; Zhao & Chen, 2014). After the People's Republic of China (PRC) was established in 1949, the government sought to explore domestic oil and develop the oil industry, although the oil supplied came entirely from abroad. From 1963 to 1992, domestic production could meet the energy demand and self-sufficiency could be achieved, with the Daqing Field serving as the largest domestic oilfield. In the 1990s, however, due to the heightened demand for energy, China was no longer able to maintain self-sufficiency, and outward investment started to rise. The Talara Block in Peru was CNPC's first development project abroad (Zha, 2006). Since the 2000s, outward investment has been growing rapidly, as manifested by CNPC's rapid overseas expansion.

China's active engagement in the world oil market fits the global trend. Before the oil crisis in 1973, the world's major oil companies (supermajors) were basically privately-owned, giant multinational corporations. The so-called "Seven Sisters" which controlled the oil market then are today's BP, Chevron, ExxonMobil, Shell, and Total SA. In the 1970s, a wave of oil nationalization across oil producing countries enabled NOCs to play the dominant role in the market. In recent decades, particularly, there has been a tendency for NOCs to internationalize and become competitive international oil companies (IOCs) (Luong & Sierra, 2013). For

instance, the Saudi Arabian government nationalized the American-owned oil company Aramco in 1974. The state-owned Saudi Aramco is currently the world's largest oil company. Brazil's Petrobras is the leading oil company in Latin America and owns oil assets in 18 countries. Russia's Gazprom, which is partially privately-owned and partially state-owned, is the world's largest natural gas producing company and the second largest oil producing company.⁵

China has joined this game as well, with its footprint in the Middle East, Latin America, Southeast and Central Asia, and Africa. The China-Africa Cooperation Forum (CACF), for instance, was founded by Beijing in 2000 to promote investment in Africa, especially in African oil producing countries (Klare & Volman, 2006; Taylor, 2006; Zweig & Bi, 2005). Beijing also generously subsidizes companies that invest in certain countries and resources (Zweig & Bi, 2005). This suggests that Beijing realizes the importance of maintaining energy security and therefore encourages investment in resources that are critical to national security and economic development. Buckley et al. (2007), for instance, find that natural resources endowment is one important determinant of Chinese outward investment. PetroChina, an arm of the CNPC, is now the world's fifth largest oil company in terms of oil production.⁶

One strategy China has employed to gain access to raw materials in Africa is "infrastructure-for-resources," with which Beijing provides loans for infrastructure development to African resource-producing countries in exchange for the right to explore natural resources needed at home. Downs (2008) argues that this strategy has not significantly helped China's NOCs to acquire oil assets in Africa. She points out that in fact China only plays a minor role in the African oil market and many of its assets are those relinquished by IOCs. Alves (2013) examines whether this strategy contributes to Africa's development. She finds that while

⁵See *Forbes*, "The World's 25 Biggest Oil Companies," at <<http://www.forbes.com/pictures/fdhe45mhei/not-just-the-usual-suspects/>> (accessed November 8, 2014).

⁶See *Forbes*, "The World's 25 Biggest Oil Companies," at <<http://www.forbes.com/pictures/fjlm45felk/5-petrochina-4-4-million-barrels-per-day-2/>> (accessed November 8, 2014).

the infrastructure provision enables the economies of African countries to take off in the short term, the long-term impact on the governance, the environment, labor practices, and debt sustainability is negative.

While there is an increased scholarly interest in Chinese outward investment in oil,⁷ most of the existing studies focus on China's energy policy or investigate the pattern or trending of Chinese oil investment. Limited attention has been paid to the impact on the recipient countries. This paper fills this gap by examining the economic and political consequences of Chinese outward investment in oil. The next section will briefly review the IPE literature that discusses the economic and political effects of oil investment, and I will then draw my hypotheses from this literature. I will also pay particular attention to the nature of Chinese oil investment and use two cases to illustrate its political and economic effects in the section that follows.

The Impact of Chinese Oil Investment

The FDI literature generally believes that FDI helps the host country's economy to rise. Foreign investors bring in capital and technology, hire local residents, stimulate domestic consumption, and increase trade flows, all of which contribute to the economic growth of the host country. The seminal work by Borensztein, De Gregorio, and Lee (1998) shows that FDI is a crucial determinant of economic growth, but it is effective only when the host country has sufficient human capital. Alfaro, Chanda, Kalemli-Ozcan, and Sayek (2004) also find a conditional effect of FDI on economic growth: it only promotes growth in countries where the financial markets are well-developed. In addition to a direct effect on the

⁷This literature basically assumes convergent interests of Beijing and China's NOCs, but some scholars challenge this view. Downs (2008) argues that China's decision-making in overseas oil investment is not as highly coordinated as is commonly assumed. Liou (2009) focuses on the bureaucratic politics within Chinese oil companies and argues that commercial interests, not simply state control, influence China's overseas investment activities.

economy, FDI may have a broader influence on the general welfare in the host country because foreign firms often offer better working conditions and pay higher wages than local firms, which may spill over to the whole of society. Jensen and Rosas (2007), for instance, find that FDI promotes income equality in Mexico.

