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THE GREAT LEAP ABROAD

AN ECONOMETRIC ANALYSIS OF CHINA'S GLOBAL QUEST FOR ENERGY SECURITY

MASTER'S THESIS

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ABBREVIATIONS

CIC	– China Investment Corporation
CDB	– China Development Bank
CNOOC	– China National Offshore Oil Company
CNPC	– China National Petroleum Corporation
EBL	– Energy-backed loans
EIA	– United States' Energy Information Association
FDI	– Foreign direct investment
GDP	– Gross domestic product
IEA	– International Energy Agency
IMF	– International Monetary Fund
IOC	– International oil company
KPMG	– Klynveld, Peat, Marwick and Goerdeler (Consultancy)
M&A	– Mergers and acquisitions
NOC	– National oil company
OECD	– Organisation for Economic Co-operation and Development
OFDI	– Outward foreign direct investment
OLI	– Ownership, location, and internalization paradigm
SOE	– State-owned enterprise
SWF	– Sovereign wealth fund
US	– United States
USD	– US Dollars

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1. INTRODUCTION

On May 21, 2014 Chinese president Xi Jinping and Russian president Vladimir Putin inked an agreement that will supply China with 38 billion cubic feet of natural gas for the next thirty years for a staggering 400 billion US Dollars (USD) (Downs, 2014). Putin called the deal, which is the biggest in Russia's history of selling natural gas, an 'epochal event' (Perlesz, 2014). The international press agrees with the usage of superlatives, but they are less positively connoted: the agreement is seen as the latest in a series of events in which China buys up hydrocarbons to fuel its economy (Helman, 2014; Lain, 2014; Perlesz, 2014). The sheer size of the deal and the constellation of two autocratic powers distributing limited natural resources amongst them, reinforces the popular perception that China is taking unconventional ways to secure its energy supply. Its global quest for energy has led Chinese investors from Angola to Brazil, Canada, Kazakhstan, and beyond.

Investing in overseas energy sectors is Beijing's primary response to China's decreasing energy security (Ploberger, 2013). While abundant in coal resources, the cleaner fuel gas is crucial for Xi to succeed in his 'war on pollution' (Downs, 2014). Crude oil, on the other hand, is indispensable for China's transport sector and thus for its whole economy (Goldthau, 2010, p. 28; Leung, 2011). In October 2013, the People's Republic inherited the United States' (US) title as the world's oil importer number one (British Broadcasting Corporation, 2013). In 2035, China's oil dependence rate – indicating the ratio of domestic supply to necessary imports – is projected to be at 84.3% (Zhang Z. X., 2011).

These numbers are of great concern to the man and woman in Zhongnanhai (中南海), the government district next to the Forbidden City: the stability of China's political system heavily depends on consistent growth and the ability to deliver a better future to millions of Chinese not yet lifted out of poverty. Securing energy thus also means securing regime survival. The importance of China's global quest for oil and gas can hence not be overestimated.

Chinese policymakers have stated that oil in particular is 'too important to be left to the market' (Downs, 2009, p. 78). The US embargo in the 1950s to 1970s forcing China to abstain from selling its back then abundant oil resources, likely reinforces Beijing's emphasis on self-sufficiency and its distrust in the 'open' international market (Tunsjø, 2013)

In its 'great leap abroad' (Hook, 2012) China is thus perceived as changing the rules of the game: first, the three Chinese national oil companies (NOCs) have access to preferential financing options, which leave powerful international oil companies (IOCs) with envy (Organisation for Economic Co-operation and Development (OECD)/ International Energy Agency (IEA), 2011). Second, the hardly transparent Chinese sovereign wealth fund 'China Investment Corporation' (CIC) has changed its strategy to predominantly invest in energy resources instead of financial services (Sun, Li, Wang, & Clark, 2014; Wu, Goh, & Hajela, 2011). Third, the China Development Bank (CDB) is extending energy-backed loans to non-democratic countries like Venezuela and Turkmenistan at conditions that the World Bank and International Monetary Fund (IMF) cannot match (Downs, 2011a). This thesis seeks to analyze these three actors' - the NOCs', CIC's and CDB's - investments in overseas gas and oil assets.

Abroad, these Chinese investment have been met with different attitudes. Venezuela has warmly welcomed Chinese investments and has in 2012 without a hitch doubled an earlier loan allowance from 4 to 8 billion USD (Wang, 2013). When one of the Chinese NOCs, the China National Offshore Oil Corporation (CNOOC), attempted to buy the US-American oil company Unocal in 2005, it had to withdraw its offer due to US national security concerns (Zhang A. H., 2014 (forthcoming)). Canada, whose oil company Nexen was in 2013 acquired by CNOOC for a staggering 17.4 billion USD (Deloitte, 2013, p. 3), is showing signs of resource nationalism. After the successful acquisition, the government set out future guidelines for takeovers, indicating Canada was open for business, but not for sale (Payton, 2012). Non-governmental organizations are worried about the socio-economic consequences of Chinese investment in oil sectors and the contribution to climate change by China's continued reliance on fossil fuels (Friends of the Earth, 2012). The question this thesis thus seeks to answer is: What factors explain Chinese investment in overseas oil and gas assets?

It is argued that host country factors have predictive value for the completion of Chinese investment in overseas oil and gas assets, as well as for the value of such deals. Using this thesis' unique dataset, which accounts for 198 states worldwide and the time period 1999-2012, four hypotheses are tested by performing ordered logit regression and Tobit regression analyses. Anticipating the results, the five main findings are presented here. For unambiguous interpretation, note that 'Chinese investment' refers to investment in overseas oil and gas assets. First, contrary to the impression obtained from media reports quoted above, Chinese investment is more likely to be accepted in states with institutional designs ranking higher in terms of institutional quality. Second, rentier states, whose leaders politically depend on the control over natural resources, do not take the expected defensive stance towards Chinese investments. Instead, a host country's oil dependence is positively related to not only deal completion per se, but also to the amount of money invested. Gas dependence, on the other hand, is not significant in any of the models presented here. Third, Chinese investment is not only more likely, but also granted in higher volumes, in states that rank higher in terms of creditworthiness. Fourth, the financial crisis has provided all three Chinese investors - the NOCs, CDB, and CIC - with an opportunity to increase chances of deal completion as well as the amount invested. Fifth, separate analyses for Asia indicate that Chinese investment follows different patterns in its regional neighborhood, highlighting the need for further research to build on this thesis.

2. LITERATURE REVIEW

This thesis relates to two streams of existing literature, namely studies of Chinese outward foreign direct investment (OFDI) and energy security. The former and its econometric analyses will be addressed first; thereafter qualitative studies on Chinese energy security are reviewed. Overall, the existing literature provides a mixed picture on the explanatory factors of Chinese OFDI in general, and in oil and gas assets in particular.

Since 1993 when China became the developing country attracting most foreign direct investment (FDI) (Cheng & Ma, 2008), scholars have paid heightened attention to investment flowing to China. However, the literature on China as a provider of FDI is

much less developed. At the latest when China announced it's 'Going-Out' strategy in 1999, which encourages OFDI on a large scale (Fladrich, 2012), academics, policy makers and businesspeople alike took note of the historic shift in global FDI flows. While developed countries have for a long time invested in developing countries, the latter are now joining the game and provide OFDI themselves (Banga, 2007; Cohn, Multinational Corporations and Global Production, 2011; Nicholson & Salaber, 2013; Yadong, Qiuzhi, & Binjie, 2010).

In this context, Chinese OFDI has received heightened attention. According to Zhang's study of psychological heuristics and cognitive biases (2014 (forthcoming)), Western audiences have reacted with undue fear towards Chinese OFDI. Zhang argues that the 'awe, fear and scepticism' (Zhang A. H., 2014 (forthcoming)) with which China's re-rise has been met, can be easily manipulated by special interest groups. She argues that US-American reactions to CNOOC's attempted acquisition of Unocal do not represent thorough deliberation, but rather reflexes triggered in the face of lacking information on Chinese OFDI (Zhang A. H., 2014 (forthcoming)).

It is under these circumstances that scholars started asking the central question: Is Chinese OFDI different than OFDI from developed countries? (Bing, Hao, & Ying, 2012; Buckley, et al., 2009; Child & Rodrigues, 2005; Kolstad & Wiig, 2012; Milelli & Sindzingre, 2013) The point of reference is frequently provided by Dunning's eclectic 'OLI' paradigm (Dunning, 1981; Dunning, 2001). It holds that firms seek internationalization because they can exert a certain comparative advantages in ownership, location or internalization ('OLI') when engaging in the new market. In discussing how Chinese OFDI might be different, scholars have especially focused on ownership and location aspects. Aiming for brevity, only the econometric analyses related to this thesis' independent variables - a host country's institutional design, its dependence on oil and gas, its creditworthiness, and the financial crisis - are reviewed. First, the three Chinese NOCs at the heart of this thesis qualify as state-owned enterprises (SOEs). There is a scholarly consensus that the prominent involvement of SOEs in Chinese OFDI alters investment allocation (Amighini, Rabellotti, & Sanfilippo, 2013; Buckley, et al., 2009; Cheng & Ma, 2008; Ramasamy, Yeung, & Laforet, 2012). In two empiric assessments private Chinese firms have been found to act more in a market-seeking manner than SOEs, while the latter are attracted by large

natural resources (Amighini, Rabellotti, & Sanfilippo, 2013; Ramasamy, Yeung, & Laforet, 2012). However, there are conflicting results regarding SOEs preference of a host country's institutional quality (Amighini, Rabellotti, & Sanfilippo, 2013; Ramasamy, Yeung, & Laforet, 2012).

Secondly, this mixed picture remains when one extends the sample towards all Chinese OFDI flows, thus including private firms and SOEs. Buckley et al. (2009) find that Chinese OFDI is preferentially directed towards states performing poorly on a scale of political risk. Using the same index from the International Country Risk Guide, Cheung and Qian (2009) find that this relationship does not persist when the sample is divided in developing and developed host countries. The authors further find that resource-seeking motives apply to both country groups. This finding is in accordance with Buckley et al (2009). Kolstad and Wiig (2012) take this research a step further and discern an interaction effect between a host country's large resources and its low institutional quality, which is conductive for Chinese OFDI. In disaggregating their resource variable, they suggest that petroleum, in connection with poor institutions, is one driving factor of Chinese OFDI.

In the study most similar to this thesis, Qian (2012) analyses Chinese OFDI directed to 29 'conventional oil producing countries'. Applying Tobit regression analysis, Qian finds that a host country's 'energy abundance', 'measured as the return in dollar units from the energy output (crude oil, natural gas, and coal) scaled by a host country's gross national income' (Qian, 2012, p. 383) is not a significant predictor for Chinese OFDI. He further detects that OFDI is preferentially invested in countries with low political risk, which is operationalized as a very comprehensive variable encompassing six risk indices from the International Country Risk Guide.

While not investigating OFDI in the energy sector particularly, a study of Zhang, Zhou and Ebbers (2011) enhanced the scholarship through the usage of different, better data, retrieved from the Thomson One database. While more detail on Thomson One is provided in the chapter on research design, it should be mentioned that it encompasses attempted and withdrawn OFDI deals as well. Based on this data, the authors find that low institutional quality, encompassing seven indices from the International Country

Risk Guide, is associated with a lower likelihood of completing a cross-border acquisition.

The literature on Chinese energy security, which is reviewed below, complements the econometric analyses in three aspects: It analyses the actor quality of the investor 'China', energy-backed loans as well as investments by the SWF.

