Chinese FDI in the Oil Sector

– Can they be explained by the prevalent theory on FDI?
Abstract

China has experienced a phenomenal growth during the last years. With this economic development comes a great need for energy. Energy to fuel the domestic production. As the domestic resources in China have shown to be insufficient, one way to get the energy demanded is to go onto the international market. China has, thus, started undertaking FDI in oil to be able to feed the domestic needs. In this thesis we will discuss these investments and investigate if prevalent theories on FDI can explain the FDI that have taken place. Our conclusion is that the FDI undertaken has been resource-seeking investment. Since the Chinese oil companies are state-owned and regulated so that they can not act as profit-maximizing firms, our thesis will show that the Chinese FDI in the oil sector therefore only partly can be explained by the theories on FDI.
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1. Introduction

China’s economic growth the past two decades has been widely acknowledged. During this period of time the Chinese GDP has had an average annual growth rate of 9.5 percent and the rapid pace of economic growth is expected to continue for several years.\(^1\) A blossoming Chinese economy has brought about increasing personal incomes and a reduction of poverty, but it has also brought problems to the surface. Demand for energy, especially oil has grown much faster than the GDP in the recent years, and the growth will carry on as the social and economic development continues.\(^2\) The growing Chinese economy needs fuel for energy and the demand for oil is increasing rapidly, this while the domestic production of oil is dwindling. With a domestic production of oil not keeping pace with the economical and social development China becomes more and more dependent on the outside world. Although China today is the second largest importer of oil, the supply of oil is insufficient and the strategic oil reserves minor. The Chinese government has stressed two important paths on the way to a larger Chinese supply of oil in order to meet increasing demand and expand oil reserves. Firstly the domestic resources must be further explored and made more efficient with new technology. Secondly China needs to explore and make use of foreign oil resources. As one way to accomplish these goals China has started exploring the opportunities of outward foreign direct investments (FDIs).

In the light of this, the main purpose of this thesis is to investigate the main motives behind the Chinese FDI in the oil sector. We intend to investigate if the Chinese FDI can be explained by the prevalent theory on FDI. Finally we aim to shortly discuss problems associated with China’s FDI in the oil sector.

We will focus on investments made by China’s three major oil companies; China National Oil Corporation (CNPC), China Petroleum and Chemical Corporation (Sinopec) and China National Offshore Corporation (CNOOC). We have further chosen to focus on the biggest and most important investments undertaken by these oil companies, namely in Sudan, Kazakhstan and Canada.

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\(^1\) OECD, 2005, [http://www.oecd.org/document/45/0,2340,en_2649_201185_35344877_1_1_1_1,00.html](http://www.oecd.org/document/45/0,2340,en_2649_201185_35344877_1_1_1_1,00.html)

A word of caution is to be said about the Chinese statistics that is known for being everything but accurate. Partly because of different standards and methods of collecting the data and partly because of the strict controlling government and its tendency to modify or re-write statistics to better fit its likings. The statistics used in this report are thus to be regarded as general tendencies and trends rather than exact numbers.

We will start by describing the theory on FDI and how it is constructed. In section three we will discuss China’s outward FDI and how that leads us to the FDI in oil. To be able to establish the motives behind the FDI we will look at the energy situation in China and try to show how the Chinese energy market works. Further this thesis will more closely look at Chinese FDI in oil made in Sudan, Kazakhstan and Canada. In section four we will analyse what results we have found and the implications thereof.
2. Theoretical Approach

According to the OECD and its benchmark definition a FDI is established when the direct investor has acquired 10 percent or more of the ordinary shares or voting power of an enterprise abroad. That is to say, has got a substantial amount of influence in the foreign enterprise.3

It is initially important to understand that there is no such thing as a typical FDI. They can take many shapes and forms, and as the types of investments are different so is the motives that lay behind them. Several theories have thus developed, trying to explain the motives behind FDI. But none of them can be said to be unanimously accepted or regarded as the best one. The eclectic theory developed by John H. Dunning is, though, the most widely accepted explanation for FDIs.4 Consequently, we have chosen to use Dunning’s theory in this thesis. What Dunning does is to combine three sets of advantages that he argues must be present for a company to consider investing abroad. The first one is the possession of ownership-specific advantages (O) against other firms or nationalities on the market it serves. The second condition is the location-specific advantages (L) that explains where the firm will invest. The third condition is the internalisation advantages (I) that explains why a firm will choose to invest rather than just rely on trade to meet its goals. Together these three form the OLI advantages that the eclectic theory is based upon.5 Let us look more closely at OLI.

2.1 Ownership-specific advantages

Operating in a foreign environment is associated with disadvantages against local firms, most apparent in the knowledge about how the market works and how to get the necessary information to operate smoothly on the market. Differences such as cultural, legal, institutional and language differences can also be substantial disadvantages *vis-a-vis* foreign

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3 OECD, 1999, p 8
4 Larimo, 1993, p 28
5 Dunning, 1993, pp 76-79
enterprises operating on their home market. Finally the cost of operating at a distance and the cost of communications can add to these disadvantages. The O advantages must outweigh these disadvantages for a firm to consider investing abroad.\(^6\)

For foreign firms to be able to compete with domestic firms, they must hence possess some advantages that is specific to the nature or nationality of their ownership. These advantages are what is known as ownership-specific advantages. By using these advantages a firm can generate higher marginal revenues for the same costs or, given the revenue, lower marginal costs than its local competitors. The O advantages can be divided into tangible and intangible assets. The tangible assets are typically some kind of natural endowment, manpower or capital giving the firm an advantage towards other firms. The intangible assets includes information and technology, superior management, marketing or entrepreneurial skills and better organizational systems.