While FDI seems to benefit the host countries, oil investment may not be as helpful as other types of FDI due to the nature of the oil industry. The oil industry is capital-intensive, large-scale, and highly concentrated, and oilfields are usually in remote areas and isolated from the rest of society, so oil investment may not have the same spillover effect as FDI in other sectors does. So while oil production can boost the economy, at least in the short term, over-reliance on oil revenues may not be a blessing to a country. The “resource curse” theory states that countries abundant in natural resources often suffer from economic stagnation (e.g., Ross, 1999; Sachs & Warner, 1995).

Although the effect of FDI on economic growth may be conditional on the sector or on other characteristics of the host country, I believe that Chinese oil investment is helpful to the economies of the recipient countries. Despite the diversity, many of the recipient countries of Chinese oil investment are developing or underdeveloped countries immersed in poverty. These countries are naturally endowed with rich oil, but lack the techniques to exploit and explore oil. The inflows of Chinese oil investment thus generate a great opportunity for their oil sectors to emerge and to develop and for their economy to take off. The provision of infrastructure and loans also has the potential to promote economic development in these countries. As a result, at least in the short term Chinese oil investment should benefit the recipient countries economically.

It is far from surprising that FDI can be conducive to economic growth in the host country, but its impact on the domestic politics may be more mixed and still a matter of debate. In the international relations literature, two camps hold divergent views. Neoliberalists believe that FDI has a beneficial effect on the political development of the host country, by promoting transparency and improving the economy (e.g., Bhagwati, 1997; Lipset, 1959; Schumpeter, 1950). The empirical study

conducted by Li and Reuveny (2002) shows that FDI increases the level of democracy. Dependency theorists, on the contrary, contend that FDI hurts democratic governance because it keeps the government from being accountable to the citizens and causes social polarization (e.g., Bennett & Sharpe, 1983; Evans, 1979).⁸

Because the flow and expense of oil money is oftentimes secret, oil investment carries a more malign effect than other investment. Scholars believe that it is often spent on coercive capacity in order to empower authoritarian leaders, and thus may not benefit the citizens (Ross, 2001; Ulfelder, 2007). It may also discourage democratic participation and social equality by creating or enlarging social segregation. Ross (2008), for example, argues that dependence on oil production prevents women from participating in the labor force, thus intensifying gender inequality. So, even if foreign capital has a benign political effect, capital that flows into the oil sector may work in the opposite direction.

The recipient countries of oil investment, moreover, vary in their political and social circumstances. While most of the oil producing countries are authoritarian states, some are democratic countries with a high level of development. Bayulgen (2010) argues that the political effect of FDI and oil is contingent on existing political institutions. FDI in oil can help stable democracies further consolidate their democratic governance, as in the case of Norway, but may lead authoritarian countries to increased corruption, rent-seeking, and suppression of opposition, as in the case of Azerbaijan. This conditional argument seems most powerful in explaining the variation in oil investment's political effects, since it takes into account different prior political regimes.

Based on the existing theory, predictions can be drawn regarding the political effect of Chinese oil investment. Given that many recipient countries of Chinese oil investment possess weak state capacity, we can hardly anticipate that the effect is favorable. Instead, the oil revenues

⁸For example, Malesky (2008) finds that FDI may empower local elites and foster decentralization.

generated by Chinese investment are very likely flowing to the authoritarian leaders or traditional local elites who may in turn expend them on patronage or power consolidation.⁹ In particular, corruption is widespread in Chinese SOEs (Cheng, 2004). When going abroad, Chinese managers carry the same bribery behavior, even in Africa where corruption is considered to be prevalent (“The Chinese in Africa,” 2011). The corrupt culture combined with existing authoritarian rules in the recipient countries may further exacerbate the weak governance, resulting in a vicious circle.

The other reason why Chinese oil investment may not promote political openness or democratic governance in the recipient countries is because of its long-held “non-interference” foreign policy. Particularly towards African countries, Beijing reiterates its policy of not interfering in domestic affairs and the separation of business and politics (Taylor, 1998). This policy, however, has become a means for China to circumvent various negative issues in Africa such as autocratic rule, human rights violations, and poor working conditions. Meanwhile, China has provided arms sales to African authoritarian leaders (Wang & Zhou, 2014), which enable them to more effectively repress the opposition and to secure their power. Tull (2006) therefore concludes that China’s presence in Africa has a deleterious effect on African countries’ political development.

In addition to the economic and political effects, there is another strand of the literature that looks at the impact of FDI on political stability, and mostly indicates a pacifying effect of FDI. Gartzke, Li, and Boehmer (2001) argue that FDI reduces conflicts between states because intensifying economic linkages act as a costly signal. Brooks (1999) argues that countries can benefit from overseas economic activities and so the incentives for military conquest are reduced. Lee and Mitchell (2012) find that FDI reduces territorial disputes. All these studies emphasize the indirect effect of FDI, i.e., FDI promoting peace after helping other

⁹Indeed, some recipient countries of Chinese oil investment are solid democracies, for example Canada and Australia. The focus of this paper, however, is only on developing countries that in general have weak state capacity, and therefore the theory cannot be applied to developed recipient countries.

aspects of the society. While FDI in the oil sector may not have a spill-over effect in a society, some scholars believe that Chinese oil investment may potentially hurt political stability, especially in African recipient countries where oil money mainly accrues to the ruling elites. Carmody and Owusu (2007), for instance, argue that Chinese involvement and oil investment in Africa not only make governments less accountable to their citizens, but also intensify local conflicts. Therefore, while the focus of this paper is on economic growth and the quality of governance, I expect that Chinese oil investment may reduce political stability as well.