First, there is general consensus among scholars that China faces a dire future with regards to energy security (Chen, 2010; Institute for 21st Century Energy, 2011; Tan, 2013; Wensheng & Bluth, 2013; Zhang J. , 2011). Oil, which already Morgenthau (1963) identified as particularly important to a state's power, has become China's 'Achilles' heel' (Goldthau, 2010, p. 28) according to scholars and Chinese politicians. (Chen, 2010; Leung, 2011; Ploberger, 2013; Wensheng & Bluth, 2013). As Economy and Levi aptly emphasize in the title of their book, 'By all means necessary' (2014), China is putting to use all available tools to increase its energy security, reaching from diplomacy to OFDI. Focusing on the latter, it would be oversimplifying to conceive of 'China's' OFDI investment abroad as coordinated actions effectively alleviating its energy security problem. While the three Chinese NOCs are state-owned, the literature suggests that investment decisions feature a complex intermingling of state interests put forward by the politburo and profit-seeking interests of the NOCs, as well as the banks financing NOCs' activities (Bo, 2009a; Downs, 2009; Liou, 2009). In studying the seemingly sudden introduction of a fuel tax in China, Bo (2009b) presents evidence that the China National Petroleum Corporation (CNPC) wrote the new law rather than the politburo. This complex principle-agent structure is the result of China's incremental progress towards a market economy (Chen, 2009). In 2007, Downs estimated that while the NOCs need financial and diplomatic support from the government, 'when it comes to choosing where to invest, the companies are almost always in the driver's seat' (2007, p. 48). This could explain mixed results for market- and resource-seeking Chinese OFDI in the energy sector.

Second, similar observations have been made about China's energy-backed loans. Under Chen Yuan, the CDB has increased its efficiency tremendously and assigns high priority to earning positive returns (Downs, 2011a). A case study of energy-backed loans in Angola and Brazil suggests that Chinese investment is most likely to be granted

in countries with political circumstances similar to the People's Republic's (Alves, 2013).

Third, the least researched aspect of Chinese attempts at securing energy are the investments made by the SWF China Investment Corporation. Very recently, some entrepreneurial, descriptive analysis has been provided and its findings are contradicting: On the one hand, it is argued that shifting assets from the financial to the energy sector was a necessity of the financial crisis. On the other hand, Chinese energy security is identified as a driving force (Sun, Li, Wang, & Clark, 2014). Concurrently, the authors report that the domestic Chinese debate is not yet settled on whether CIC makes strategic or commercial investment decisions. The US Congressional Research Service (Martin, 2010) has suggested that CIC invests more in emerging markets due to protectionist attitudes in the US and Europe. Increased transparency has been advised to counter skepticism and 'hostility' towards CIC (Wu & Seah, 2008).

Drawing on this existing literature, a theory of Chinese investment in overseas oil and gas assets is formulated below.

3. TOWARDS A THEORY OF CHINESE INVESTMENT IN OVERSEAS OIL AND GAS ASSETS

This thesis seeks to answer the following research question: 'What factors explain Chinese investment in overseas oil and gas assets?' To build a theory answering this question, first the context of China's global quest for energy security and its 'Going Out' policy is introduced, followed by a delineation of 'Chinese investment' and investors. In a third step, the hypotheses are formulated.

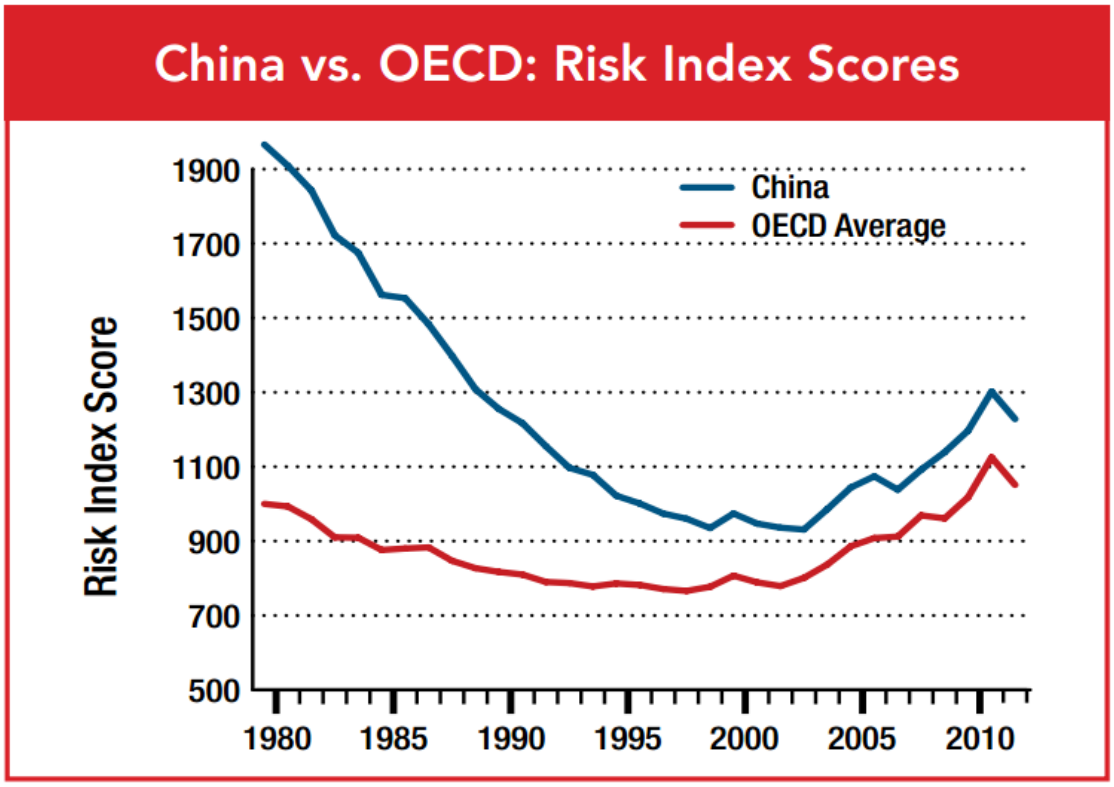
3.1 THE CONTEXT OF CHINA'S QUEST FOR ENERGY SECURITY AND ITS 'GOING OUT' POLICY

3.1.1 CHINA'S DECLINING ENERGY SECURITY

Energy security can be defined as the 'reliable supply at affordable prices in the case of consuming nations and as reliable demand at sustainable prices in the case of producing nations.' (Goldthau, 2010, p. 26) The Institute for 21st Century Energy (2013) has

transformed this concept into an index comprised of 29 indicators to produce Energy Security Risk Scores for countries worldwide. As can be seen from Figure 1, China's energy security risk is not only higher than the OECD average, but it is also rising sharply since 1999. Therefore, this year marks the beginning of the research period, which ends at the end of 2012 for reasons of data availability as described in the research design.

Figure 1: China's Energy Security Risk Score, 2013.



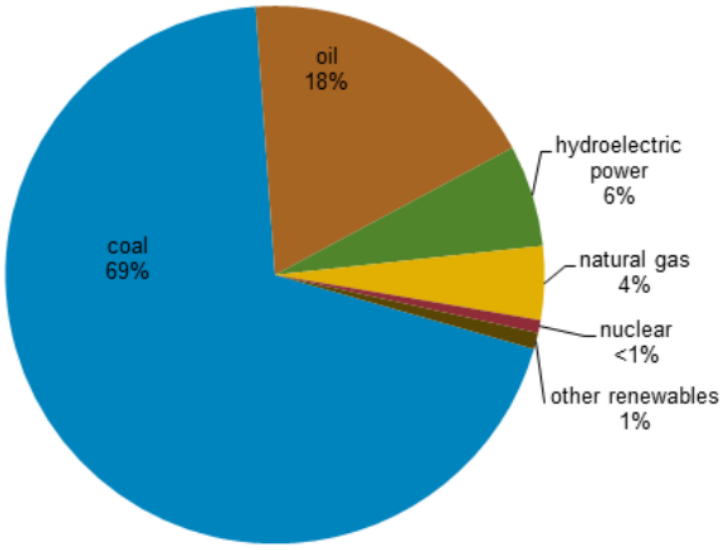
Source: Institute for 21st Century Energy (2013, p. 20).

While energy subsumes everything from coal, to nuclear or alternative energy, the focus here lies only on two energy resources: The first is oil, China's 'Achilles heel' (Goldthau, 2010, p. 28). Until 1993, China's was a net exporter of oil. Twenty years later, in 2013, it overtook the US and became the world's biggest oil importer (British Broadcasting Corporation, 2013). In 2035, China's oil dependence rate – indicating the ratio of domestic supply to necessary imports – is projected to be at 84.3% (Zhang Z. X., 2011). Contrary to popular perception, it is not so much the Chinese industry per se which needs oil to further uphold growth, rather oil can in the mid-term not be

substituted in the transport sector (Leung, 2011), 'the global economy's primary enabler' (Korin & Woolsey, 2008). Regardless of this differentiation, there remains a strong connection between regime survival and oil supply as the stability of China's political system heavily depends on consistent growth and the ability to deliver a better future to millions of Chinese not yet lifted out of poverty. Oil supply security thus ranks high on Beijing's agenda.

The second resource to be included in the analysis is natural gas. There are three reasons to do so. First, China seeks to significantly increase the natural gas' share in its energy mix, which is depicted in Figure 2, from 4% in 2011 to 10% in 2020 (EIA, 2014). Natural gas is envisioned to become the substitute of coal, reducing China's CO_2 emissions significantly. President Xi has recently reiterated this strategy when declaring his 'war on pollution' (Downs, 2014). However, demand for the cleaner fuel has already in 2007 outgrown domestic supply (EIA, 2014).

Figure 2: China's Energy Mix, 2011.



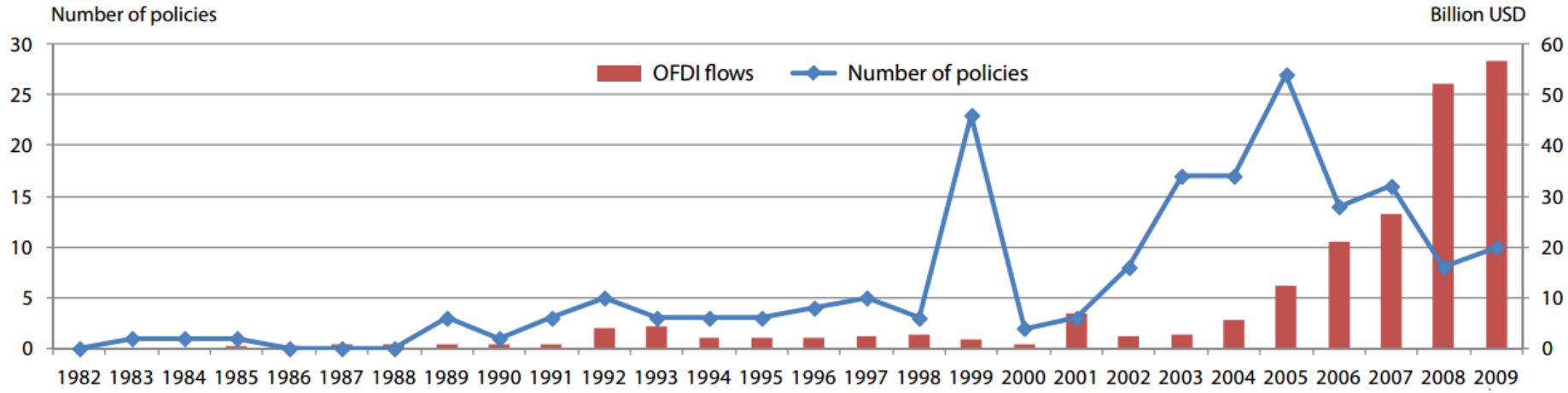
Source: EIA (2014).

Second, the natural gas market is changing rapidly thus offering business opportunities and demanding scholarly attention. Contrary to oil, natural gas is not traded on a global market, instead it is due to the necessary pipeline infrastructure traded on separate Eurasian, Asian and North-American markets. However, liquidization of natural gas is becoming more widespread and could proof to be a game changer, establishing a global LNG market in the long run (Goldthau, 2010, p. 40). Third, China's NOCs, which are central to this thesis, are engaged in oil and gas business at the same time.

3.1.2 CHINA'S 'GOING OUT' POLICY AND A SHORT INTRODUCTION TO OFDI

Whether coincidently or not, 1999 marked not only the turning point in China's energy security, but also Beijing's announcement of the so-called 'Going Out' (走出去) policy. It marks the latest development in China's policy towards OFDI in general. As Figure 3 indicates, China has come a long way from strictly limiting OFDI to embracing it.

Figure 3: China's OFDI Flows and the Number of OFDI Policies.