### 2.2 Location-specific advantages

The second condition of the eclectic theory, the L advantages, is concerned with the “where” of production. Where can a firm can invest to generate higher returns when using its O advantages? The L advantages help explain this question. We can divide this factor into three subcategories, namely economic, social and political advantages. The first, economic advantages, include the quantities and qualities of the products, size and scope advantages, infrastructural advantages, technological, innovatory or other created assets and so forth. The second concern social and cultural advantages such as the actual distance between home and host country, the general attitude towards foreigners, language barriers and cultural differences, and the overall climate towards free enterprise. The third subcategory deals with political advantages. This subcategory includes the political structure in the host country and in what ways it affects FDI flows. To invest in a politically or economically unstable country is combined with a great risk for the investor and the investment will become less attractive. The investor is therefore interested in investing in an economically stable country, making macro economic policies important. Low corporate and personal taxes in the host country could also provide further incentives to attract FDI. Investors are also interested in investing where the supply and quality of the productive resources and human capital are high, which

\(^6\) UNCTAD, World Investment Report 1998, p 89
makes education and health policies important. A host country that has got some of the above mentioned advantages will be an attractive alternative for firms considering undertaking FDI.

2.3 Internalisation advantages

Internalisation advantages explains why firms that possess O advantages choose to transfer them across national boundaries and into a foreign market within their own organisation rather than license or export them to the foreign market. To use the external market, i.e. sell or license, as a method of earning rents on the firms O advantage is sometimes associated with costs such as contract enforcements, costs of maintenance of quality or other standards or different protectionistic trade barriers. If a foreign country has set up protectionistic trade barriers, such as import quotas or protection tariffs, it will make selling or licensing a product to that particular market more expensive. Firms can get past these barriers and extra costs by instead service the market from within the market itself, use the internal instead of the external market. That is, use FDI to lower the costs when this kind of barriers are present. It is noted that companies prefer to use licensing and franchising as means of serving international markets when the costs mentioned above are absent. One example of this behaviour is Coca-Cola that choose to franchise the rights to its products and the right to put them on the market in many nations where it is not a problem with contract enforcement. In nations where enforcement of contracts is a problem Coca-Cola does not franchise but controls its operations directly instead.

This framework gives us a basic understanding for the advantages that, according to the eclectic theory, needs to co-exist for a firm to consider investing abroad. A firm that possess these advantages have incentives for FDI, but depending on the nature of the firm and its motives the investments will vary in shape and form.

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7 Tahir, 2003, pp 58-59
8 Graham, 1989, p 146
2.4 The Main Types of FDI

According to Dunning there are four different types of FDI. These are market-seekers, efficiency-seekers, resource-seekers and strategic asset-seekers. In the following sections we will further develop these different types of FDI.

2.4.1 Resource-seeking FDI

The reason for engaging in resource-seeking FDI is to get access to resources not available on the home market, or to get access to resources to a lower real cost than in the home market. According to Dunning there are three main types of resource-seeking FDI.

Firstly, there are the TNCs looking for natural resources, or physical resources with their investments. The firms engaging in this kind of investment are typically primary producers and manufacturing enterprises from both developed and developing countries. The motives for investments in natural resources are normally to secure a source of resources that is necessary for production or to minimize cost.9

This kind of investment has historically been a very important determinant for FDI. The industrialized nations of Europe and North America used FDI in the nineteenth century to secure a reliable economic source of minerals. Since then the relative importance of natural resources as a determinant for FDI has diminished. Partly because the importance of the primary sector in the world output has declined. Partly also, because new large local enterprises have emerged in many developing countries. The level of industrialisation in many developing countries has reached a point where enterprises has got the technological skills and sufficient amounts of capital to process and distribute the natural resources that exists within the country. This reconfiguration of conditions in developing countries shows that the relationship between the resource/asset-seeking TNCs and the developing host countries has changed. The fact that the governments rely on indigenous and typically state-owned enterprises for the production and distribution of the natural resources makes FDI no longer necessary and TNCs instead revert to trade their comparative advantage on a global market.

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9 Dunning, 1993, p 57
Instead of investing in foreign countries the TNCs sell or license their comparative advantage (i.e. O advantages such as technology or organizational systems and so forth) to the local companies. Although FDI in natural resources has declined in relative importance it has increased in absolute terms. Natural resources are hence still an important motive for FDI and can explain a lot of the inward FDI in countries such as Kazakhstan – with its supply of oil, and countries in sub-Saharan Africa – with their overall resource-rich environment.10

Secondly, there are the TNCs looking for cheap labour, skilled as well as unskilled, with their investments. As an example, TNCs that are producing labour-intensive products can lower the production costs considerably by taking advantage of low-cost and relatively unskilled labour in a foreign country. Also TNCs that under some stage of the production, a stage that is separable geographically from the others, has got the need for unskilled labour can use FDI to get access to immobile low-cost unskilled labour.11

TNCs can also make use of highly skilled labour. If the TNCs has got a capital-intensive production they often need more highly skilled labour. If this kind of labour, with sufficient human capital, is absent or expensive at the home market an investment in a foreign country with a more highly skilled labour force can lower the marginal costs, given the revenue, or increase the marginal revenues for the same costs.12

Thirdly, there are the TNCs looking for technology or other intangible assets with their investments. This motive can be explained by TNCs that in their FDI seek high-technological solutions not available in the home market. By investing in an already established production facility in a foreign country with sophisticated technology, so called cross-border acquisition, TNCs can get access to this technology and repatriate it to the home market.13

Another important motive for resource-seeking TNCs is the state of the infrastructure. The concept of infrastructure includes both physical infrastructure (i.e. ports, roads, railways, telecommunications and power) and institutional infrastructure (i.e. accounting, legal systems and services). The physical infrastructure can have a positive impact on FDI in the sense that good infrastructure helps ease transportation and thus lowers cost for production. The proximity to air- and seaports and the extent of transportation facilities also have some