To sum up, based on the existing literature and the features of Chinese NOCs, I hypothesize that Chinese oil investments have distinct effects on the recipient countries' economy and politics. The influx of Chinese oil investment may help the recipient countries to develop their oil industries and thus enjoy an economic take-off. Its impact on domestic politics, however, may be unfavorable, because the extant authoritarian governance, corrupt practices, and rent-seeking behavior may intensify. It may not help to promote peace either since the oil money is usually captured by the state. Therefore, three testable hypotheses are as follows:

- Hypothesis 1:** Chinese oil investment has a positive effect on the recipient country's economic growth.
- Hypothesis 2:** Chinese oil investment has a negative effect on the recipient country's domestic governance.
- Hypothesis 3:** Chinese oil investment has a negative effect on the recipient country's political stability.

Case Studies: Sudan and Chad

At least two cases illustrate the positive economic effect and negative political effect of Chinese oil investment. The first is Sudan, which is an often-cited example in the existing literature (see, for example, Carmody & Owusu, 2007; Taylor, 2006; Tull, 2006). The other is Chad, which is less explored in the literature. In this section, I discuss these two

cases in detail with a focus on how Chinese oil investment impacts their economic and political development.

Sudan

Before Sudan started to produce oil, its economy was in a dire situation. The GDP per capita in Sudan was less than 200 dollars in the 1960s. The US multinational corporation Chevron was the first oil company to invest boldly in Sudan in the 1970s, but its operations did not go smoothly due to the frequent domestic conflicts in Sudan. Chevron withdrew in 1992 due to the insecure environment and the poor relations between Washington and the Sudanese government (Patey, 2007). Other major IOCs also hesitated to enter Sudan, which generated opportunities for small Western oil companies and state-owned oil companies from Asia. In 1996, CNPC formed a consortium, Greater Nile Petroleum Operating Company (GNPOC), with Petronas from Malaysia and started its investment in Sudan (Patey, 2007). Huge amounts of capital were poured into Sudan and helped its oil industry to grow. Thanks to oil production and Chinese investment, Sudan enjoyed an economic boom in the 2000s. Today, China is the largest foreign investor in Sudan, and the GDP per capita in Sudan is four times that in the 1990s.

Although it has a rapidly growing economy, Sudan probably has the world's most abysmal human rights record. The genocide in Darfur in 2003 took around 400,000 lives. Due to the serious human rights violations and the subsequent sanctions imposed by the United States, Western IOCs have largely divested from Sudan since 2003. China, despite the condemnation from Western countries, has kept close ties with the Sudanese government and provided weapons and other assistance (Jakobson & Zha, 2006; Taylor, 2006). China has also vetoed, blocked, or weakened UN actions that targeted Sudan. The oil revenues generated from oil production, which would not have been possible without Chinese investment, have largely financed the authoritarian Khartoum regime and helped it militarize (Chen, 2007). It is commonly believed that Beijing's refusal to force the Sudanese government to accept a UN peacekeeping deployment

is one important factor causing the worsening of Sudan's humanitarian crisis.¹⁰ So the political development in Sudan seems to have been hindered in part due to Chinese oil investment.

In 2011, South Sudan gained independence, which features an important change in Sudan, as the majority of the oil fields are located in the South. Before the 2005 Comprehensive Peace Agreement that granted South Sudan the right to hold a referendum to vote for independence or unity, oil had played a crucial role in the persistent North-South conflict in Sudan (Patey, 2010). Although the oil production in Sudan decreased after the secession of South Sudan, Sudan has still enjoyed huge oil revenues and China's role has remained largely unchanged for two reasons. First, CNPOC is still the major oil company operating in South Sudan, in which CNPC controls 40% of the stock and Sudan's state-owned oil company Sudapet owns 5% (U.S. Geological Survey [USGS], 2011). Second, South Sudan still needs technical and other assistance from Sudan in many respects, and Sudan therefore profits from assisting South Sudan. For example, the crude oil extracted in South Sudan is sold to oil refineries in the North at low prices (Patey, 2010). Oil is also transported through pipelines that are shared with Sudan and exported at Port Sudan, and South Sudan has to pay transit fees to Sudan (USGS, 2013b). Chinese investors have participated and invested in these oil infrastructures, facilities, and the port of export, so the impact of Chinese investment has not been reduced even after the separation of South Sudan and Sudan.

Chad

The other case is Chad. Chad is not a major African oil producer, but its oil production has been significantly growing in recent decades. Before Chad started to develop the oil industry, it was one of the world's poorest and most unstable countries. The average economic growth rate

¹⁰Downs (2008), however, argues that although this belief is true, Beijing's attitude was changing due to reputational concern and it no longer insisted on the separation of politics and business.

from 1961 to 2000 was less than 2%. The first oil company to enter Chad was a consortium of Chevron, ExxonMobil, and Shell, which began the operation in 2000. CNPC entered Chad in 2003, and developed close ties with the Chadian government until 2013, when both sides had disputes over the oil spill issues (IBTimes Staff Reporter, 2013). In October 2014, after a fine was paid to the Chadian government, CNPC's operations resumed (USGS, 2013a). In a media interview in December 2014, Chad's minister of oil, mines, and energy said that the bilateral relationship with China had been an important help to Chad's oil industry, especially in building the refinery (Touroumbay, 2014). Oil production contributes to economic growth in Chad. From 2001 to 2013, Chad's average economic growth reached a high of 9.5%.