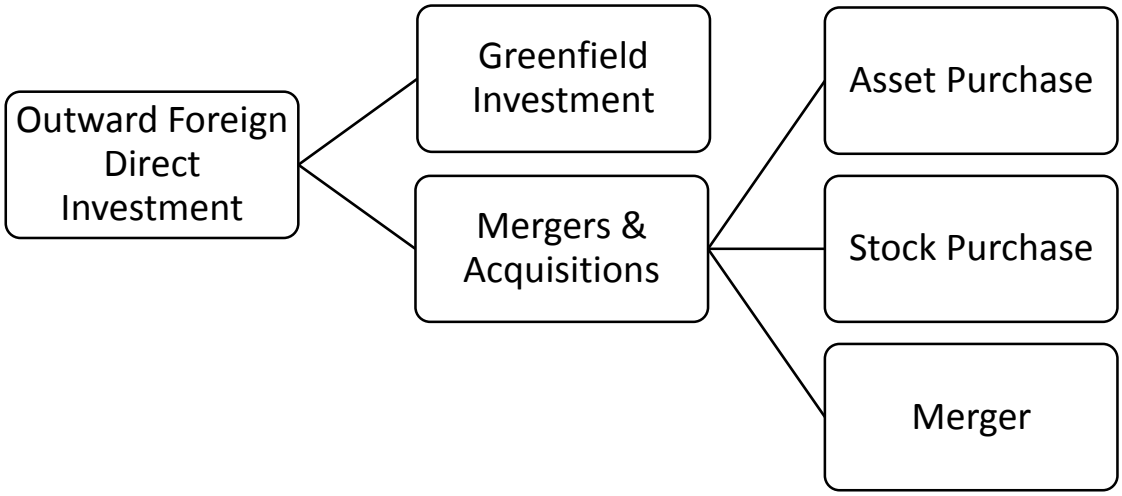


Source: Clipping from Figure 4 'China's outward foreign direct investment policy development and flows, 1982-2009' in (Huang & Wilkes, 2011, p. 6)

The ‘Going Out’ policy is designed to encourage a range of outbound investments made by private Chinese and state-associated entities. But this policy is only a means to an end, or more precisely to four objectives: first, to increase supply for highly demanded natural resources by investing abroad; second, to promote export by investment in manufacturing; third, to foster collaborative projects in the area of research and development; and, fourth, to pursue mergers and acquisitions (M&As) to increase market share and expertise of Chinese firms (Andreff, forthcoming). It follows from this list, that the increase of Chinese OFDI is central to the ‘Going Out’ policy and thus to this thesis. Consequently, a short introduction to OFDI is given below.

OFDI is ‘[t]he purchase or establishment of income-generating assets in a foreign country that entails the control of the operation or organisation’ (The Financial Times Ltd, 2014a). The crucial question what constitutes 'control' has been authoritatively answered by the OECD. According to its guidelines, a buyer exercising control owns at least 10% of the voting power in the target company (OECD, 2008, p. 23).

Figure 4: Different Forms of Outward Foreign Direct Investment.

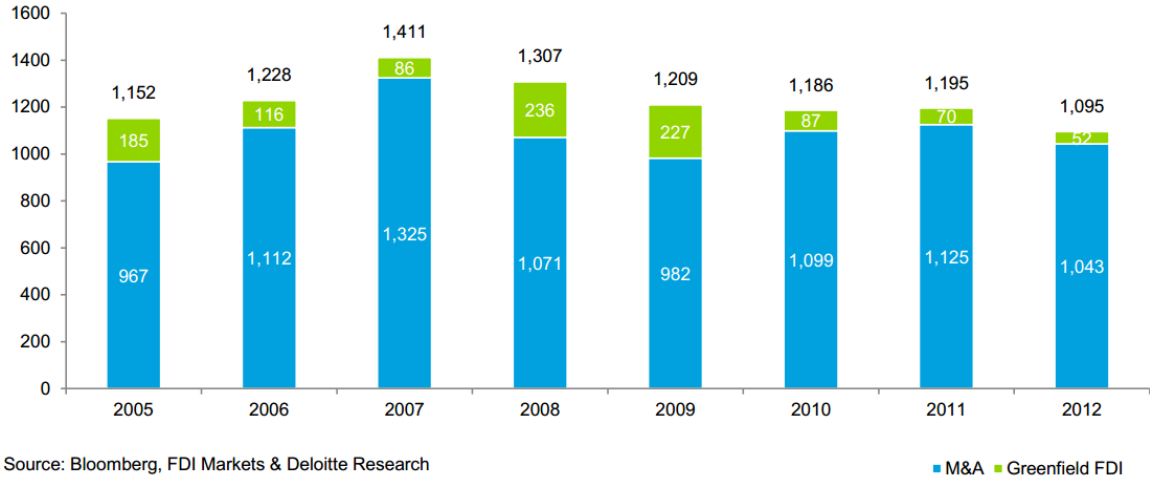


Source: Author’s own presentation.

When an acquiring entity, for instance a Chinese NOC, engages in OFDI, it can do so in two ways: First, it can opt for Greenfield investments, which refer to the genuine creation of assets in the host country (The Financial Times Ltd, 2014a). This form of OFDI has in the past decade occurred less often than the second form, mergers and acquisitions (M&A) (Cohn, 2011, p. 251). This trend is also mirrored in the industry

researched in this thesis. Figure 5, indicates the ratio of Greenfield investments to M&As in the oil and gas industry worldwide between 2005-2012. Based on this and the four objectives of the 'Going Out' policy outlined above, which specifically emphasize the pursuance of M&As, this thesis will limit the analysis of FDI to M&As.

Figure 5: Global Oil and Gas Greenfield Investments and M&A's by Volume, 2005-2012.



Source: Deloitte (2013, p. 5).

While the name 'merger and acquisition' suggests a straightforward concept, presumably subsuming either the merging of two companies to a new legal entity or alternatively the complete acquisition of one entity by another, M&As are actually more complex. As seen in Figure 4, M&A's come in three forms: mergers, assets purchases and stock purchases.

When a merger takes place, at least two companies are combined to form one legal entity. However, true mergers represent less than 1% of foreign acquisitions (The Financial Times Ltd, 2014a). Instead an acquired company is frequently given the opportunity to publicly present the acquisition as a merger to save its reputation (The Financial Times Ltd, 2014a; The Financial Times Ltd, 2014b).

Acquisitions can come in two forms, stock purchases and asset purchases (Sherman, 2010, p. 122ff.) Importantly, not 100% of stocks or assets need to be bought for an acquisition to take place. In an asset purchase, the buyer can cherry-pick those assets,

which it is particularly interested in, e.g. a natural gas field owned by the target company. This allows for the possibility of leaving unwanted liabilities with the target company (Morgan, Lewis & Bockius LLP, 2009). This option is, contrastingly, not given when an M&A takes the form of a stock purchase. Here, assets and liabilities are sold in one package, increasing the risk for the buyer and forgoing the option of cherry-picking. (Morgan, Lewis & Bockius LLP, 2009).

3.2 CHINESE INVESTMENT AND INVESTORS

3.2.1 CHINESE INVESTMENT

Having laid out the basics of OFDI, the phenomenon this thesis seeks to explain, 'Chinese investment', can be introduced: it refers to the decision of overseas state or private actors to allow for investment by Chinese state-backed investors in their natural gas and/ or oil assets in a certain host country. The decision-makers in these international deals are likely to be state-associated themselves, as about 90% of global oil reserves are controlled by NOCs (The Economist, 2013). The Chinese state-backed investors, however, require more elaboration.

3.2.2 CHINESE STATE-BACKED INVESTORS

In the context of this thesis, three kinds of Chinese state-backed investors are considered. First are the three Chinese NOCs: China National Offshore Oil (CNOOC), China National Petroleum Corporation (CNPC), and Sinopec. All three of them were founded in the 1980s by transforming two government ministries into the state-owned enterprises (Houser, 2008, p. 145). Despite this common origin, there is fierce competition between the companies as each of them is trying to build its empire (Zhang A. H., 2014 (forthcoming), p. 59). To do so, engaging in the international market is crucial: the domestic market is not very profitable for the NOCs as the Chinese government is setting a non-market based price for refined oil products like gasoline (Downs, 2009, p. 79). Consequently, Chen (2011, p. 34) estimates that in 2006 about two-thirds of oil pumped by Chinese NOCs overseas, was sold on the international market. Note, that this does not indicate an effective increase of China’s energy security.

Especially by expanding their overseas business, all three NOCs made it into the exquisite circle of the most revenue-rich companies worldwide. Sinopec and CNPC made it in the top 5 of the 'Fortune Global 500' in 2013, with CNOOC being number 93 (Fortune, 2013). Together with private Chinese oil and gas companies the three NOCs have in 2009 accounted for 61% of all acquisitions by NOCs worldwide (OECD/ IEA, 2011, p. 10). In this thesis, 'Chinese investment' originating from the three NOCs is taken into consideration if its FDI takes the form of M&As, for reasons explained above.

The second type of Chinese state-backed investors considered here is the Chinese sovereign wealth fund (SWF) China Investment Corporation.[1] As one of the few SWFs worldwide its reserves do not originate with the extraction of natural resources. Instead its wealth springs from the foreign currency reserves earned by trade. Consequently, CIC was founded in 2007 to diversify the Chinese foreign exchange. In its first years of existence, CIC invested predominantly in the US financial services industry, which due to the financial crisis, turned out to be ill-timed. For profit-maximizing reasons, but also given the significant political backlash at home, in which CIC was accused of 'squandering state money on foreign ventures' (Wu, Goh, & Hajela, 2011, p. 127), CIC had to change its strategy. Investing predominantly in energy and natural resources was the strategy of choice (Sun, Li, Wang, & Clark, 2014; Wu, Goh, & Hajela, 2011). In this analysis, portfolio investments of CIC are not of interest given the lack of control over assets acquired. Instead, the focus of attention lies, as in the case of NOCs, on the M&A deals pursued.

The third and last Chinese investor to be introduced falls in a different category, as it provides foreign investment, but not OFDI: The China Development Bank. As the People's Republic's biggest policy bank, CDB is designed to be 'the bridge between the strategic objectives of the Chinese government and the commercial activities of Chinese firms' (Downs, 2011a, p. 58). However, it would be oversimplifying to

[1] According to the SWF Institute, China possesses four SWFs: the China-Africa Development Fund, the China Investment Corporation, the National Social Security Found and the State Administration of Foreign Exchange (SAFE) Investment Company. However, as has been pointed out by Sun et al. (2014), only CIC fulfils the definition of SWF as used in the Santiago Principles, the newly emerging standard for SWFs.

characterize CDB as a provider of never-ending cash flows. Under Chen Yuan CDB has reduced its non-performing loans from 42.65% to under 1% (Downs, 2011a, p. 12; Downs, 2011b, p. 45). In the context of energy security, CDB fulfills two main functions. On the one hand, it provides the three NOCs with low cost financing. On the other hand, and of interest here, it issues energy-backed loans (EBLs) to overseas countries. While China has not invented this mode of investment (Alves, 2013), loans issued by CDB have drawn increased public attention to them. EBLs issued by CDB are distinguished from commercial loans not only in their enormous size, but also in their long terms, and short negotiation periods (Downs, 2011b, p. 43). It is however important to note that EBLs do not literally work along the lines of 'oil for money'. Instead, '[t]he loans are secured by revenue earned from the sale of oil [or gas] at market prices to Chinese national oil companies' (Downs, 2011a, p. 1). These companies then deposit their payments for the hydrocarbons in a bank account at CDB, from which fees and interest are paid. These EBLs will in this analysis be referred to as 'Chinese investment', too.

3.3 EXPLANATORY FACTORS AND HYPOTHESES

On the basis of the information about context, investment, and investors given above, four hypothesis are formulated in this section. They seek to explain the decision of overseas state or private actors to allow for investment by Chinese state-backed investors in their natural gas and/ or oil assets in a certain host country.