11 Ibid., p 108
explanatory power on the attractiveness of FDI. It is more attractive for a TNC to invest in a country that possess smooth and developed infrastructural solutions. Although bad physical infrastructure is normally considered as having a negative impact on investments it can also offer an opportunity for some TNCs to invest and participate in the infrastructural sector. In sectors such as airlines and telecommunications this behaviour has been observed. But in sectors that is associated with high political risk and low returns such as road-building this option remains an unattractive alternative. Further it is established that a weak legal system and poor accounting standards influence the reliability for the financial institutions in a bad way and that this kind of unsatisfactory institutional infrastructure prevents FDI from taking place.\textsuperscript{14}

\subsection*{2.4.2 Strategic Asset-seeking FDI}

Strategic asset-seeking TNCs usually acquire assets from foreign corporations to fulfil their long-term strategic goals. This can be to sustain or advance their international competitiveness. The motive for this kind of FDI is to focus more on acquiring new assets to the firm’s already existing portfolio of such assets. The motives are less focused on the exploitation of specific cost or marketing advantages over other competitors. The perceived assets will either weaken the position of their competitors or strength the TNCs overall competitive position.\textsuperscript{15} There are many different reasons for undertaking strategic asset-seeking FDI, but to exemplify a firm can merge with a foreign rival to strengthen their position against another, more powerful, rival. Another example is a firm that acquire a group of suppliers to get exclusive access to the market for a particular raw material. A third example is a firm buying out another firm producing complementary products or services so that the firm can offer a broader range of products or services to its customers.\textsuperscript{16}

\textsuperscript{15} Tahir, 2003, pp 72-73
\textsuperscript{16} Dunning, 1993, pp 60-61
2.4.3 Efficiency-seeking FDI

Efficiency-seeking FDIs are undertaken in order to rationalize the structure of already established production units in the home country. Dunning recognizes two different types of efficiency-seeking FDI. The first kind of investments take place in countries with largely similar economic structure and income levels. The objective of this kind of investments is to get benefits of economies of scale and scope by geographically concentrating the production, a concentration of the product itself and also from a specialization of the production process. These benefits are expected to work as a motive for TNCs to locate their production facilities where the marginal cost of operating is the lowest and also to capture the advantages that spring from operating interrelated activities within firms.17

The second kind of efficiency-seeking FDIs is designed to take advantage of the differences in the cost and availability of traditional factor endowments. For a production that is labour-intensive the cost of labour will be the most important determinate, i.e. the wage rate in the host country. A production that is more capital-intensive does not need as much labour but the productivity of labour will be utmost important. Higher efficiency in the production can be achieved by a higher productivity of the labour. The infrastructure will affect FDI according to the cost of transportation and communication within the country as well as to and from the country of origin.18

2.4.4 Market-seeking FDI

As growth and competitiveness are important needs for firms they seek new markets at home and abroad to stay competitive and to increase their market shares. The relevant determinants for market-seeking TNCs thus include market growth and market size, both in relation to the size and income of the foreign country’s population and in absolute terms. A market with a high growth rate is more attractive for firms, and foreign as well as domestic investment tends to be stimulated.19 Another important motive for market-seeking FDI is the importance of

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17 Dunning, 1993, p 60
18 UNCTAD, World Investment Report 1998, p 91, Based on Table IV.1.
19 Ibid., p 91
physical presence in the foreign market. Being present at a particular market gives the TNC a much greater ability to monitor any changes in the market it is serving and allows them to more easily adapt and update their products to the changing needs of the market. Also, it is often important to modify or adapt products to the local needs and tastes, and to indigenous resources and capabilities. By being present at the actual market, TNCs have a better overview of these local differences and thus have a better possibility of servicing the local market in the way it wants to be served. The risk of getting a disadvantage against local firms are also reduced by this behaviour.  

It is important to bare in mind that distinguishing between different types of FDI serves to facilitate an understanding of the underlying motives behind FDI decisions and the key characteristics of different types of FDI. It is not an absolute classification with strict borders. The motives brought up are not mutually exclusive but can interact and co-exist. FDI can be driven by different motives simultaneously and in various combinations.  

In sum, the eclectic theory combines several different international business theories on cross-border activity, hence the name. Together they form a theory that provides a framework for explaining the determinants of FDI. It consist of ownership-specific advantages, location-specific advantages and internalisation-specific advantages. When a firm has got these three advantages simultaneously the incentives for FDI are high. But, what kind of FDI that will take place depends on the motives of the firm. The four major motives described here, and in line with the work of Dunning, are resource-seeking FDI, strategic asset-seeking FDI, efficiency-seeking FDI and market-seeking FDI. This is summarized into Figure 2:1.

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20 Dunning, 1993, pp 58-59
21 Tahir, 2003, p 74
After having established the theoretical framework it is now time to look at the Chinese FDI, and especially those made in the oil sector. The next section will discuss these issues.
3 China’s FDI in the Energy Sector

In this section we will look at the Chinese outward FDI in the energy sector to see where and what kind of investments have been made. We will start by describing the historical development of outward FDI flows from China.

3.1 China’s Outward FDI

The starting point of the Chinese outward FDI is in 1979 when investments first were undertaken in occasional sectors and carried out only by a few state-owned enterprises. Our historical description ends in 1992 when investments had expanded to include both TNCs and state-owned enterprises. Under this period of time the range of sectors had widened and in 1992 the first Chinese FDI in oil was undertaken.