Like Sudan, in spite of its economic boom, Chad's politics is characterized by corruption, rentierism, and authoritarianism. The Chadian government, particularly President Idriss Dèby, has benefited tremendously from Chinese oil investment. Royalties paid by Chinese oil companies have been largely spent on the army, which has strengthened Idriss Dèby's power internally and externally (Besliu, 2013). In fact, other international actors such as the World Bank and the International Monetary Fund have made efforts to prevent the negative political effect of oil revenues in Chad. For example, in 1999, the World Bank requested that the parliament of Chad pass a law to distribute 10% of the total revenues to a special saving fund and 90% to the national treasury, most of which should be spent on poverty reduction (Colom-Jaén & Campos-Serrano, 2013). The World Bank, however, failed to hold Chad accountable, and the saving fund was eliminated in 2005 by Idriss Dèby (Gould & Winters, 2007). As a result, even though growing oil production generates substantial windfalls to Chad, Chadian citizens gain little but only suffer from the resource curse.

The empirical evidence presented in the next section (Figure 3) shows that Chad's economy has been growing rapidly since CNPC's entry but corruption and political unaccountability have deteriorated. While both cases of Sudan and Chad illustrate the detrimental effect of Chinese oil investment on the domestic politics, these findings may not be gener-

alizable to all recipient countries. In the next section, I conduct a large-N analysis to systematically examine the economic and political effects of Chinese oil investment.

Quantitative Study: Research Design

To examine the impact of Chinese outward investment in the oil sector, ideally we should use data on the amount of oil investment across host countries. To the best of the author's knowledge, however, such data are unavailable. Alternatively, I use a simplistic, dichotomous indicator for the existence of Chinese oil investment. This measure is equal to 1 for countries in which CNPC has been operating and 0 otherwise. The data are gathered from CNPC's website, in which they list countries that have been cooperative with them and the year when the cooperation started.¹¹ Indeed, CNPC is not the only NOC in China, as the China National Petroleum Corporation (Sinopec) is comparable and the China National Offshore Oil Corporation (CNOOC) and Sinochem are also active. However, on the one hand CNPC is China's largest oil company as well as one of the world's major companies that provide oilfield service. On the other hand, to the best of the author's knowledge, only CNPC publishes the information on their overseas partners. So I believe using this measure and data source is reasonable.

Table 1 lists the 30 countries where CNPC has been present and the years in which CNPC entered. These countries are also highlighted in Figure 2. As shown, CNPC started to go out as early as 1993, investing in Canada and Thailand in that year. Then CNPC entered Latin America, Central Asia, the Middle East, and North Africa. In the 2000s, CNPC quickly expanded and invested in more than 20 countries across the world, especially in emerging oil producing countries in Africa and Asia.

¹¹ Available at <<http://www.cnpc.com.cn/en/cnpcworldwide/cnpcworldwide.shtml>> (accessed November 12, 2014).

Table 1
List of Countries with CNPC Operations

| Region | Country | Year started |
|----------------|-------------------|--------------|
| North America | Canada | 1993 |
| Latin America | Colombia | 2010 |
| Latin America | Venezuela | 1997 |
| Latin America | Ecuador | 2003 |
| Latin America | Peru | 1994 |
| East Asia | Japan | 2008 |
| East Asia | Mongolia | 2005 |
| Southeast Asia | Thailand | 1993 |
| Southeast Asia | Myanmar | 2001 |
| Southeast Asia | Indonesia | 2002 |
| Central Asia | Kazakhstan | 1997 |
| Central Asia | Uzbekistan | 2006 |
| Central Asia | Turkmenistan | 2002 |
| Eastern Europe | Russia | 2003 |
| Eastern Europe | Azerbaijan | 2002 |
| Middle East | Iran | 2004 |
| Middle East | Syria | 2002 |
| Middle East | Iraq | 1997 |
| Middle East | Qatar | 2010 |
| Middle East | Oman | 2002 |
| North Africa | Tunisia | 2002 |
| North Africa | Algeria | 2003 |
| North Africa | Libya | 2005 |
| North Africa | Sudan | 1996 |
| West Africa | Niger | 2003 |
| West Africa | Nigeria | 2006 |
| West Africa | Mauritania | 2004 |
| Central Africa | Equatorial Guinea | 2006 |
| Central Africa | Chad | 2003 |
| Oceania | Australia | 2010 |

Notes. Data are from the CNPC website and summarized by the author.

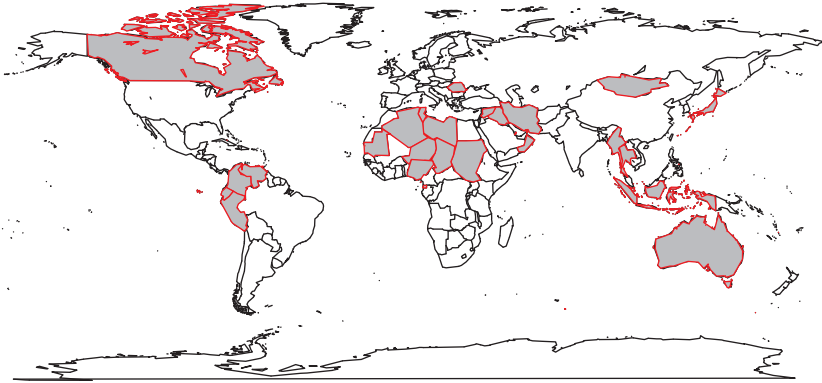


Figure 2. Map of countries with CNPC operations. Source from CNPC website.