As outlined above, profit-oriented NOCs are supposedly in the 'driver's seat' when choosing investment locations (Downs, 2007, p. 48), further, CDB and CIC also perceive profit-maximization as part of their maxim. It is thus assumed that these actors will choose to invest in countries promising high returns. This consideration gains importance as investments once made are hardly undone (Jensen, 2003) and facilities for resource extraction tend to be immobile.

Potential host countries are in constant competition for attracting FDI as it is in many cases a welcome support for their domestic economy. It provides capital, employment, and transfers technology, to name just a few benefits. A main category in which potential host countries differ, is their institutional design: states can take on a wide

range of institutional designs ranking from autocratic to democratic institutional quality. Research has presented an ambiguous picture on which institutional design is more conductive for FDI attraction. Anticipating what follows below, it will here be argued that Chinese investment in oil and gas assets is more likely to be granted, the lower the institutional design of a host state ranks in terms of institutional quality. Below three possible causal mechanisms are laid out.

First, there is empirical evidence that states of democratic institutional design have in total received more GDP (Bauerle Danzman, 2013; Bloningen, 2005; Globerman & Shapiro, 2009; Jensen, 2003). It has been suggested that the protection of property rights is more likely given in democracies (Olson, 1993; Jensen, 2003; Nieman & Thies, 2012). This is due to the judicial independence in democracies (Olson, 1993; Nieman & Thies, 2012) and governments being unlikely to renege completed deals. Democratically elected governments do not only face audience costs when they renege completed deals, they are also less likely to do so given the high number of veto players encountered (Jensen, 2003). In other words, multinationals are looking for reliability and predictability in a host country. If this is the case, then Chinese investors, too, will prefer to invest in more democratic states to secure returns on their investments.

But China is a late-comer on the international OFDI market (Child & Rodrigues, 2005). As described above, it was only in 1999 that China started encouraging OFDI, after it had even explicitly forbidden OFDI in former times (Fladrich, 2012), as seen in Figure 3. Since the turn of the century, however, China's OFDI has been constantly increasing and has created displacement effects for OFDI of OECD countries. Importantly, this is not the case for resource-rich countries (Yao & Wang, 2014). A possible reason why China has not driven out OECD country's investment in resource-rich countries is that facilities for resource extraction tend to be immobile. Once an investment is made, it is not easily un-done. It is thus presumed that China's late-comer status on the international oil market necessitates it to operate in less attractive business environments, which are not yet occupied by other NOCs or IOCs. In fact, OECD/ IEA (2011, p. 37) use the word 'leftovers' to describe the assets unwanted by IOCs and picked up by Chinese NOCs in the early phases of their existence. These less attractive business environments are associated with institutional designs ranking low in terms of institutional quality. One could then theorize that the preferential financing options of

Chinese NOCs allow them to mitigate the risk of potential financial losses encountered in these host countries.

Second, the research of Daude and Stein (2007) provides the basis for another possible causal mechanism. The authors have put aside the democracy – autocracy cleavage and analyzed the predictive value of the twelve indicators of institutional design and political risk used by the International Country Risk Guide (The Political Risk Services Group, 2012) for FDI flows. While many of the indicators proofed insignificant, the 'unpredictability of laws, regulations and politics,' as well as 'government instability' (Daude & Stein, 2007, p. 317) are significantly deterring OFDI. There are two things to be noted about this finding. On the one hand, it is consistent with multinationals' preference for reliability and predictability as introduced in the first causal mechanism. On the other hand, government stability and predictable 'laws, regulations and politics' (Daude & Stein, 2007, p. 317) are not exclusively found in host states with democratic institutional design.

According to Daude and Stein (2007), a further, very interesting, significant factor for deterring FDI is an 'excessive regulatory burden'. In their recent research, Dorsch, McCann and McGuirk (2014) take up this thought and find: 'In designing policies to attract investment, leaders face a tradeoff between lowering taxes, which reduces rents, and lowering regulation, which diminishes popular support' (Dorsch, McCann, & McGuirk, 2014, p. 16). Coming back to the question of institutional design, the authors judge that the level of accountability, or in other words the constraints on the executive, determines how leaders decide when facing this trade-off: 'autocrats can afford to offer firms low levels of regulation, whereas the more constrained democratic leader must offer lower taxes to attract FDI' (Dorsch, McCann, & McGuirk, 2014, p. 16). It could be reasoned that regulations are of particular importance when it comes to the extraction of natural resources like oil and gas. High environmental standards necessitating multinationals to account of natural capital used, for instance, are according to this theory less likely to be found in autocratic states. This reasoning is in accordance with O'Donnell who already in the 1970s/ 1980s argued that autocratic states have more leeway to protect foreign investors as they face less overt pressure from the population than democracies do (O'Donnell, 1978; O'Donnell, 1988).

Third, an alternative causal mechanism is presented by Goldthau (2010). He holds that China can invest in countries for which investment is discouraged for Western firms, e.g. Sudan and Zimbabwe. Grauvogel and van Soest's (2013) research on global sanctions between 1990 and 2011 suggests that these states are more likely to rank low in terms of institutional quality.

On the basis of these three possible causal mechanism the first hypothesis is formulated:

Hypothesis 1: The lower the institutional design of a host country ranks in terms of institutional quality, the more likely Chinese investment in oil and gas assets is granted.

The second hypothesis draws on the functional logic of rentier states. Rentier states are characterized by their reliance on revenues from natural resources for regime perseverance (Ross, 2011). Building an efficient taxing mechanism is not necessary given the rents from natural resources (Tilly, 1985). Hence, leaders' ability to stay in power depends on the control over natural resources. Granting investment to Chinese state-backed actors could lessen control and would as such not be politically desirable. Zhang, Zhou and Ebbers (2011) find that Chinese OFDI – regardless of the sector – is less likely to succeed if the 'target' is considered sensitive for national security. This suggests that states being largely dependent on oil or gas for regime survival will be less likely to grant Chinese investment. For the purpose of this thesis, rentier states are identified by the percentage of oil or gas revenues of gross domestic product (GDP).

Hypothesis 2: The higher the percentage of oil or gas rents of GDP, the less likely Chinese investment is granted.

The third and fourth hypotheses assume that financial liquidity affects the decision to allow for investment in the oil and gas sector, which is potentially important to national security. Private and/ or public actors with control over the oil sector are driven by the need for credit to either sustain the private company or the state. If credit cannot easily be obtained in the market due to the low ranking of creditworthiness, Chinese investment will be attractive. Thus hypothesis 3 holds:

Hypothesis 3: The lower a host country's creditworthiness, the more likely Chinese investment is granted.

The effect of the ongoing financial crisis, which started in 2008, is expected to be similar. As a consequence of the financial crisis, the spot market price for oil, to which the gas price is indirectly coupled, plummeted (OECD, 2014). As a consequence, revenues of companies in the oil and gas industry decreased. Given that there are high upfront costs for exploration, which is essential for keeping up business, the industry faced a serious financial problem. Figure 6, provided by Klynveld, Peat, Marwick und Goerdeler (KPMG International) (2009), illustrates the mismatch between the Brent oil price, an important indicator at the oil market, and the oil industry's rising costs. Given this development, Chen Yuan, governor of CDB, drew the following conclusions:

> 'We should think about what China really needs. I've considered this. Natural gas and oil are the resources that China currently has the most pressing need for. So, we should take advantage of the financial crisis. In the past, these energy producing countries could raise capital on the western capital market. But now they are in a difficult situation because they can't raise capital from the West. […] Therefore, we should grasp this opportunity to do deals.' (凤凰卫视 (Phoenix TV), 2009)

Importantly, Chen Yuan did not only refer to his own bank, but also to Chinese enterprises, including NOCs. This leads to the formulation of hypothesis 4:

Hypothesis 4: Since the onset of the financial crisis in 2008, Chinese investment is more likely to be granted.

Figure 6: Brent Oil Price and Oil Industry's Cost Inflation.

Source: KPMG International (2009, p. 2)

4. RESEARCH DESIGN

In accordance with the hypotheses presented, this thesis examines the effect of four explanatory factors associated with the recipient countries on 'Chinese investment': institutional design, oil and gas rents, creditworthiness, and the financial crisis. As outlined above, the analysis limits itself to examining the timespan 1999-2012 for 198 states worldwide. Domestic Chinese investments are excluded from the analysis.

This study thus provides a significantly more comprehensive sample than Qian (2012) chose in his closely related study. He preselected 29 'conventional oil producing countries' to analyze the inflow of Chinese OFDI (Qian, 2012). Studying Appendix B with the list of included countries, disadvantages of this sampling become apparent. For instance, Canada is not included. This country recently saw the conclusion of China's so far largest M&A deal through the acquisition of the oil and gas company Nexen for 17.4 billion USD (Deloitte, 2013, p. 3). Especially given this particular deal's value, that Qian's data do not account for, the generalizability of his study is limited. Hence, this thesis will not preselect a sample, but instead analyze the whole population of potential host states for Chinese investment to allow for generalizability of Chinese investment in overseas oil and gas assets.

4.1 CHINESE INVESTMENT

To increase this thesis' added value, 'Chinese investment' is considered in two dependent variables. The first one, labeled 'Investment Ordinal', assesses the question of deal completion. It asks whether Chinese investors have articulated interest in investing in a certain host country or not, and whether deals were completed. Consequently, this first version of the dependent variable features ordinal units of measurement, which can take on three values: (0) no attempt of investment reported; (1) investment attempted; and (2) investment completed.

Importantly, oil and gas assets are broadly understood in this thesis. They do not only subsume e.g. securing rights to explore an oil well, but for instance also a merger and acquisition with a company specialized in advance drilling machines.

The second dependent variable, labeled 'Investment Scale', reports the value of the investment made in a certain host country in millions of USD. Thus, it uses ratio units of measurement ranging from a minimum investment of 0 to a maximum investment of 20600 million USD.

As conceptualized above, Chinese investment can originate from three alternative sources: 1) M&A deals struck by the three Chinese NOCs, 2) M&A pursued by CIC, and 3) EBLs issued by CDB. This information is included in the analysis through three dichotomous variables: 'NOC's Mergers & Acquisitions', 'Sovereign Wealth Fund', and 'Energy-backed Loans'. Hence, each deal is coded (1) for the category it belongs to, and (0) for the two others.

In what follows, data collection for these actors' investments is presented.

4.1.1 NOC'S MERGERS & ACQUISITIONS

Data paucity is a serious problem when it comes to Chinese OFDI. In earlier studies, data from the annually published Almanac of China's Foreign Economic Relations and Trade has been used (Buckley, et al., 2009; Cheung & Qian, 2009).While the Almanac provides data since 1984, it only captures aggregated OFDI per country and only those investment flows, which have been instigated by Chinese multinationals and approved by the Chinese government. It will thus very likely underreport OFDI (Cheung & Qian, 2009, p. 318ff.) and hence does not provide an appropriate source of data if generalizations are to be made about non-approved OFDI.

Cheng and Ma (2008) addressed this shortcoming and utilized a different set of data published by the Chinese Ministry of Commerce. Since 2003, the ministry discloses the actual, and not only the approved, OFDI flows and stocks per country in the Statistical Bulletin of China's Outward Foreign Direct Investment. These data are complying with the reporting standards put forward by the OECD and IMF. It also provides the basis of

the Chinese OFDI data reported by the United Nations Conference on Trade and Development (UNCTAD) (2014), which has been used by Kolstad and Wiig (2012).

In the paper most similar to this thesis, Qian (2012) analyzes Chinese OFDI directed to 29 ‘conventional oil producing countries’. Problematically, he pieces his data together from the approved OFDI flows from the Almanac for the years 1991-2005 and the actual OFDI flows reported in the Statistical Bulletin in the years 2003-2007. Both do not only measure different phenomena, but also follow a different methodology. In fact, the Statistical Bulletin changes its definitions of OFDI again in 2008, which limits Qian's research period to 1991-2007 (Qian, 2012).