In 1979 a new law was undertaken in China called the Joint Venture Law opening up the economy and allowing for foreign companies to invest in China.22 As a consequence of this economic reform the market opened up not only for foreign investment in China but also for Chinese investments abroad. International operations started in a small scale through centrally controlled and state-owned enterprises. This primary wave of investment was at a relatively small scale and it was mainly concentrated to a limited number of sectors and industries including catering, engineering, finance and insurance, with only a few in manufacturing.23 Some of these enterprises did not however flourish and were not profitable year after year, mostly because of bad management and unsatisfactory supervisory systems. To check this development the joint venture companies that were being mismanaged were, with the permission of the joint venture partner, terminated in 1983.24

Between 1984 and 1985 more than one hundred new overseas enterprises were approved by the Chinese government. This second wave of investment included a broader range of

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22 Chow, 2002, p 306f  
23 Cai, 1999, p 859  
24 Chen, 2001, p 1238
business sectors and industries than the first and also spread to over 40 regions and countries. Sectors such as processing and assembly, trade and manufacturing were amongst those who attracted this new investment.25

Economic liberalisation in China expanded even further and important improvements in technical and managerial standards took place between 1986 and 1992. All together this spurred Chinese FDI to take place on a larger scale and consequently also participation in the international competition. The Chinese export and its foreign exchange reserves experienced a brisk increase at the same time. The domestic economic development though experienced problems with adapting the existing supply for resources with the increased demand. As a consequence the market was left with a shortage of resources, and one resource in particular – oil. The Chinese self-sufficiency in oil had declined since 1985 but was now reaching its breaking point. It became clear that China needed to make use of foreign oil resources and the first Chinese oil FDI took place in 1992. CNPCs investment in the North Twing Oilfield in Canada became the starting point for China’s global search for oil and the Chinese FDI in oil has continued and escalated ever since. The Chinese energy situation and the structure of the Chinese energy market helps us explain the Chinese outward FDI in the energy sector. It is therefore important to first understand the situation on the home market in China. The next section will explain what kind of energy China demands, what kind of energy it supplies and how they match.

3.2 China’s Energy Situation

World energy consumption is expecting to increase with 57 percent in the next two decades, and emerging economies like China and India will account for 45 percent of this projected increase. The energy consumption in China alone is expected to more than double between 2000-2025 and the consumption is far greater than the domestic supply, especially regarding oil. When the Chinese economy grows so does the demand for energy. China is a resource rich country and holds 10.7 percent of the global energy reserves, but reserves per capita are very low due to its large population. This makes China more and more dependent on imports.

25 Chen, 2001, p 1239
As seen in Figure 3:1 above, the most important source of energy in China is coal which accounts for 70 percent of total energy usage. China has one of the world’s largest reserves of coal and with a base reserve of 334 billion tons it could, with the same rate of consumption as today, stay self-sufficient for the next 200 years. China is also the second largest exporter of coal in the world. Despite this huge domestic reserve, the fast growing coastal cities in eastern China import coal from Australia due to poor infrastructure from China’s interior making transports both costly and time consuming.

Coal will continue to be the most important source of energy in China but the use of oil continues to rise. In 2003, China consumed 6.5 million barrels of oil per day (bbl/d). In 2025 China is expected to consume 14.2 million bbl/d, hence more than double the oil consumption in the next 20 years. China has an increasing demand for oil since the rapidly expanding economy needs fuel for energy. Growing GDP has improved Chinese peoples living conditions, and consumption of energy demanding merchandise such as vehicles and refrigerators has increased. China has several times been hit by electricity shortages.

26 U.S.-China Economic and Security Review, 2005, p 164-165
27 Sandklef, 2004, pp.9-11
29 Kiesow, 2005, p 7
Because of this Chinese factories have installed energy demanding diesel engines to provide electricity in troubled times. The increased demand for oil can also be explained by the fact that imported oil is not as heavily state controlled as coal. This makes imported oil more flexible and reliable as a source of energy.\textsuperscript{30}

In 2004, China became the second largest consumer of petroleum products in the world after the U.S. and China will account for 40 percent of world demand growth in the next four years.\textsuperscript{31} China’s self-sufficiency in oil started to decline in 1985 and in 1993 they became a net importer of oil. The biggest demand is found in the southern and eastern provinces where the economic growth has been the largest.\textsuperscript{32} China imported only small amounts of oil from neighbouring countries before 1990. When it, in the beginning of 1990, became clear that demand for oil were to rise dramatically, imports expanded and China started to import more heavily from the Middle East and Africa. Increasing of imports from these regions continued and in 2001 it constituted 56 percent of China’s oil imports (see Figure 3:2).

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{Figure3-2.png}
\caption{China's Oil Imports by Region}
\end{figure}


Today the demand for oil is far greater than the domestic production and the gap between consumption and domestic production continues to rise (see Figure 3:3). In 2004, the problems with supply were so severe that the government decided to take actions to slow

\textsuperscript{30} Sandklef, 2004 p. 13
\textsuperscript{31} Energy Information Administration, 2005, \url{http://www.eia.doe.gov/emeu/cabs/china.html}
\textsuperscript{32} Sandklef, 2004, p 13
down demand for energy by introducing restrictions on energy demanding industries such as aluminium and steel.33

**Figure 3:3** Chinas growing gap between oil consumption and domestic production

![Production vs Consumption Graph](image)


Finally, natural gas accounts for 3 percent of the total primary energy demand in China today. China is interested in further development in its imports of natural gas and the goal is to let natural gas meet 8-10 percent of the energy demand by 2025. Increasing gas imports has got both security and environmental reasons. Decreasing the oil imports will reduce the vulnerability of strong import dependence, and reducing the use of dirty coal will lessen the impact on the environment. The consumption of Liquefied Natural Gas (LNG) will grow most rapidly in cities suffering from pollution such as Beijing. Several supply agreements have been made to provide China with LNG, for example has CNOOC signed a US$12 billion, twenty-five year contract with Australia providing the country with LNG in the coming years. The total natural gas consumption is expected to increase with 7.8 percent annually and the electricity generation will be the main consumer. Only the nuclear power is expected to grow faster than the natural gas consumption, with an average annual rate at 9.9 percent through 2025.34

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33 Kiesow, 2005, p 7
34 U.S.-China Economic and Security Review, 2005, p 164-165
3.3 The Chinese Oil Producers

Another important aspect in order to explain the behaviour of the Chinese oil companies and their FDI is the working conditions for these companies on the home market. How the Chinese oil companies work and how they are governed are described below. This will later be proven an important section for explaining the Chinese outward FDI in oil.