In order to compare countries that receive Chinese oil investment with other countries, the sample includes both recipient countries and countries that have never received Chinese oil investment. The empirical analysis includes 134 developing countries from 1993 to 2012.¹² While CNPC has invested in a few developed countries, the analysis excludes developed countries because they follow a very different pattern in terms of economic and political development. As can be seen in Figure 2, after we exclude developed countries (Canada, Japan, and Australia), quite a number of the recipient countries are in Asia—Southeast and Central Asia, probably due to geographical proximity. Other recipient countries are primarily located in North and West Africa, the Middle East, and Latin America.

To test the effect of Chinese oil investment on the recipient countries' economic and political prospects, I use four outcome variables. The first one is a country's economic growth, measured by the growth rate of GDP. This measure captures the short-term economic performance of a country. The data are from the World Bank's World Development Indicators

¹²Whether a country is developed or developing is determined by its OECD status. Only OECD members are considered as developed countries.

(WDI) database. The prediction is that Chinese oil investment has a positive effect on economic growth.

To examine whether Chinese oil investment affects the host country's domestic governance, I use two variables. One is the level of corruption control, which measures the government's ability to control corruption. The other variable is the level of accountability, which measures the extent to which the government is accountable to the citizens. To test the destabilizing effect, the last outcome variable is the level of political stability. The data for these three variables are from the World Bank's Worldwide Governance Indicators (WGI) database. All these three indices range approximately from -2.5 to 2.5, with a higher value indicating a higher level of governance quality.¹³ The WGI database covers the years from 1996 to 2013, so the time period under investigation for the last three models is shorter, from 1997 to 2012.¹⁴

The case of Chad is discussed in Section 4. Here I use time-series data to show the before-after differences in the economic and political indicators in Chad as an illustrative example. The left panel of Figure 3 displays the annual GDP per capita in Chad from 1996 to 2013.¹⁵ The right panel shows the level of political accountability and the level of corruption control in Chad from 1996 to 2013. The vertical line in both panels indicates the year 2003 in which CNPC started its operations in Chad. As

¹³ According to the WGI database, the variable control of corruption “[r]eflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as the ‘capture’ of the state by elites and private interests.” The variable voice and accountability “[r]eflects perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.” The variable political stability and absence of violence/terrorism “[r]eflects perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism.”

¹⁴ Before 2002, the data are biyearly, and I supplement the data for 1997, 1999 and 2001 by using the information in the previous year. The results, however, remain the same without data for these three years. The year 1996 is dropped because a lagged outcome variable is included.

¹⁵ Although GDP per capita is different from the growth rate of GDP, the consensus is that it represents the level of economic development in a country. I use GDP per capita here to demonstrate the yearly changes in Chad's economic development.

Chinese Outward Investment in Oil

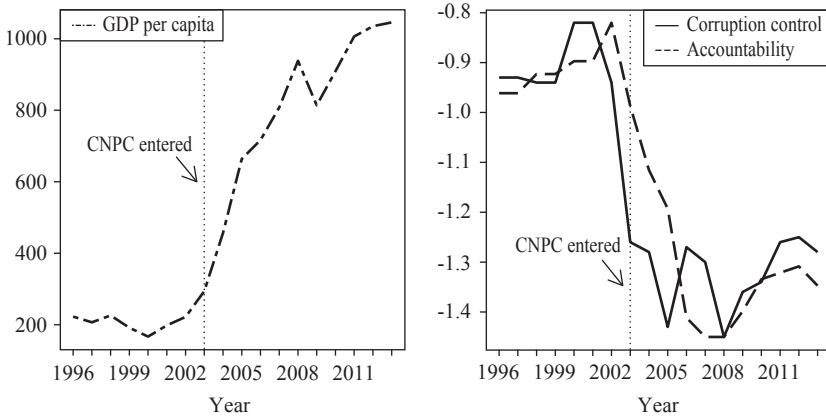


Figure 3. Changes in economic and political indicators in Chad. Source from World Development Indicators and World Governance Indicators.

can be seen in the left panel, before CNCP’s entry, Chad’s economy was quite stagnant, with GDP per capita no higher than 300 dollars. Since 2003, however, its economy has been growing rapidly, and in 2011 GDP per capita reached 1,000 dollars. On the other hand, the right panel shows that the governance quality in Chad has been declining since the early 2000s. Figure 3 provides preliminary evidence that CNPC’s presence may affect the domestic economy and politics in divergent directions.