This thesis seeks to avoid these weaknesses in design. To do so, it follows the approach of Zhang, Zhou and Ebbers (2011) and utilizes the Thomson One database. Formerly called SDC Platinum, the database is the financial industries' standard for gaining information on M&As, syndicated loans, private equity and other forms of financial deals. Collecting information from English and foreign news sources and trade publications, the US Securities and Exchange Commission and its equivalents, Thomson One comprises over 900 000 M&A deals dating back to the 1970s (Thomson Reuters, 2014). This thesis utilizes Thomson One's data on M&As exclusively. As opposed to other sources of OFDI data quoted above, this database provides firm-level information. Thus OFDI flows are disaggregated and allow for analysis of the oil and gas sector in particular. The range of information Thomson One provides on an average deal includes, amongst others, the acquiring company, the target company, and the value of the deal to a short history of the M&A at hand, to the current status of the deal.

As indicated above, the dependent variables necessitate a specific focus on the value of the deal and its current status. For the dependent variable ‘Investment Ordinal’ Thomson One's status labels have been transformed according to Table 1 below.

Table 1: Coding Rules for Thomson One 'Status'

Thomson One 'Status'	*Investment Ordinal*
[no data]	(0) – no attempt of investment reported
dis rumor	(1) - investment attempted
intended	(1) - investment attempted
pending	(1) - investment attempted
rumor	(1) - investment attempted
status Unknown	(1) - investment attempted
withdrawn	(1) - investment attempted
completed	(2) - investment completed

Source: Author's own presentation.

M&A data have been extracted for the three Chinese NOCs and their majority-owned subsidiaries, as well as their listed arms like CNPC's PetroChina. To ensure data reliability, the Heritage Foundation's China Global Investment Tracker (2014) has been used for double-checking. If the Heritage Foundation, which provides a comparatively small dataset and only records deals over 100 million USD, indicated a deal not covered by Thomson One, the Factiva database has been used to confirm the deal and its details.

4.1.2 SOVEREIGN WEALTH FUND

Given CIC's lack of transparency (Wu & Seah, 2008), data for the SWF's M&A deals was hard to obtain. First, all annual reports (China Investment Corporation, 2014) were consulted in which only selected deals are presented. Second, the obtained data was compared and complemented with secondary literature on CIC (Chong Siew Keng, 2012; Martin, 2010; Sun, Li, Wang, & Clark, 2014)

The report by the Congressional Research Service (Martin, 2010) proved to be particularly helpful. While significant effort was put into collecting the data for CIC, there are two limitations to the obtained data: First, the author has less confidence in the completeness of these data when compared to data obtained for NOCs. This is a necessary consequence of CIC's lack of transparency. Second, and with regard to the

above introduced dependent variable ‘Investment Ordinal’', all of CIC's M&A deals fall into the categories 'investment completed' or 'no investment attempt reported'. Information on withdrawn, rumored or otherwise attempted deals could not be obtained.

4.1.3 ENERGY-BACKED LOANS

These two limitations also apply to the third kind of Chinese investment, the energy-backed loans. Similarly to CIC, CDB business lacks transparency. Further, annual reports do not provide disaggregated data on loans (China Development Bank, 2013). The absolute number can also not serve as an indication, as not all loans are energy-backed. Consequently, secondary literature had to be used for data collection. The works of Downs (2011a; 2011b) are outstanding in this respect, as she clearly is the expert on the topic. Friends of the Earth (2012), as well as Gallagher, Irwin and Koleski (2012) provided complementing data. However, all of the consulted works only included EBLs up until 2011. Thus Factiva was used to search for EBLs in 2012.

4.2 INSTITUTIONAL DESIGN

In contrast to other studies on Chinese OFDI flows (Buckley, et al., 2009; Cheung & Qian, 2009; Qian, 2012; Zhang, Zhou, & Ebbers, 2011), this thesis will not utilize the International Country Risk Guide (The Political Risk Services Group, 2012) to operationalize 'institutions'. These papers are formulated from a finance perspective and by the term 'institutions' actually refer to factors influencing political, financial, and economic risk (The Political Risk Services Group, 2012). The study of international relations informing this thesis acknowledges the bigger picture and 'brings the state back in' (Evans, Rueschemeyer, & Skocpol, 1985). As laid out in hypothesis 1, 'institutional design' here indicates a state's position on the spectrum between democracy and autocracy. The essential feature of institutional design, as understood here, then is the constraint on the executive. Hence, Polity IV will be used for operationalization as it focuses specifically on this aspect (Marshall, Gurr, & Jaggers, 2013, p. 15).

A possible alternative dataset for operationalizing institutional design would have been ‘Freedom in the World’, the annual report of the Non-Governmental Organization

‘Freedom House’. Given accusations of ideological bias, especially towards socialist regimes, and a lack of replicability, the more academic dataset Polity IV is preferred (Hadenius & Teorell, 2005).

For the purpose of the thesis, the latest Polity IV dataset including country data up to 2012 is used (Marshall, Gurr, & Jaggers, 2013). This is the reason for limiting the research period, which starts in 1999, to 2012, as mentioned above. Polity IV provides an empirical assessment of almost all countries’ institutional design in the world over time, dating back until 1800 (Marshall, Gurr, & Jaggers, 2013). This thesis specifically utilizes Polity IV’s indicator ‘POLITY2’. Like the original indicator ‘POLITY’, it ranges from -10 for fully developed autocracy to +10 for fully developed democracy. In ‘POLITY2’, however, cases of foreign interruption, interregnum, or transition are not coded as -66, -77, and -88 respectively. Instead they are converted to values between -10 to 10 to allow for an inclusion on the original scale, this consequently decreases the number of essentially missing values. To create a non-negative variable, the scale has been converted by adding 11 to each value. Further, to normalize distribution, the obtained values have been log transformed.

4.3 OIL AND GAS RENTS

Abundance of natural resources has been of interest in earlier studies of Chinese OFDI (Buckley, et al., 2009; Cheung & Qian, 2009; Kolstad & Wiig, 2012). However, these papers seek to measure the potential for revenue to be derived by the investor. Thus they chose operationalizations like ‘the ratio of ore and metals to merchandise exports of a host country’ as used in Kolstad and Wiig (2012); or ‘the share of fuels exports to total merchandise exports’ in the work of Cheung and Qian (2009).

Hypothesis 2 does not assess resource abundance per se, but the dependence of a host state on oil and/or gas. Following the work of Ross (2011), this dependence is best expressed as the percentage of oil or gas rents of GDP. These values are derived from the World Bank’s dataset ‘The Changing Wealth of Nations’ (World Bank, 2011). The indicator ‘NY.GDP.PETR.RT.ZS’ expresses oil rents as ‘the difference between the value of crude oil production at world prices and total costs of production’ (World Bank, 2014) and its percentage of a country’s GDP. Indicator ‘NY.GDP.NGAS.RT.ZS’

measures natural gas rents accordingly (World Bank, 2014). Both variables have ratio units of measurement and had to be log transformed to normalize distribution. Unfortunately the 'Changing Wealth of Nations' dataset has not been updated since 2011, limiting the time span for which the relationship between Chinese investment and percentages of oil and gas revenues of GDP can be tested.

4.4 CREDITWORTHINESS

The creditworthiness of potential host countries is assessed through credit rating agencies. This could be disputed as it has been shown that credit rating agencies are not only lacking transparency, but are also biased (Fuchs & Gehring, 2013). Having said this, they remain the key actors to influence states' ability to obtain credit in the financial market by issuing sovereign credit ratings. Ideally, this thesis would have utilized time series data for the three major credit rating agencies Standard & Poor's, Moody's Investors Service and Fitch Ratings. While these are generally available through Bloomberg Professional Service, access could not be obtained via the university. Hence, the second best option has been chosen, which is to utilize Standard & Poor's publicly available assessment history (Standard & Poor's Rating Services, 2013). Given the high correlation coefficient of 0.97 to 0.99 found between different agencies sovereign credit ratings (Ratha, De, & Mohapatra, 2011), it is expected that the loss of information is acceptable.

Naturally, Standard & Poor's historic sovereign credit ratings do not cover the whole population of states analyzed for the period 1999-2012. This is due to some states remaining without sovereign credit ratings, while others only were rated comparatively recent, and yet again others were dropped again from the list of rated states. From the obtainable sovereign credit ratings, the 'sovereign foreign currency recovery ratings' have been chosen for operationalization as they express Standard & Poor's 'opinion on the extent to which a sovereign government will be able and willing to repay nonofficial foreign currency debtholders post-default.' (Standard & Poor's Rating Services, 2013, p. 6) Hence, this is the indicator of interest to foreign investors.

Following the work of Fuchs and Gehring (2013), Standard & Poor's sovereign foreign currency recovery ratings have been transformed to an ordinal scale using Table 2

below. Importantly, the historic time series from Standard & Poor's only document changes in ratings and in some cases there are several changes per year. As the dataset of this thesis only allows for one entry of creditworthiness per year, the given rating ranking lowest in Table 2 has been coded for. Finally, the data have been log transformed to ensure a more normal distribution.

Table 2: Coding Rules for Standard & Poor's Sovereign Foreign Currency Recovery Ratings.

Standard & Poor's rating	*Numerical scale*
AAA	21
AA+	20
AA	10
AA-	18
A+	17
A	16
A-	15
BBB+	14
BBB	13
BBB-	12
BB+	11
BB	10
BB-	9
B+	8
B	7
B-	6
CCC+	5
CCC	4
CCC-	3
CC	2
C	1
SD	1
D	1

Source: Author's own presentation based on Fuchs and Gehring (2013).

4.5 FINANCIAL CRISIS

As put forward in hypothesis 3, it is expected that Chinese investment is more likely granted in host countries since the onset of the financial crisis in 2008. Therefore a dichotomous variable has been introduced, which codes (0) for the years of 1999-2007, and (1) for the years 2008-2012.

4.6 DESCRIPTIVE STATISTICS

Table 3 provides the descriptive statistics for the variables operationalized above.

Table 3: Descriptive Statistics Chinese Investment

	Observations	*Mean*	*Standard Deviation*	*Minimum*	*Maximum*
Investment Value	2709	95.275	876.732	0	20600
Investment Ordinal	2709	0.111	0.439	0	2
Institutional design (log)	1571	1.982	0.419	0	2.303
Oil Rents (log	1888	1.039	1.349	0	4.402
Gas Rents (log)	1898	0.546	0.859	-0.095	4.313
Creditworthiness (log)	1459	2.573	0.462	0.693	3.091
Financial Crisis	2709	0.438	0.496	0	1
NOC's Mergers & Acquisitions	2709	0.539	0.226	0	1
Energy-backed loans	2709	0.006	0.074	0	1
Sovereign Wealth Fund	2709	0.010	0.975	0	1

Source: Author's own calculations.

5. ANALYSIS

To assess the effect of the explanatory factors, regression analyses have been performed. Given the different nature of the two dependent variables, 'Investment Ordinal' and 'Investment Scale', separate statistical models were chosen adequately.

The variable 'Investment Ordinal', which assesses the question of deal completion, features an inherent ranking and values can fall into more than two categories. Hence, analysis can best be performed by using either ordered probit regression or ordered logit regression. While similar in the function they perform, logit is chosen over probit due to having slightly flatter tails and allowing for more digestible interpretation in log odds, or as used here, in odds ratios.

Table 4: Explaining Chinese Investment in Overseas Oil and Gas Assets, 1999-2012: Main Models.