The central and provincial governments direct the policies of China’s energy development. The reason for this is that the big energy companies in China to a large extent are state-owned. CNPC, Sinopec and CNOOC have all carried out initial public offerings of stocks and have received large amounts of foreign capital, but the Chinese government holds a majority position in all companies. Even though they are state-owned the three main oil companies are supposed to compete freely both domestically and internationally. The companies are allowed to compete freely in the areas of exploration and production (E&P), refining and marketing. The government still have the power to approve investment and control the energy prices. In 1998, the Chinese government made a reorganization of the three oil companies. The companies and their assets where reorganized into vertically integrated firms. Before the reorganization CNPC had been focusing on E&P and Sinopec had been focusing on refining and distribution. The reorganization in 1998 changed the companies’ engagement from covering just part of the oil manufacturing process to covering the whole process but in different regions. CNPC was allotted the west and north regions of China, and Sinopec the south and east. CNOOC continued to be responsible for offshore E&P. The Chinese government’s main purpose with the reorganization was to make the structure of China’s main oil companies more like big Western vertically integrated oil companies. This in order to make the companies more competitive and eliminate unprofitable activities. Before the reorganization the oil companies engaged in several unprofitable activities not connected to their business, such as running hospitals, and housing units.35

The three Chinese oil companies have developed a more Western structure, and in the sectors of crude oil output, refining capacity and crude oil throughputs they now hold the same class as other world oil majors. But in the area of technological capabilities, refining cost and secondary capacity the Chinese oil companies still lag behind.36

36 Zhi, 2004, p 9
The Chinese oil companies have undergone a modernization but there are still important components of the Chinese energy market that continue to be under heavy state control. One component is the energy price. Energy prices in China are set by the government and prices vary between locations and type of consumers. Due to the lack of market oriented energy prices, the price of energy can not adjust the supply to the demand. The market can not adjust to an unexpected change in demand by raising or lowering prices. China is though taking small steps towards more market oriented energy prices. One step was the partial liberalization of retail oil prices in 2000. Being just a partial liberalization, the companies can only adjust the energy price within 8 percent of the benchmark price set by the government, showing that full liberalization of energy prices still have a long way to go.

4. China’s FDI in Oil

As we look at China’s energy situation we see a country struggling with a rapidly increasing demand for energy, especially oil. We also see a country where the domestic oil production is dwindling. For further development and growth it is important for China to meet the increasing demand for energy. The manufacturing sector which has been a fuel in China’s export-led growth is very dependent on energy supplies. Several energy shortages have led to rationing of electricity and cutting down to a four-day work week in many provinces. Many Chinese companies can therefore not produce at their full capacity. China has recognized the growing gap between the supply and demand for oil, indicating that the domestic production and development can not satisfy the needs of the country’s growing economic and social development. Therefore the Chinese government states: “We need to take all possible measures to conserve oil, accelerate exploitation of oil and natural gas resources, and make effective use of overseas resources”. China is heavily oil import dependent today and the dependence of foreign oil is not expected to decline. If the current rate of growth in China continues, and the demand for oil keeps rising it will probably become impossible to purchase the oil needed from the world market and import it to China. There will simply not be oil enough.

37 Zhi, 2004, p 9
38 Sandklef, 2004, p 16
39 Ibid., p 28
41 Kiesow, 2005, p 7
Because of this China has found it necessary to develop alternatives to oil imports. China wants to reduce its dependence on imports and further increase efficiency in consumption and production of energy. China also aims to increase its strategic oil reserve, which of today is only lasting for 7-10 days. The small oil reserve is a result of growing dependence on imports combined with high consumption and poor infrastructure to store oil.

Having a small strategic oil reserve and being heavily import dependent China becomes very vulnerable. A sudden change in the oil price as well as a delayed or stopped shipment of oil could be severely damaging, since a shortage in energy negatively affects economic growth. China wants to reduce its vulnerability by owning the source of energy, in this case oil, already at the stage of exploration and production, and by doing so securing a supply. To secure the supply of oil is therefore the main objective of the Chinese oil companies. This is accomplished through further exploration of Chinese domestic resources and making the current oil production more efficient with new technology. But foremost it is accomplished by undertaking FDI around the world. And Chinese oil investments have been made, investments with intention to get access to oil resources, transport networks and new technology. We will continue this thesis by taking a closer look at these investments.

The first FDI in the oil sector took place in 1992 when CNPC took part in developing the North Twing Oilfield in Canada. The first investments undertaken were small low-risk projects such as rehabilitation of oil fields, field-development and provision of services. With time China’s investments has expanded to cover E&P as well as refining and building of infrastructure. The China’s global search for oil has widened in range and now includes investments in more than 25 countries around the world. By 2004 the three Chinese oil companies had concluded 61 projects, and 41 of these projects were made by CNPC that has by far been the largest investor. CNPC has invested in over 15 countries; Azerbaijan, Canada, Venezuela, Iraq and Iran to name a few. CNPCs biggest investments so far are the acquirements in Sudan and Kazakhstan. We will continue by investigating these investments and Sinopec’s investments in Canadian oil sands more thoroughly.

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42 U.S.-China Economic and Security Review, 2005, p 167
43 Japan, being as heavily import dependent as China, has got a strategic oil reserve of 100 days.
44 U.S.-China Economic and Security Review, 2005, p 167
45 Zhi, 2004, p 9
4.1 Sudan

Sudan is the largest country in Africa, and has got significant amounts of natural resources, such as oil, minerals and agricultural land. Yet the country is one of the poorest in the world with a GDP per capita of US$1900, as compared to Sweden’s US$28400, and a population where 40 percent lives below the poverty line. Sudan has long aimed to extract oil riches but due to its economic situation it has lacked the necessary capital and been depended on outside investors. In 1996 CNPC acquired a 40 percent share in the Greater Nile Petroleum Operating Company (GNPOC), an investment of US$441 millions, putting CNPC in a majority position in the company. Together with national energy companies and firms from Malaysia and India the consortium dominates Sudan’s oil fields. Between 1996 and 2005 CNPC has invested around US$3 billion in Sudan making it one of the largest Chinese overseas investment projects.