To control for other factors that may influence economic growth and governance, I include a number of control variables in the model. The first one is the amount of proved oil reserves (in barrels). This variable is too important to exclude because it may be oil *per se* or the rents generated from oil production rather than Chinese investment in the oil sector that have led to the changes in the domestic economy and politics. The data are from BP Statistics,¹⁶ and are log transformed. The next four control variables are GDP (logged), GDP per capita (in millions of dollars),

¹⁶ Available at <<http://www.bp.com/en/global/corporate/about-bp/energy-economics/statistical-review-of-world-energy/review-by-energy-type/oil/oil-reserves.html>> (accessed November 12, 2014).

trade openness, and urbanization, which are concerned with a country's economic circumstances. These economic factors may be highly correlated with economic growth, for example with Barro's (1991) classical work showing that growth is negatively related to initial per capita GDP. Modernization theory also indicates that economic development largely conditions the level of political development (Lipset, 1959). The data for these economic variables are obtained from the WDI database. The classical work by Przeworski, Alvarez, Cheibub, and Limongi (2000) argues that a country's income grows faster in democracies. So I also include the level of democracy, measured by the standard Polity score, and regime durability, which is the number of years since the last regime change. These two variables are expected to be correlated with accountability and corruption as well. The last three explanatory variables on the quality of governance are quite persistent over time, so a lagged outcome variable is also included, which helps control for potential serial correlation.¹⁷

The data structure is time-series cross-sectional, which is a multilevel structure with the country-year as the first level of analysis and country and year as the second. All the four outcome variables are continuous measures. I thus use a multilevel linear model and include both country and year effects. Country random effects are used to control for country heterogeneity, and year random effects are used to control for contemporaneous shocks. All the explanatory and control variables are lagged one year behind the outcome variable to avoid reverse causality or simultaneous effects.

Quantitative Study: Results

Before analyzing the economic and political effects of Chinese oil investment, it would be worth exploring the pattern of the recipient countries of Chinese oil investment. Using a simple logit model in which

¹⁷However, the results remain unchanged when the lagged outcome variable is dropped.

the outcome variable is the presence of CNPC, I examine what country-level factors can better predict CNPC's decision to invest. I only use data for 2012 since the focus is on cross-national rather than time-series comparison. The explanatory variables included are primarily the control variables discussed above plus the distance to China (in kilometers). All explanatory variables are lagged one year. The sample includes 126 developing countries due to missing data in the distance variable.¹⁸

Table 2 reports the results of the model in which the presence of CNPC is the outcome variable. As it shows, the most important predicting factor of Chinese oil investment is the amount of oil reserves. This finding is not at all surprising since any IOC would prefer to invest in an oil rich country where it can profit.¹⁹ Another interesting finding, however, is that regime durability has a negative and statistically significant effect on the presence of CNPC, which implies that CNPC tends to enter unstable countries. This finding seems counterintuitive, because a stable investment environment should be one important consideration for foreign investors. The FDI literature, however, points out that even though oil rich countries often have higher political risks, they are attractive to foreign investors simply because of the high profitability (Jensen & Johnston, 2011). China as a latecomer in the global oil market is thus willing to take higher risks and to enter unstable, emerging oil producing countries, like those in Africa.

Having explored the determinants of Chinese oil investment, the focus is now turned to its impact. Table 3 presents the results of the main analyses. In Model 1, the outcome variable is economic growth. As its results show, the coefficient for Chinese oil investment is positive and statistically significant at the 90% level. In other words, Chinese oil investment does help the host country's economy to grow. Other things being equal, countries where CNPC is present enjoy a 1% higher GDP growth

¹⁸The data on the distance to China are obtained from the CEPII database. The results remain the same if the distance variable is removed.

¹⁹Biggeri and Sanfilippo (2009) also find that oil is one of the important determinants of Chinese FDI in Africa.

Table 2
Determinants of Chinese Oil Investment (in 2012)

| Outcome variable: | The presence of CNPC |
|------------------------|----------------------|
| Oil reserves (logged) | 0.216 (0.053)*** |
| GDP (logged) | -0.347 (0.261) |
| GDP per capita | -0.0001 (0.023) |
| Economic growth | -0.347 (0.261) |
| Level of democracy | -0.009 (0.066) |
| Regime durability | -0.044 (0.021)** |
| Distance to China | -0.069 (0.085) |
| Number of observations | 126 |
| Log likelihood | -34.136 |
| AIC | 84.272 |
| BIC | 106.962 |

Notes. Standard errors are in parentheses.

* $p < .1$; ** $p < .05$; *** $p < .01$.

rate than countries without Chinese oil investment. Notice that the variable oil reserves is also positive and statistically significant, which means that oil rich countries grow faster than non-oil rich countries. However, even after this variable is controlled in the model, the variable Chinese oil investment still reaches statistical significance, indicating the beneficial effect of Chinese oil investment on the economy. In addition to these two variables, countries that are more open to trade grow faster, but countries with a larger market (measured by GDP) and a higher level of economic development (measured by GDP per capita) have a lower growth rate.