	Ordinal	*Ordinal*	*Ordinal*	*Ordinal*	*Ordinal*	*Scale*	*Scale*	*Scale*	*Scale*	*Scale*
	Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*	*Model 8*	*Model 9*	*Model 10*
Institutional design (log)	6.127 (4.423)*	15.927 (13.252)**	1.276 (1.349)	35.004 (34.886)***	55.687 (61.694)***	2198.702 (1566.275)	3075.096 (1690.405)	-1558.655 (1387.321)	3659.197 (1636.443)	3717.858 (1703.932)
Oil Rents (log)	3.412 (0.6227)***	4.358 (0.895)***	2.945 (0.884)***	4.113 (0.8765)***	4.103 (0.896)***	2527.656 (486.915)***	2629.735 (498.897)***	1717.796 (469.021)***	1951.278 (425.598)***	2044.064 (444.082)***
Gas Rents (log)	0.808 (0.199)	0.916 (0.238)	0.560 (0.296)	0.959 (0.250)	1.017 (0.265)	-173.211 (518.769)	4.448 (517.509)	-325.731 (715.696)	101.377 (425.811)	202.092 (444.498)
Credit-worthiness (log)	3.189 (1.241)**	2.780 (1.141)*	0.995 (0.425)	2.720 (1.237)*	2.053 (0.940)	2034.585 (732.874)**	1238.385 (715.946)	953.209 (729.368)	1074.264 (629.858)	800.3977 (653.762)
Financial Crisis		7.722 (2.856)***	5.013 (2.638)**	6.597 (2.441)***	5.819 (2.175)***		3696.874 (825.489)***	3344.830 (960.011)**	2596.545 (671.136)***	2589.341 (703.879)***
NOC's Mergers & Acquisitions			322.489 (172.232)***					7040.191 (1010.100) ***		
Energy-backed loans				1.71e+09 (1.15e+13)					7291.574 (1465.602) ***	
Sovereign Wealth Fund					2.24e+09 (1.05e+13)					5889.117 (1169.594) ***
Constant						-18114.27 (4124.526) ***	-20089.600 (4351.594) ***	-10167.110 (3517.483) **	-18873.210 (3986.792) ***	-18753.380 (4138.797) ***
Observations (censored)	699	699	699	699	699	699 (647)	699 (647)	699 (647)	699 (647)	699 (647)
Log-likelihood	-219.747	-199.465	-99.438	-189.172	-178.48	-604.690	-589.555	-535.605	-577.484	-575.740
LR Chi2	63.280	103.840	303.890	124.430	145.800	50.910	81.180	189.080	105.320	108.810
Probability > Chi2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pseudo R2	0.126	0.207	0.604	0.248	0.290	0.040	0.064	0.150	0.084	0.086

Source: Author's own calculations. Ordinal models: odds ratios with standard errors in brackets. Scale models: coefficients with standard errors in brackets.
* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

The second dependent variable, 'Investment Scale', ranges from 0 to 20600 million USD. As the dataset features 198 states in the world and China has not invested in the majority of them, a significant number of countries are coded as zero. Thus, the data are left-censored as 'Investment Scale' does not take on negative values and zero serves as a threshold. To take this restriction into account Tobit regression analysis is utilized. As Maddala (1983) has pointed out, Tobit regression analysis should only be used if in theory the censored variable could take on values beyond the given threshold. In the data used here, this is easily imaginable: deals might be withdrawn after completion, as recently happened in Iraq (Economist Intelligence Unit, 2014), or the amount invested can be reduced ex-post. While the data used here do not capture this information, it is conceivable that 'Chinese Investment' could take on negative values. Hence, it is legitimate to use Tobit regression analysis.

For both statistical models, ordered logit regression and Tobit regression analysis, multicollinearity of independent variables is not a reason of concern. The test performed yielded variance inflation factors in the range of 1.04 - 2.21, which are well below the critical threshold of 10.

The results of both the ordered logistic regression and the Tobit regression analysis are presented in Table 4. Models 1 and 2 will be addressed as the 'basic ordinal models', while models 6 and 7 are called 'basic scale models'. The discussion of the results follows the order of the hypotheses put forward. Thereafter follows a short discussion of Chinese investment in Asia specifically.

5.1 PRESENTATION OF THE MAIN MODELS AND FINDINGS

5.1.1 INSTITUTIONAL DESIGN

A central finding of this study is that institutional design is highly significant for investment to be completed. Importantly, however, the effect is contrary to the expected. In basic ordinal model 1, which does not take into account the financial crisis, a one unit increase in the logged scale of institutional design raises the odds of Chinese investment to be completed by 6.127. Accounting for the financial crisis, the odds are increased by 15.927 to bring deals to a successful closure, given a one unit increase in

the logged scale of institutional design. These findings are, however, not replicated in the basic scale models 6 and 7: Institutional design is not significant for determining the amount of million USD invested. However, comparing the log-likelihood and the Pseudo R^2 for the basic ordinal and scale models, caution is warranted not to rely on the scale models excessively for explanation as they only account for 4% and 6.4% of variance in the model. Contrastingly, log-likelihood and Pseudo R^2 of the basic ordinal models 1 and 2 are encouraging trust in the findings.

These results stand in strong contrast with allegations that Chinese state-backed investors are decidedly propping authoritarian leaders by investing in their oil and gas businesses specifically (Downs, 2009; The Economist, 2008; Zhang A. H., 2014 (forthcoming)). While singular cases like investment in Venezuela might nurture this popular perception, the data analyzed here do not show such a pattern.

Further, this finding indicates that Chinese state-backed actors, too, prefer to invest in institutional designs ranking higher in terms of institutional quality. This is accordance with the literature on democracies attracting more FDI (Bauerle Danzman, 2013; Bloningen, 2005; Globerman & Shapiro, 2009; Jensen, 2003). The tendency of institutional design ranking lower in institutional quality to offer less regulatory burdens to foreign investors thus do not seem to significantly impact Chinese investors' reasoning.

Further, the obtained results contradict the findings by Buckley et al (2009), while they are concurrent with Qian's analysis (2012). The other side of the coin is that host states ranking higher in terms of institutional design have also allowed for deals to be completed. The fear and anxiety evolving around the Unocal case is thus an outlier. This finding is contrary to the findings of Zhang, Zhou and Ebbers (2011), who had analyzed the whole range of Chinese OFDI for deal completion and found it to be more likely to occur in institutional design ranking lower in institutional quality.

Taking a closer look at the three different Chinese investors, energy-backed loans issued by CDB and investments by CIC comply with the findings above: as seen in models 4 and 5, and significant at the 0.001 level, the odds that investment is completed increase by 35.004 and 55.687 for CDB and CIC, if a one unit increase in the log

transformed scale of institutional design occurs. There is, however, no significant effect of the latter change, when the value of investment is assessed, as in models 9 and 10.

In her case study of energy-backed loans issued by CDB and the China Export-Import Bank to Brazil and Angola, Alves (2013) finds that less liberal, more centralized states - thus ranking lower in terms of institutional quality - are more suitable for Chinese energy-backed loans. While notably, also loans issued by the China Export-Import Bank are included, this thesis raises doubts about the generalizability of this case study.

Looking at model 3 and Chinese NOCs' M&As in particular, a divergence from the findings reported above is notable: Institutional quality is not significantly related to the completion of NOCs' deals in either the ordinal or the scale model. This finding potentially provides support to the reasoning that SOEs' preferential financing options allow them to pay less attention to political risk, thus altering their allocation of resouces (Amighini, Rabellotti, & Sanfilippo, 2013; Buckley, et al., 2009; Cheng & Ma, 2008; Ramasamy, Yeung, & Laforet, 2012). As such, it is conceivable that OECD/ IEA (2011, p. 37) have occasionally observed Chinese NOCs picking up 'leftovers' from the IOCs in risky environments associated with lesser quality of institutional design. While this might have been an entry strategy or accounts for singular cases, 'picking up leftovers' is not a general pattern observed here as otherwise the odds ratio would have been negative.

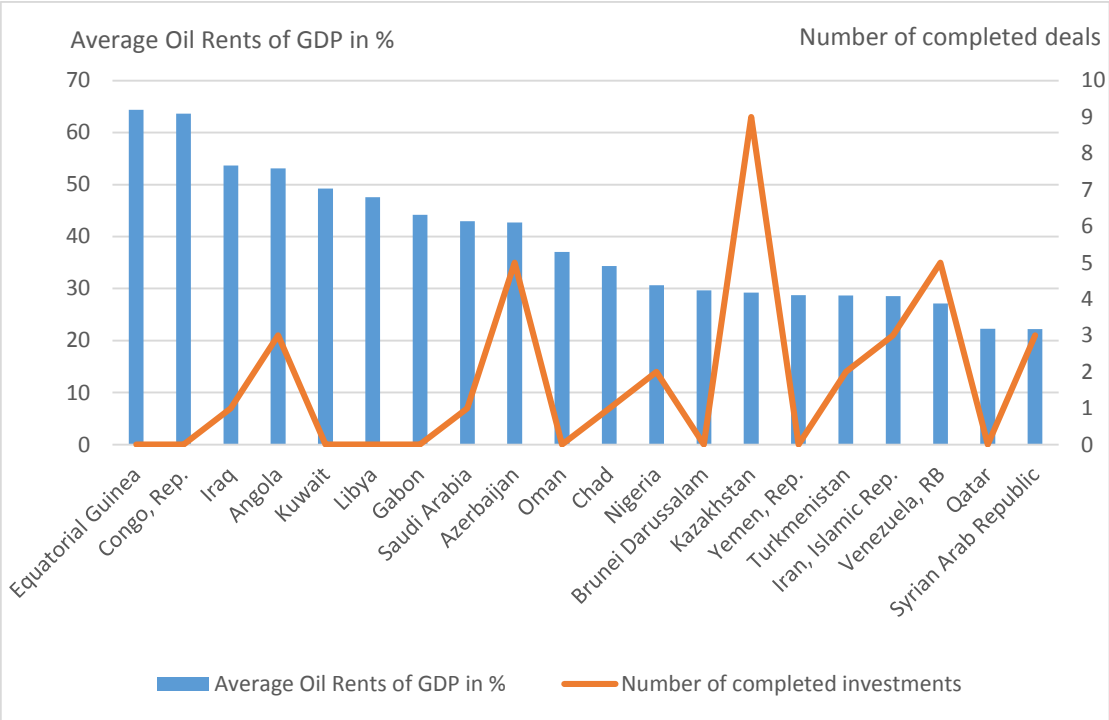
This result is of particular importance to the literature on OFDI from emerging countries as it explores difference to Dunning's OLI paradigm, and in particular the choice of location (Bing, Hao, & Ying, 2012; Buckley, et al., 2009; Child & Rodrigues, 2005; Kolstad & Wiig, 2012; Milelli & Sindzingre, 2013). Of course, Chinese OFDI in the oil and gas sector cannot be generalized to account for overall OFDI from emerging economies. However, it occupies a key position as the main sector the biggest emerging economy invests in.

5.1.2 OIL AND GAS RENTS

Looking at Table 4, hypothesis 2, suggesting that the more a state depends on oil and gas, the less Chinese investment is granted, is rejected. Instead it can be said that the

more oil dependent a host state is, the more likely deal completion for Chinese investors is. To be precise, the odds of deal completion increase by 3.412 for an increase of one unit in the log transformed scale of oil rents. If the financial crisis is accounted for, the odds increase by 4.358 for a one unit increase. Significant at the 0.001 level, these findings suggest that oil dependent states do not have a defensive stance towards Chinese investment, but instead welcome it. To illustrate this finding, Figure 7 showcases a particularly interesting sample of the population analyzed, namely the twenty most oil-dependent states worldwide. The table indicates the number of Chinese investments completed in these twenty countries in the period 1999-2012.

Figure 7: Number of Completed Chinese Investments in the Oil and Gas Sectors of the Twenty Most Oil-dependent States, 1999-2012.



Source: Author's own presentation.

As can be seen, eleven of the twenty most oil-dependent states have agreed to Chinese investment, indicating that generally speaking there is no particular defensive stance towards state-backed Chinese investment. Instead, the data for the 'Investment Scale' instead holds that for every unit increase in the log transformed scale of oil rents, 2527.656 million USD are additionally invested. If the financial crisis is accounted for, this coefficient increases to 2629.735 million USD. However, it needs to be stated that

these models, number 6 and 7, do not fit the data very well as indicated by Log-likelihood and Pseudo R^2. Nonetheless, as literally each of the ten models presented in Table 4 reports a positive relation between oil rents and the dependent variables at the 0.001 level, there is little doubt about the relevance of a host states oil dependence for Chinese investment.

Contrastingly, a host state's gas dependence is not significantly related to Chinese investment in any of the ten models presented in Table 4. This indicates that oil is what Chinese investment is aimed at, and not gas (Chen, 2010; Goldthau, 2010; Leung, 2011; Wensheng & Bluth, 2013). A possible underlying reason is that domestic oil resources covered Chinese demand until 1993, but domestic gas supplies are only insufficient since 2007 (EIA, 2014). The future development of China's quest for gas, a resource China seeks to significantly increase in its energy mix (EIA, 2014), will also depend on the possibilities to extract the domestic abundance of shale gas on a large scale.