Figure 3:4 Sudan


A US$1 billion, 1506 km long, export pipeline has been built and started to operate in June 1999. The pipeline made it possible to transport oil to the ports for export, and Sudanese oil

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could be brought to China (see Figure 3:4). In 1999 a new refinery north of Khartoum, the largest in Sudan, was inaugurated together with Sudan’s Energy Ministry. CNPC was the main investor providing half of the total investment (US$540 million). China was also the main provider of engineering, equipment and construction in both these investment projects, and also in the building of Port Bashir – a two million ton oil terminal south of port Sudan. In October 2001 the Petrodar Operating Company (PDOC) was established. Both CNPC and Sinopec invested in the company and gave China a 47 percent share. China also got access to two new blocks in the Melut Basin by these investments. A new US$215 million oil terminal will be built to service these new blocks and China Petroleum Engineering and Construction Group has been chosen to build it.\(^49\)

Sudan accounts for about 7 percent of the Chinese oil imports and with one of the largest unexploited oil resources in Africa it will continue to be a major player.\(^50\) In 2002, the estimated amount of oil in Sudan was 262 millions barrels, today proven reserves are 563 million barrels. Since the Sudanese oil exploration is still very limited the Sudanese Energy Ministry estimates reserves up to five billion barrels.\(^51\) Sudan is being acknowledged as an important oil producer and was granted observers status by OPEC in August 2001.\(^52\)

4.2 Kazakhstan

It is not only in Africa that Chinese oil companies have consolidated a position. China has also made significant investments in Central Asia, and particularly in Kazakhstan. Kazakhstan has grown to be an important player in world oil market, having the Caspian Sea’s biggest oil fields in its possession with estimated reserves of 29 billion barrels.

China has been operating in Kazakhstan for 8 years as a foreign investor, foremost through CNPC that has been involved in several projects in the country. CNPC acquired 60 percent of Aktobermunaigas Corporation, now known as CNPC Aktobe in May 2004. The investment is considered as the most significant oil investment so far made by a Chinese company. Together with KazMunaiGaz – Kazakhstan's state oil company – CNPC will construct the Atasu-Alashankou pipeline. The 980 km long pipeline runs from Atasu, a production facility

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\(^{49}\) Shichor, 2005, [http://www.asianresearch.org/articles/2754.html](http://www.asianresearch.org/articles/2754.html)

\(^{50}\) U.S.-China Economic and Security Review, 2005, p 168


in central Kazakhstan, to a railroad station in Alashankou, China, and is expected to finish in December 2005. When the pipeline is finished China will fill the pipeline with oil from the acquired fields in Kazakhstan. The Atasu-Alashankou pipeline is the second stage in the grand Kazakhstan-China pipeline that will stretch over 3022 km and connect Kazakhstan and China. As seen in Figure 3:5 this grand project is split up into three different stages. The first and parts of the third are already completed, but until the second stage is completed it will not be possible to transport oil from Kazakhstan to China. The pipeline will though when completed only supply China with less than five percent of the expected oil demand.53

Figure 3:5 Kazakhstan


In October 2004 CNPC closed a US$4.2 billion deal to acquire PetroKazakhstan (PK), a Canadian based oil company operating in Kazakhstan. PK is one of the biggest operators in the country and CNPCs purchase of the company will help China solidify its position in Kazakhstan. PKs production is also located near the Chinese border making it strategically close to the fast growing market in China. The affair is said to be a good deal for CNPC. By purchasing PK, CNPC get access to a good refinery, reserves and production facilities and the oil can be transported through the pipelines built.54

4.3 Canadian Oil Sands

China’s domestic production of oil is, as described earlier, inefficient. China also has sources of oil that is not being extracted. This can be explained by the fact that China does not possess sufficient technology, or that the technology available in China is too expensive. Chinese oil companies has therefore carried out investments in projects that have not only been supplying China with oil. These investments have also provided China with new technology, necessary at the home market. Sinopec’s subsidiary SinoCanada shows us an example of this, an investment in Canadian oil sands.

Canadian oil sands\textsuperscript{55} reserves where officially recognized in 2003, followed by a massive international investment interest. Highly developed infrastructure and refineries, together with a stable political climate made, and makes, Canada an attractive country for investment. Oil sands is available in several areas around the world but rarely extracted due to lack of technology and expensive methods of production. In China alone, oil sands resources have been found in over 20 provinces, but none of them have been exploited because of the high costs and sophisticated technology associated with the production. Extraction of crude oil from oil sands is very resource- and man-power-intensive and as a consequence expensive. But it has got potential of being a stable and high volume oil supplier, making it lucrative for investors.

China has taken on a different investment attitude towards the Canadian oil sands. The strategy has been a careful approach, making smaller and more measured investment rather than a massive one. By taking minority positions in private companies or form joint ventures, China can get access to new technology and business expertise without causing much attention, controversy and unwanted government interference.\textsuperscript{56} The technology and business expertise can later be transferred to China and there help increase the chances of a domestic Chinese oil sands production.