Table 3
The Economic and Political Effect of Chinese Oil Investment

| Outcome variable | Model 1 | Model 2 | Model 3 | Model 4 |
|-------------------------|----------------------|---------------------|---------------------|----------------------|
| | Economic growth | Corruption control | Accountability | Political stability |
| Presence of CNPC | 1.036 (0.571)* | -0.024 (0.013)** | -0.022 (0.011)** | -0.006 (0.019) |
| Oil reserves (logged) | 0.178 (0.034)*** | -0.001 (0.001)* | -0.0005 (0.0004) | -0.0002 (0.001) |
| GDP (logged) | -0.593 (0.198)*** | -0.001 (0.003) | 0.0003 (0.002) | -0.012 (0.004)*** |
| GDP per capita | -0.141 (0.034)*** | 0.002 (0.001)*** | 0.001 (0.001)** | 0.001 (0.001) |
| Trade openness | 0.046 (0.005)*** | 0.004 (0.008) | -0.002 (0.007) | 0.024 (0.011)** |
| Urbanization | -0.002 (0.015) | 0.093 (0.022)*** | 0.021 (0.018) | 0.102 (0.032)*** |
| Level of democracy | 0.011 (0.038) | 0.001 (0.001)* | 0.007 (0.001)*** | 0.001 (0.001) |
| Regime durability | 0.013 (0.013) | 0.0003 (0.0002) | -0.0002 (0.0002) | 0.001 (0.0003)** |
| Lagged outcome variable | | 0.933 (0.007)*** | 0.936 (0.008)*** | 0.933 (0.008)*** |
| Number of observations | 2,466 | 1,987 | 1,989 | 1,989 |
| Number of countries | 134 | 132 | 132 | 132 |
| Years covered | 1993-2012 | 1996-2012 | 1996-2012 | 1996-2012 |
| Log likelihood | -7911.695 | 881.7805 | 1074.489 | -5.205 |
| AIC | 15847.39 | -1737.561 | -2122.978 | 36.409 |
| BIC | 15917.11 | -1664.834 | -2050.238 | 109.149 |

Notes. Standard errors are in parentheses.

*p<.1; **p<.05; ***p<.01.

In Model 2, the outcome variable is the control of corruption. The results show that Chinese oil investment has a negative and statistically significant effect on corruption control. This suggests that countries receiving Chinese oil investment have a higher level of corruption than

other countries. While Chinese oil investment benefits the economy, it may harm the quality of governance and foster corrupt behavior. Oil itself also has a harmful effect on corruption control, meaning that oil producing countries may be more corrupt than other countries. But even so, oil producing countries that cooperate with CNPC perform worse in terms of corruption control than other oil producing countries. Countries that are economically more developed, more urbanized, or more democratic are less corrupt.

In Model 3, the outcome variable is the level of voice and political accountability. This measure reflects the level of political participation and political freedom in a country, so not surprisingly, it is highly correlated with the level of democracy. The results, moreover, show that Chinese oil investment has a negative and statistically significant effect on accountability. Other things being equal, the level of political accountability in a country where CNPC is present is reduced by 0.022, meaning that Chinese oil investment hurts political accountability. In addition, political accountability is positively correlated with economic development. Both Models 2 and 3 indicate a detrimental effect of Chinese oil investment on the domestic politics of recipient countries.

In Model 4, to test the destabilizing effect, the outcome variable used is the level of political stability. As can be seen, the coefficient for Chinese oil investment is negative, as expected, but it does not achieve statistical significance. So we do not have sufficient evidence to say that foreign investment from China in the oil sector has an impact on political stability. While the presence of Chinese oil investment may hurt the quality of governance, it does not lead to intensified violence or promote peace. The level of oil reserves does not have any statistically significant effect either. It may be because oil has competing effects on political stability. On the one hand, it can lead to stable authoritarian regimes, but on the other it may foster civil conflicts (Morrison, 2012). Furthermore, larger markets are less stable, but trade openness or urbanization helps promote stability.

Overall, the findings in Table 3 show that Chinese oil investment has an impact on both the economy and the politics of the recipient coun-

tries. By receiving investment from China and cooperating with CNPC, a country can achieve short-term economic growth. The quality of domestic politics, however, is harmed. Not only may corrupt practices be increasing, but the government may also become less accountable to the citizens. The findings are consistent with the conclusion in Alves (2013) that Chinese oil investment in Africa helps the local economy to take off but brings a negative impact in other dimensions.

One may suspect that the effects discovered here are not unique to oil investment from China. After all, oil has strategic and economic importance. To secure a sustainable oil supply and to pursue the geopolitical goal, Western countries may also cooperate with authoritarian leaders in oil producing countries and ignore the political and social conditions in these countries. McFerson (2010), for example, argues that the weaknesses of political institutions in Africa cause the theft of revenues from natural resources that are extracted by foreign companies, which accelerates political repression. To test whether oil investment from Western countries carry similar effects, I replace the variable Chinese oil investment with a variable indicating Western oil investment. This variable is equal to 1 for country-years where ExxonMobil has been operating and 0 otherwise. ExxonMobil is chosen because it is currently the largest Western oil company (and ranked number 4 in the world) and also because its website provides information on their worldwide operation locations.²⁰

Table 4 presents the results when the presence of ExxonMobil is used as the main explanatory variable. As Model 1 shows, the effect of Western oil investment on economic growth is positive and statistically significant. Countries in which ExxonMobil is present grow faster than other countries. This effect, moreover, is larger than the effect of Chinese

²⁰ Available at <<http://corporate.exxonmobil.com/en/company/worldwide-operations/locations>> (accessed February 5, 2015). ExxonMobil has operations in more than 50 countries. For some countries, there is no information on the year when ExxonMobil entered, so I use 1990 as the entry year. The results remain unchanged when I try other different years.