5.1.3 CREDITWORTHINESS

Hypothesis 3 predicts that the lower a host country's creditworthiness, the more likely Chinese investment is granted. The obtained statistical results do not support this hypothesis. Instead, the basic ordinal models 1 and 2 indicate that investment is more likely to be completed, the higher a host country's creditworthiness ranks. The effect decreases from a 3.189 to 2.780 raise in odds when the financial crisis is accounted for. Similarly, the basic scale model 6 indicates that for a one unit increase in the log transformed scale of creditworthiness an additional 2034.585 million USD are invested. Taking into account the financial crisis, however, model 7 does not find a significant relationship between creditworthiness and the invested amount.

With regard to the three different sources of Chinese investment, only the model for CDB's energy-backed loans indicates that creditworthiness is significant for deal completion: a one unit increase in the logged scale of creditworthiness results in a 2.720 increase for the odds of deal completion. This suggests that Chen Yuan's policy of transforming CDB from a sheer political instrument into an organization highly interested in the security of returns (Downs, 2011a), is bearing fruit. However,

creditworthiness does not predict the amount of USD millions invested, as indicated by model 9.

5.1.4 FINANCIAL CRISIS

While the effect of the financial crisis has partly been addressed en passant, a discussion is worthwhile nonetheless. Remarkably, all eight models accounting for the financial crisis in Table 4 show a highly significant relation between the financial crisis and Chinese investment. This provides evidence to accept hypothesis 4. It thus seems like all three sources of Chinese investment have followed the advice of Chen Yuan regarding the financial crisis and 'grasp[ed] this opportunity to do deals.' (凤凰卫视 (Phoenix TV), 2009) Chinese investment has thus provided much needed investment in the oil and gas sector, which suffered from the low oil price caused by the crisis, as seen in Figure 6.

While this explanation has intuitive appeal to it, there is at least one other possible causal mechanism. Looking at Figure 3, indicating China's overall OFDI flows and the number of OFDI policies issued, it is also conceivable that it was only around 2005 that the legislative situation of OFDI became clearer and flows started to increase. This explanation is by no means incompatible with the predicted effect of the financial crisis, instead it is likely that they go together.

5.2 A SPOTLIGHT ON ASIA

If there is a cradle of Chinese OFDI, it is the People's Republic regional neighborhood – Asia (Child & Rodrigues, 2005). To engage the literature written on China's OFDI in this region as well, Table 5 presents Chinese investment in Asia's oil and gas assets in particular. Asia is conceptualized as Central Asia, East Asia and Pacific and South Asia. Note that due to Russia's geographical position, it has been subsumed under Central Asia, too. The regression analyses for Asia are presented in Table 5, models 11-20.

To compare and contrast, Table 6 presents Chinese investments outside of Asia in models 21-30. A note on interpretation is in order: The model 'Outside Asia' explicitly

does not allow for generalizations to be made about other regions, e.g. Europe. Instead it accounts for the whole population analyzed minus the Asian states.

In what follows below, models 11 and 12, as well as 21 and 22, are again labelled as 'basic ordinal models'. Accordingly, models 16 and 17, along with models 26 and 27, are named 'basic scale models.'

Table 5: Explaining Chinese Investment in Overseas Oil and Gas Assets, 1999-2012: Asia only.

	Ordinal	*Ordinal*	*Ordinal*	*Ordinal*	*Ordinal*	*Scale*	*Scale*	*Scale*	*Scale*	*Scale*
	Model 11	*Model 12*	*Model 13*	*Model 14*	*Model 15*	*Model 16*	*Model 17*	*Model 18*	*Model 19*	*Model 20*
Institutional design (log)	596.264 (1029.185) ***	665.631 (1150.962) ***	0.201 (0.391)	6340.050 (13704.510) ***	59487.340 (156628.300) ***	9004.338 (3664.750)	8759.681 (3847.776)	-4029.994 (3493.518)	6119.846 (1723)**	13343.91 (4088.122)**
Oil Rents (log)	9.557 (5.203)***	10.158 (5.732)***	3.785 (2.546)	14.138 (9.022)***	20.016 (14.326)***	4569.157 (1376.446)**	4417.598 (1409.594)**	2562.159 (1204.002)	2025.090 (555.781)***	3708.457 (1113.797)**
Gas Rents (log)	1.889 (0.859)	1.803 (0.825)	0.510 (0.532)	2.627 (1.342)	3.778 (2.176)	303.271 (1168.924)	394.327 (1178.461)	-2019 (2174.176)	587.776 (430.203)	1686.704 (937.0129)
Credit-worthiness (log)	1.0129 (0.543)	0.472 (0.282)	0.252 (0.280)	0.345 (0.215)	0.256 (0.169)	746.742 (1015.299)	-1040.935 (1261.925)	-452.9943 (1357.511)	-537.496 (444.140)	-1550.692 (890.910)
Financial Crisis		4.959 (3.156)	22.925 (40.309)	3.988 (2.654)	3.245 (2.286)		4039.234 (1669.518)	6240.686 (2628.267)	881.531 (544.552)	1310.572 (1065.284)
NOC's Mergers & Acquisitions			4426.230 (8454.905) ***					11205.150 (3332.487)**		
Energy-backed Loans				8.21e+07 (7.73e+10)					14845.600 (1268.925) ***	
Sovereign Wealth Fund					9.51e+08 (1.21e+12)					15068.19 (2717.418) ***
Constant						-29575.140 (9234.524)**	-26879.490 (9243.484)**	-7303.346 (6544.592)	-15581.160 (4010.190) ***	-32046.43 (9073.522)**
Observations (censored)	156	156	156	156	156	156 (131)	156 (131)	156 (131)	156 (131)	156 (131)
Log-likelihood	-274.980	-71.428	-31.168	-65.335	-60.829	-274.980	-271.048	-252.227	-240.537	-251.304
LR Chi2	31.670	39.140	119.660	51.330	60.340	21.580	29.440	67.090	90.470	68.930
Probability > Chi2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pseudo R2	0.174	0.215	0.658	0.282	0.332	0.038	0.052	0.117	0.158	0.121

Source: Author's own calculations. Ordinal models: odds ratios with standard errors in brackets. Scale models: coefficients with standard errors in brackets.
* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 6: Explaining Chinese Investment in Overseas Oil and Gas Assets, 1999-2012: Outside of Asia.

	Ordinal	*Ordinal*	*Ordinal*	*Ordinal*	*Ordinal*	*Scale*	*Scale*	*Scale*	*Scale*	*Scale*
	Model 21	*Model 22*	*Model 23*	*Model 24*	*Model 25*	*Model 26*	*Model 27*	*Model 28*	*Model 29*	*Model 30*
Institutional design (log)	0.966	6.524	3.725	8.640	8.695	-129.992	3070.075	280.643	4397.635	3821.056
	(1.263)	(9.148)	(6.366)	(14.022)	(14.424)	(2826.666)	(2847.312	(2269.852)	(3086.820)	(2960.578)
Oil Rents (log)	2.974	4.606	4.150	4.009	3.854	2276.843	2758.652	1646.321	2399.723	2307.461
	(0.645)***	(1.250)***	(1.617)***	(1.130)***	(1.105)***	(597.4072) ***	(677.515) ***	(543.713) **	(634.789) ***	(626.6511) ***
Gas Rents (log)	0.482	0.656	0.821	0.674	0.683	-423.5681	-31.61019	259.036	42.112	92.236
	(0.219)	(0.289)	(0.499	(0.308)	(0.324)	(687.2515)	(667.8075)	(569.028)	(633.979)	(627.848)
Credit-worthiness (log)	7.719	7.981	2.864	13.867	9.528	3663.501	3182.126	1563.567	3202.414	2684.535
	(5.230)**	(5.607)**	(2.358)	(12.089)**	(8.229)**	(1439.298)	(1359.887	(1083.139)	(1416.163)	(1352.348)
Financial Crisis		14.054	9.906	11.408	8.728		4576.142	3126.739	3885.791	3530.220
		(8.053)***	(7.040)**	(6.519)***	(4.984)***		(1260.505) ***	(1043.271)**	(1138.025)**	(1109.972)**
NOC's Mergers & Acquisitions			201.247					5149.553		
			(135.104)***					(927.955)***		
Energy-backed Loans				1.78e+09					5232.223	
				(1.11e+13)					(1923.277)**	
Sovereign Wealth Fund					3.14e+09					4378.393
					(2.08e+13)					(1347.661)**
Constant						-17569.83	-26332.7	-13885.32	-28394.39	-25526.52
						(5994.758) **	(7182.811) ***	(5433.065) *	(7476.141) ***	(7039.455) ***
Observations (censored)	543	543	543	543	543	543 (516)	543 (516)	543 (516)	543 (516)	543 (516)
Log-likelihood	-125.340	-109.178	-60.606	-100.691	-93.121	-317.744	-304.331	-277.423	-300.073	-297.843
LR Chi2	52.220	84.640	181.790	101.610	116.750	37.310	64.140	117.950	72.660	77.120
Probability > Chi2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pseudo R2	0.172	0.279	0.600	0.335	0.385	0.056	0.095	0.175	0.108	0.115

Source: Author's own calculations. Ordinal models: odds ratios with standard errors in brackets. Scale models: coefficients with standard errors in brackets.
* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Starting out with institutional design, it is remarkable that this explanatory factor is showing an even stronger effect in Asia than in the main models presented above: A one unit increase in the logged scale of institutional design raises the odds that investment is completed by 596.264. If the financial crisis is included in the model, the odds are raised by 665.631. In both cases, the level of significance is 0.001. As in the discussion of the main models above, the basic scale models fail to report this effect for the value of investment. Note, again the basic scale models do not provide a very good fit of the data according to log-likelihood and Pseudo R^2.

Parallel to the findings presented above, institutional design is significant in the ordinal models accounting for energy-backed loans and investments by the sovereign wealth fund. However, the Table presenting Asia only, also reports significant effects of institutional design for the scale models of energy-backed loans and sovereign wealth fund investments: for every one unit increase in the log transformed scale of institutional design, 6119.846 USD million energy-backed loans or respectively 13342.91 USD millions of sovereign wealth fund investments are additionally spend by Chinese investors. As in the findings above, the models accounting for NOCs' M&As do not indicate that institutional design is significant for either deal completion or value of investment.

In stark contrast to both the Asia models and the main models, Table 6 accounting for investment outside of Asia, does not find institutional design to be significantly related to either 'Investment Ordinal' or 'Investment Value'. Note, again this does not automatically mean that this result holds for every region in the world.

The models for outside Asia share the main models' strong evidence for the importance of a host country's oil dependence for Chinese investment. In the 'Asia only' model, however, oil dependence is not significant in the models accounting for NOCs M&As. This is a puzzling finding, which will be addressed below.