\textsuperscript{55} Oil sands are deposits of a thick, tar-like oil called bitumen. Bitumen is much thicker than normal crude oil and therefore needs to be mixed with lighter hydrocarbons or heated up to flow. Before you can use it in refineries to produce diesel fuels and gasoline you need to put it through rigorous conversion processes. (see \url{http://www.energy.gov.ab.ca/100.asp} for further information)

The Chinese company SinoCanada has formed a joint venture with Canadian Synenco Energy Inc paying around 150 million Canadian dollars for a 40 percent share in an Alberta oil sands project. The project in northeast of Alberta, Canada, with expected total investment of 4.5 billion Canadian dollars will include both mining and extracting.\textsuperscript{57} PetroChina International Company Limited have also shown interest in the Canadian oil sands entering a memorandum of understanding with Enbridge Inc. The memorandum implements cooperation in building and developing the Gateway pipeline, a pipeline providing China with Canadian crude oil.\textsuperscript{58}

\textsuperscript{57} Peoples Daily Online, 2005, \url{http://english.people.com.cn/200506/01/eng20050601_187975.html}
\textsuperscript{58} Peng, 2005, \url{http://www.asia-inc.com/May05/Up_asianeye_may.htm}
5. Analysis

We have now presented a theoretical framework for explaining TNCs FDI behaviour. We have also discussed the Chinese energy situation and FDI undertaken by Chinese oil companies in Sudan, Kazakhstan and Canada. It is time to connect these pieces and analyse the Chinese FDI in oil with Dunning’s eclectic theory. Below we will examine the motives behind the FDIs described and analyse in what way, and if, the OLI advantages were present in these FDI. The analysis will also try to explain why investments have been made although these advantages have not been present at some stages. We will end the analysis by raising some questions and problems concerning the development and the future prospects of China’s FDI in the oil sector.

As we analyse the Chinese FDI in oil it is important to recognise that the three oil companies mentioned in this thesis are all state-owned, hence regulated and controlled by the Chinese government. It is therefore of interest to take a look at the Chinese government’s policies on energy and the motives stated for China. As mentioned earlier the Chinese government emphasizes the importance of an accelerated exploration and exploitation of natural resources such as natural gas and oil, and also to, as effective as possible, make use of overseas resources. As a consequence hereof, the Chinese government has taken on a two-pronged strategy to attain these goals. That is to, (1) increase the domestic output of energy, and (2) obtain strategic deals with foreign petroleum countries to secure access to their oil resources, preferably by owning the physical source of production itself. The securing of oil can hence be seen as the general motive for the Chinese FDI in the oil sector. The Chinese government has stressed the importance of a secure oil supply for continued economic growth and the major task for the state-owned oil companies is therefore to put this objective into practice.

One way of securing oil is through direct investments in oil resources that gives the investor the right to extract and then export the crude oil back to the home country. CNPCs investments in Sudan has mostly been of this type. The same can be said about most of the other investments that China has undertaken in oil as well. When applying the motives behind

60 U.S.-China Economic and Security Review, 2005, p 167
the investments in Sudan to Dunning's eclectic theory, these investments will fall under resource-seeking FDI.

The investment in the Canadian oil sands can be seen as a resource-seeking FDI, but in the sense that Sinopec was looking for new technology not available at the home market. By acquiring this new technique China improves the possibilities to further explore the domestic Chinese oil sands. An affordable method of extracting oil sands creates new possibilities for the Chinese domestic oil production.61

By building pipelines from Kazakhstan to China it will be possible to transport crude oil between the two countries helping China reach its goal of an increased supply of oil. The investments in Kazakhstan’s infrastructure can thus also be seen as resource-seeking FDI.

We have now showed that the motives behind the Chinese FDI in the oil sector seems to have been resource-seeking. We will continue to analyse if the Chinese FDI in oil that has been described are applicable to Dunning’s eclectic theory, hence if the OLI advantages have been present.

The application of Dunning's eclectic theory to the Chinese FDI in oil is though not without complication. The fact that the Chinese oil companies are state-owned has got many implications whereas a couple are of importance for us. Fully applying the investments made by Chinese oil companies to Dunning’s theory on FDI becomes difficult as these companies can not act as normal profit-maximizing companies. Instead they need to satisfy the Chinese governments energy policies. This makes some of the investments more concentrated on the political objective than the economical dito. We saw examples of this when we looked at the historical background of the Chinese FDI. The main goals and motives behind the first FDI undertaken by Chinese companies, for example, was not to maximise profit in the sectors involved, but more to expand and enhance the Chinese international trade relations, improve China’s political and economical influence on the world market and an overall strengthening of its global position.62 As we analyse the Chinese FDI undertaken in oil we will see similar tendencies.

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62 Chen, 2001, p 1238
With this in mind we now turn to discuss Dunning’s theory on FDI. The eclectic theory argues that the OLI advantages should be present for FDI to take place. In the case of Sudan, China can be said to have had an O (ownership-specific) advantage. Sudan did not have the capital needed to make use of their oil resources. China, through CNPC, did have the economic resources and the technology necessary for extraction of the Sudanese oil which gave them an O advantage in Sudan. In the case of Kazakhstan, it seems as the capital was lacking too. Kazakhstan need foreign investors in order to produce at its full capacity and to create transport networks, as the pipeline connecting Kazakhstan and China. Being one of the world’s ten largest oil companies, CNPC could provide the amount of capital needed and could also bring technology and expertise superior to the smaller Petro Kazakhstan. CNPC could thus provide both tangible and intangible assets and can be said to have had an O advantage. The Chinese investments in Canada has brought capital into the existing companies, something that has been appreciated. The Chinese oil companies thus contributed with capital and that is argued to be an O advantage.

The L (location-specific) advantage, further, is argued to take three different forms, namely economic, social and political. One rather obvious L advantage that all investments that we have investigated have in common is the fact that there is a quantity of oil available where the Chinese oil companies have decided to invest. The investments in Canada also had an L advantage in the sense that Canada possessed technology that was attractive for the Chinese oil companies. By undertaking FDI in the Canadian oil sands China got access to this technology. According to our theoretical framework technological, innovatory and other created assets can be a L advantage. The investments in Kazakhstan can be said to have had the L advantage of being relatively close to China, thus making transportations and contacts easy. This is earlier explained as being a L advantage. Another L advantage is argued to be a stable political climate. An investment in a politically and economically unstable country is less attractive than in a country that is stable. The Chinese FDI in the Canadian oil sands can be said to have this L advantage as well, seen as Canada is a relatively stable country. However, Sudan is a very unstable country, on many levels. Abuse of human rights, declining security conditions and the situation in the Darfur region as to mention some. China, thus, does not seem to have had that L advantage with their investments in Sudan.