Table 4
The Economic and Political Effect of Western Oil Investment

| Outcome variable | Model 1 | Model 2 | Model 3 | Model 4 |
|-------------------------|----------------------|---------------------|----------------------|----------------------|
| | Economic growth | Corruption control | Accountability | Political stability |
| Presence of ExxonMobil | 3.125 (0.724)*** | -0.006 (0.011) | 0.009 (0.009) | -0.0002 (0.016) |
| Oil reserves (logged) | 0.143 (0.036)*** | -0.001 (0.001)** | -0.001 (0.0004)** | -0.0003 (0.001) |
| GDP (logged) | -0.765 (0.206)*** | -0.001 (0.003) | -0.0002 (0.002) | -0.012 (0.004)*** |
| GDP per capita | -0.154 (0.034)*** | 0.002 (0.001)*** | 0.001 (0.001)** | 0.001 (0.001) |
| Trade openness | 0.045 (0.005)*** | 0.004 (0.008) | -0.002 (0.007) | 0.024 (0.012)** |
| Urbanization | 0.005 (0.016) | 0.089 (0.022)*** | 0.023 (0.018) | 0.102 (0.032)*** |
| Level of democracy | 0.010 (0.038) | 0.001 (0.001)* | 0.007 (0.001)*** | 0.001 (0.001) |
| Regime durability | 0.009 (0.013) | 0.0003 (0.0002) | -0.0001 (0.0002) | 0.001 (0.0003)** |
| Lagged outcome variable | | 0.935 (0.007)*** | 0.938 (0.008)*** | 0.933 (0.008)*** |
| Number of observations | 2,466 | 1,987 | 1,989 | 1,989 |
| Number of countries | 134 | 132 | 132 | 132 |
| Years covered | 1993-2012 | 1996-2012 | 1996-2012 | 1996-2012 |
| Log likelihood | -7903.966 | 879.935 | 1072.818 | -5.387 |
| AIC | 15831.93 | -1733.87 | -2119.636 | 36.774 |
| BIC | 15901.66 | -1661.143 | -2046.896 | 109.514 |

Notes. Standard errors are in parentheses.

* $p < .1$; ** $p < .05$; *** $p < .01$.

oil investment shown in Table 3. This means that foreign investment in oil helps the economy in the recipient countries, and this helpful effect may be stronger for investment from Western oil companies. From Models 2 to 4, as can be seen, the presence of ExxonMobil has no statistically

significant effect on governance or political stability, suggesting that the harmful effect of oil investment on governance only comes from Chinese oil companies, not Western oil companies. Western oil investment may not promote political development in the recipient countries as neoliberalists claim, but it does not worsen the situation either.²¹

The other quibble may be that this analysis does not distinguish between democracies and non-democracies. If a recipient country is already a consolidated democracy in which political institutions function soundly, then the inflows of Chinese oil investment may not be able to change the status quo. Indeed, this may be true in OECD countries where China invests, such as Japan, Canada, and Australia. As can be seen in Table 1, however, none of the developing recipient countries of Chinese oil investment is a country with long-established democratic institutions. Among them, Indonesia is considered to be a democracy since 1999, and is often cited as a successful case that has escaped the economic resource curse (e.g., Dunning, 2005; Ross, 2012). The evidence shown in Sovacool (2010), nevertheless, indicates that Indonesia, despite being free from the resource curse, still suffers from some political problems such as corruption and a lack of transparency. So I believe there is no need to segregate democracies from the sample, as no recipient country of Chinese oil investment is a *de facto* consolidated democracy.

Discussion and Conclusion

As a rising power, China has maneuvered and exerted its diplomatic and economic influence in the global society. Its increasing outward investment in oil is one of the endeavors to act as a global player. How

²¹I also run four additional models in which both Chinese oil investment and Western oil investment enter simultaneously as explanatory variables. The results remain unchanged. Both sources of oil investment have a positive effect on economic growth, but only Chinese oil investment has a negative effect on political accountability and corruption control.

Chinese oil investment affects the recipient countries is nevertheless rarely studied. This paper examines the economic and political consequences of Chinese oil investment. Using a dichotomous measure of the presence of CNPC, I find that countries in which CNPC has been operating are more likely to have a faster growing economy but less likely to have good governance, including corruption control and political accountability. The beneficial economic effect is not unique to Chinese oil investment, as the presence of ExxonMobil also leads to economic growth. The harmful political effect, however, seems to solely come from Chinese oil investment, and not from Western oil investment.

The implications of this paper for international development are twofold. First, the evidence suggests that Chinese oil investment has a helpful economic effect. While the international society is uncertain of the economic and political consequences of the rise of China, China does emerge as an important actor in the global economy. So the international society should be positive about the fact that Chinese investment helps promote economic development in these young oil producing countries. Second, the proponents of neoliberalism believe that economic integration helps political development as well. FDI has thus been used as a tool by Western countries to promote democratization or to punish uncooperative governments in the developing world. Chinese outward investment, however, is oftentimes seen as flowing to failed states or aberrant leaders, as in the cases of Sudan and Chad. So while it helps recipient countries to get out of poverty, we may be pessimistic about its impact on democratic governance in these countries.

While this paper is the first to empirically test the economic and political effects of Chinese oil investment, the empirical results only show the short-term effects. As China entered the global oil market later than other players, the long-term effect cannot be detected this soon. Whether Chinese oil investment leads to longstanding economic and political development should be left for future research. In addition, one goal of China's oil diplomacy in Africa is to secure oil provision (Taylor, 2006). Whether this goal is achieved or whether oil investment in emerging oil producers helps China maintain energy security remains to be answered.

While oil production in these recipient countries is increasing, China still needs oil supplies from other oil producers.²² So future work may involve examining the relationship between Chinese oil investment and China's energy security.

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²²Currently, the largest oil exporter to China is Saudi Arabia, where CNPC is not operating.

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