Moving on to creditworthiness, the models for investment outside of Asia report similar effects to the ones found in the main models: none of the scale models indicates significance of a host country's creditworthiness for the amount of Chinese investment. The ordinal models, however, do report that an increase in the log transformed scale of

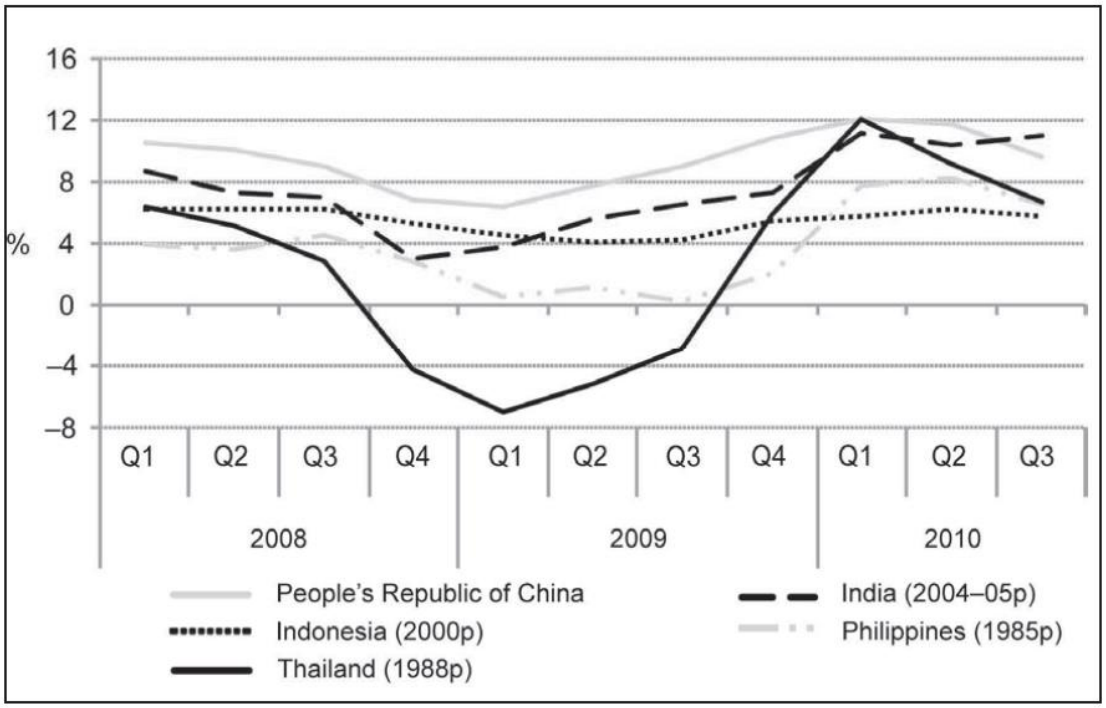
creditworthiness is associated with higher odds of deal completion. As in the main models, this effect is not obtained for NOCs' M&As.

Last but not least, the effect of the financial crisis is addressed. As in the main models, investment outside of Asia is more likely to be completed and more likely to receive increased amounts of investment, if the financial crisis is ongoing. In stark contrast, the financial crisis shows no significant relationship with Chinese investment in Asia at all.

Paraphrasing the above, it can be summarized that Chinese investment in Asia deviates from the main models in three major ways: 1) the financial crisis did not unfold a significant effect on either deal completion or the value of investments. 2) Neither deal completion nor the invested amount are significantly related to a state's creditworthiness. 3) Chinese NOCs' M&As are not significantly related to a state's oil rents.

What distinguishes Asian states from other investment locations? With regard to the first divergence, the missing effect of the financial crisis, research from the Asian Development Bank (Brunschwig, Carrasco, Hayashi, & Mukhopadhyay, 2011) provides a possible answer. While the financial crisis that hit in the second half of 2008, has affected literally every state in some way, degrees of vulnerability were different. More specifically, 'the degree of dependency to external demand and credit' (Brunschwig, Carrasco, Hayashi, & Mukhopadhyay, 2011, p. 2) determined how much a state was exposed to the crisis. Asian countries were more affected by the slowdown in demand for their export products, than by the financial system. Further, Asian countries' growth levels were quickly back to pre-crisis levels, as Figure 8 indicates.

Figure 8: Quarterly Real GDP Product Growth Rates (year-on-year, in percent).



Source: Figure 1 from Brunschwig, Hayashi & Mukhopadhyay (2011, p. 3)

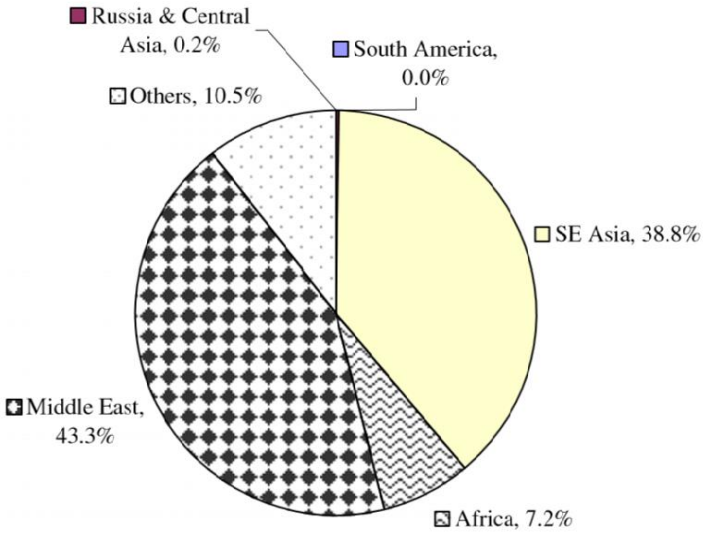
It thus seems conceivable that the opportunities that provided themselves to Chinese investors in states severely affected by the financial crisis simply did not exist in Asia. This is of course only one possible explanation and calls for further research.

With regard to creditworthiness not being significantly related to Chinese investment in Asia's oil and gas assets, it could be argued that Chinese investor's concern for security of returns, indicated by a higher rank of creditworthiness, is overridden by other factors. Buckley et al. (2009) suggest that Chinese OFDI in general is preferentially directed towards 'culturally proximate' countries, which Asia, as coded here, does at least partially account for. Similarly, Child and Rodrigues (2005) find that China incurs less of a 'liability of foreignness' in other Asian countries, thus making these countries more attractive for OFDI via other causal mechanisms. Cheng and Ma (2008) show that common borders facilitate increased Chinese OFDI. While these provide possible reasons why Chinese investment differs in Asia and is not significantly related to creditworthiness, they only qualify as educated guesses and provide an interesting venue for further research.

The most puzzling finding, however, is that NOCs M&As in Asia are not significantly related to host country's oil dependence, expressed in oil rents of GDP. One possible reason is that China's former reliance on oil from Southeast Asia in particular has decreased due to growing Southeast Asian domestic demand (Zhang Z. X., 2011). Figures 9 and 10 indicate the drastic shrinkage of oil imports from Southeast Asia. Oil import from Central Asia and Russia, however, has increased significantly. Note, however, that these figures indicate China's oil import by region and that Chinese NOCs are not necessarily involved in the import of oil, let alone in the form of M&As.

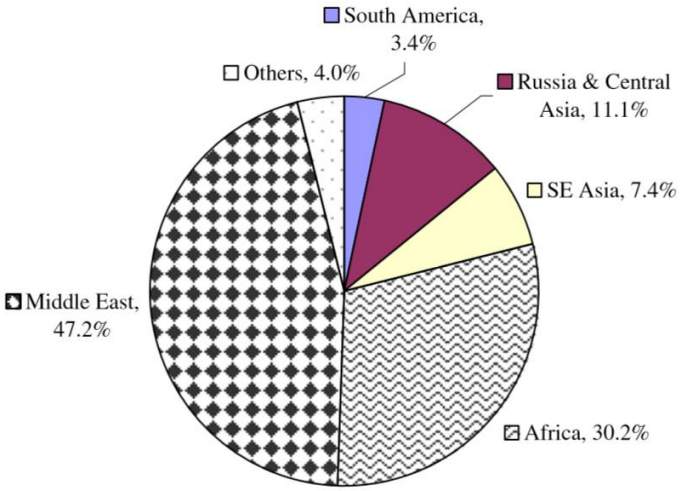
One further possible reason for the surprising finding reported above, is that Chinese NOCs seek to expand the regional infrastructure in Asia for gas and oil transports (EIA, 2014). Thus, investments in Asia's gas and oil assets, as defined under 4.1, could be of more infrastructural nature, as well. Note, that these are assumptions about the underlying reasons for the surprising statistical results. The data as presented here cannot reveal the underlying causal mechanisms, calling for further research to address these thought-provoking findings.

Figure 9: China's Oil Imports by Region, 1995.



Source: Clipping from Figure 1 in Zhang, Z. X. (2011, p. 7613)

Figure 10: China's Oil Imports by Region, 2005.



Source: Clipping from Figure 1 in Zhang, Z. X. (2011, p. 7613)

6. CONCLUSION AND OUTLOOK

This thesis set out to answer the research question: 'What factors explain Chinese investment in overseas oil and gas assets?' It is argued that host country factors have predictive value for the completion of Chinese investment in overseas oil and gas assets, as well as for the value of such deals. Using this thesis' unique dataset, four hypotheses were tested for these effects by performing ordered logit regression and Tobit regression analyses.

The data provide evidence that Chinese investment is more likely to be completed in host countries with institutional designs ranking higher in terms of institutional quality. The findings of Qian (2012) are hence confirmed here, while support for the analysis of Buckley et al. (2009) cannot be expressed. The positive relationship between institutional design and the completion of Chinese investments in overseas oil and gas assets is of particular importance to the literature on OFDI from emerging countries, which especially seeks to discern difference in allocation when compared with OFDI from developed countries (Bing, Hao, & Ying, 2012; Buckley, et al., 2009; Child & Rodrigues, 2005; Kolstad & Wiig, 2012; Milelli & Sindzingre, 2013). Of course,

Chinese OFDI in the oil and gas sector cannot be generalized to account for overall OFDI from emerging economies. However, it occupies a key position as the main sector the biggest emerging economy invests in. As is frequently the case when analyzing Chinese policies, generalizability is hard to obtain as simply no country matches the Chinese profile at the moment. However, just like other emerging countries started to adhere to 'the China model' for economic growth, it is conceivable that other states, or NOCs, emulate the Chinese investment strategy for energy security. A potential candidate to do so, is India.

The second main finding in this thesis holds that rentier states, whose leaders politically depend on the control over natural resources, do not take the expected defensive stance towards Chinese investments. Instead, the research suggests that a country's oil dependence is positively related to not only deal completion per se, but also to the amount of money invested. Gas dependence, on the other hand, is not significant in any of the models presented here. This indicates that oil is what China's global hunt for energy security is aimed at, and not gas.

Moving on to the third main result, creditworthiness, too, has been found to have the exact opposite effect than expected. States ranking higher in terms of creditworthiness are not only associated with higher likelihood of deal completion, they also receive more investment. Together with the preference for states with higher institutional quality this suggests that Chinese investors are by no means immune to risk, or are generally less concerned about the security of returns. While they might have picked up 'leftovers' from the IOCs in the beginning of their international careers, it is not a general pattern that was observed.

The financial crisis has provided Chinese investors with a superb opportunity to invest in states hit hard by the global financial and economic crisis. The analysis of the separate models for Asia, suggests that states individual degree of vulnerability towards the crisis influences Chinese investors chances of investing more successfully and with higher volumes.

While these main findings provide a good basis for further research, it would necessarily have to take a different format than the thesis at hand. Carefully designed

case studies could for example assess difference in investment patterns between regions in the world. According to the data obtained here, analyzing North America in comparison with Asia, could yield interesting results that can further discern the causal mechanisms at work.

In the case of further statistical studies, it would be promising to include China's Greenfield investments in overseas oil and gas assets. They have here been omitted as research suggests that only a minority share of Chinese OFDI in oil and gas assets will take the form of Greenfield investments. However, Chinese actors are obtaining more risk management skills with every M&A pursued. This suggests that at some point Greenfield investment will be assessed as less risky.

While this study has assessed the period 1999-2012, a policy-oriented look into the immediate future is in order. While drafting this thesis, Chinese president Xi Jinping has announced to gradually reform the pricing mechanism for energy products, like gasoline (Xinhuanet, 2014). This will have at least two effects: first, it will encourage less usage of coal, China's primary energy source, which is heavily subsidized. Cleaner fuels like oil and gas will predominantly fill this void (EIA, 2014). Second, Chinese NOCs will export less to the international oil market, but instead deliver to their home country as it becomes more and more profitable to do so. Paradoxically, this liberalization of price mechanisms would improve China's sought-after energy security. But not only regarding the domestic price mechanism would Beijing stand to profit from liberalization. Based on the numerous cases analyzed for this thesis' unique dataset, it can be assumed that a credible detachment of the Chinese NOCs from the state apparatus would decrease skepticism towards Chinese investments and thus increase the rate of completed deals. While the author expects this development to take place in the long run, for now the complex principle-agent structure between Chinese investors and the Chinese government itself, allows the three actors analyzed here, to follow their own profit-maximizing agendas to a high degree. As long as reforms are lacking, the old Chinese proverb applies: the mountains are high and the emperor is far away.

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