63 Moore, 2005, [link](http://atimes01.atimes.com/atimes/China/GH25Ad01.html)
64 Peng, 2005, [link](http://www.asia-inc.com/May05/Up_asianeye_may.htm)
65 Shichor, 2005, [link](http://www.asianresearch.org/articles/2754.html)
I (internalisation) advantages can be said to explain why a firm chooses to invest in a foreign country rather than staying at home. By using the internal market you can get past trade barriers or costs that are associated with the conditions in the host country. In the way that these advantages are explained by Dunning it is difficult to apply them to the Chinese FDI in oil, since oil is a special commodity. Given the fact that there is a limited scope for further discoveries of large oil fields within China, the Chinese oil companies need to invest abroad to expand, or even maintain, the revenue and to be able to keep their workforce employed.66 But in the sense that China can get past certain uncertainties by investing in the politically and economically unstable Sudan they can be said to have had an I advantage.

As seen above it is not clearly stated that the OLI advantages have been present at all FDI that the Chinese oil companies have undertaken. With the information available to us it has been hard to establish if these advantages have been present, and therefore if our explanations are sufficient. But, as it seems, China has invested although some of OLI advantages have not been present. It looks as if the Chinese oil companies have not acted on the basis of the prevalent theory on FDI, but rather on their government’s policies.

The fact that Chinese FDI in many cases have not been the most cost-effective way to acquire oil shows us examples of this behaviour. The Chinese government’s objective to secure oil has sometimes been stronger than acquiring oil in the most cost-effective way; economical motives has been secondary to political objectives. The building of the Kazakhstan-China pipelines is an example where it has not been the cheapest route for transporting oil to China, and the oil purchased in Kazakhstan is not the least expensive. It would be cheaper for China to continue importing from the Middle East. Pipelines should then instead be built from coastal ports to refineries in China’s interior. Even so the Chinese oil companies keep investing in Kazakhstan and Central Asia.67 The question of interested hence becomes: Why engage in FDI when imported oil is cheaper?

China’s goal to establish a long term energy security, brings us closer to the answer. By using FDI, China can own oil at the source of production, hence own the oil before it is exported back to them. For China this can be a preferable alternative for several reasons. Firstly, almost

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66 Andrews-Speed, 2000, p 392
67 Ibid., pp 392-394
80 percent of the Chinese oil imports have its origin in unstable Middle Eastern and African countries. Disturbance in the region will most likely make the price of oil rise, making Chinese imports more expensive. Oil is normally sold under long term trade agreements and these only regulate volume. Prices are mobile and set on the spot market. This means that although the supply of oil is secured by the agreement, the price may fluctuate depending on external factors, such as regional or international disturbances or changes in the world demand.

When owning the source already at the ground, China will not be as affected by possible price distortions. As a consequence hereof China can reduce their vulnerability and lessen the uncertainties associated with sudden price fluctuations.

Secondly, being heavily import-dependent on Middle Eastern oil has another disadvantage. Tankers carrying oil from the Middle East must transit sea lanes that could easily be blocked by the U.S. navy, and this can become a concern. China and the U.S. have several issues of disagreement, Taiwan is one example, and should the two countries come into conflict, the U.S. could block Chinese oil imports causing severe oil shortages in China.

Thirdly, oil is a non-renewable resource that will eventually dry up. When this occurs is a matter of discussion, but in around 40 years the oil resources that we know of will have run short. China’s attempt to own oil at the ground can therefore partly be explained by the fact that China in the future probably have difficulties buying the oil needed on the world market.

These explanations can provide some understanding as to why China choose to undertake FDI rather than increase their import. Even though the investments might be more costly it can provide greater long-term security to own oil at the point of production rather than relying on imports.

By owning oil at the production point the Chinese oil companies can choose to export oil exclusively to China and not put it out on the market. This creates great dissatisfaction amongst other oil majors like the U.S. and EU that sell their oil in the world market. When Chinese oil companies invest and export exclusively to China they withdraw oil that otherwise could be sold on the free market. An example hereof was when the Chinese oil company CNOOC placed a US$18.5 million bid on the American oil company UNOCAL in an attempt to buy it. This proposal got a lot of attention and it showed that the Chinese energy

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68 Kiesow, 2005, pp 12-13
70 Dreyer, 2004, pp 235-236
policy on trying to own oil at the source of production is not without complication. Protests against this attempted Chinese FDI was so powerful that CNOOC eventually withdrew its bid. One of the main arguments that came up against this affair was the fact that China could, by investing in UNOCAL, restrict access to the crude oil and export it exclusively back to China. UNOCAL accounts for less than one percent of the U.S. oil consumption so this particular deal was not very large. But given the attention it got it shows the provocation the Chinese energy policy constitute.⁷²

6. Conclusion

This thesis aimed to investigate the motives behind Chinese FDI in oil. It also intended to analyse if Chinese oil investments can be explained by Dunning's eclectic theory and the OLI-advantages. After describing China's energy situation and examining the FDI undertaken by CNPC and Sinopec in Sudan, Kazakhstan and Canada we can conclude that the investments undertaken has been resource-seeking investments. Concerning the Chinese FDI in the oil sector we observed indications that the Chinese oil companies possessed some ownership-specific advantages in all the investments, in the form of capital needed for the foreign production. Chinese oil investments in Kazakhstan showed to have a location-specific advantage being geographically adjacent, while the L advantage could not as easy be argued to exist in the troubled and unstable Sudan. Canada, though, had a L advantage because of it being a politically and economically stable country. We found it hard to decide if any I advantages had been present, partly because a lack of information and also because of the nature of the FDI in oil.

The analysis then discussed why investments had been made, despite the fact that not all the OLI advantages had been present. The fact that the Chinese oil companies are state-owned and can not act as profit-maximizing companies explained why this had happened. The Chinese government's goal to establish a long-term energy security had made economical motives secondary to the political. Finally it was argued that the Chinese policy on owning the oil at the point of production is controversial and criticized.
7. Literature


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