

Understanding China's Global Energy Strategy

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Abstract: As China's economy has expanded, so has its need for energy. Consequently, China has increased its domestic energy capacities and developed import strategies for oil and gas. In its international energy activities, China has progressed through a series of stages. The purpose of this paper is to focus on China's latest stage: creating an overland energy network, supplied primarily by Central Asia's Kazakhstan, Turkmenistan and Uzbekistan, and becoming the energy hub of an integrated Asian market – China's recent "Silk Road" proposal. This paper also examines the impact of Chinese energy investments on the prospects of Central Asian energy producers transitioning to emerging markets.

Keywords: developing countries, emerging markets, China, Central Asia, Silk Road, Energy Politics

1. Introduction

Accompanying China's stunning economic growth in recent years has been an equally stunning rise in its energy demand. From the mid-1960s until 1993, China was energy self sufficient. By 2010, however, China had become the world's largest energy consumer and in 2012 had to import 57% of its oil (CNPC News, 2012). In 2014, China is expected to surpass the United States (US) as the world's largest net oil importer; and, by 2020, it will need to import 66 percent of its total oil requirements (US EIA, 2014).

In recognition of its looming reliance on oil imports and its burgeoning environmental problems, China would like to curtail its oil and coal consumption and expand the role of natural gas in its economy. Since its first liquid natural gas (LNG) regasification terminal became operational in 2006, China's gas imports have rapidly risen and are projected to grow 5 percent annually. China's consumption of natural gas reached 169 billion cubic meters per year (bcm/y) in 2013, accounting for 5.9 percent of

its primary energy mix. Future gas demand, according to China's state-owned China National Petroleum Corporation (CNPC), will "grow by about 8 percent annually" and consumption will increase to "350 bcm/y and 550 bcm/y in 2020 and 2030 respectively, accounting for 10-12 percent of China's primary energy consumption (CNPC Speeches, 2012)."

Since China became an energy importer in 1993, government officials have pursued a dual track energy security strategy, divided between internal and external measures. Domestically, the government has sought to increase indigenous sources of energy, such as oil, natural gas (including shale gas and coal-to-gas), nuclear, and renewable energies. The government has also emphasized conservation to temper energy use. On the international front, China has pursued imports, evolving from an inexperienced and reluctant player in the international energy system into a major investor in both upstream and downstream ventures. Geography dictates that non-pipeline imports of oil and gas be delivered per tanker to China's Pacific coast along three main routes. The route for supplies from Southeast Asia and Australia crosses the South China Sea; those from the Americas cross the Pacific Ocean; and the third – and most important – route, serving supplies from the Middle East and Africa, is across the Indian Ocean and the Strait of Malacca, which is how China receives 75 percent of its oil. The Strait of Malacca is the shortest waterway between the Indian and Pacific Oceans to the South China Sea and the regional sea lines of communication (SLOC) are controlled by the US Navy.

Chinese officials worry that the US navy could disrupt oil shipments bound for China in the case of a conflict between China and a US ally in the Pacific (Taiwan, Philippines, Japan or Korea) (Zhang, 2011; Smith, 2014). Besides the US naval presence, the Strait poses additional security concerns because the relatively long and narrow passageway exposes tankers to potential piracy and terrorism. The Chinese government's anxieties over an energy crisis are now accompanied by worries over a transit crisis, known as the "Malacca dilemma" (Chen, 2010; Smith, 2014). In addition to these worries, Chinese officials are also concerned about the stability of some of their existing suppliers (CNPC News, 2012). To lessen its vulnerability to maritime disruptions and diversify suppliers, China has recently devoted considerable attention to securing overland energy supplies from several producing states in Central Asia.

The Chinese government's pursuit of energy security has, in general, been well documented. Some scholars have focused on maritime security issues, such as the Strait of Malacca and China's disputes over territorial waters with neighbors in the East China Sea and the South China Sea (Chen, 2010; Buszynski, 2012). A number of studies have examined China's efforts to diversify its sources and routes of energy supply (Erickson and Collins, 2010; Downs, 2013). Other scholars have focused on the "New Great Game" rivalry between several major powers, such as Russia and the US, for political and economic influence in the Caspian region – a "game" which China has only recently entered (Cooley, 2012; Kubicek, 2013). Thus far, however, scant attention has been paid to China's overland approach for securing energy and how this strategy fits into its

vision of creating a new “Silk Road.” Our objectives are manifold: First, we seek to analyze China’s approach to mitigating energy shortages, particularly with regard to its overseas and overland import strategies. We argue that, in the past year, China has entered a new stage in its quest for energy security, comprising an integral component of the “Silk Road” vision it articulated in 2013, which would integrate Asian markets with China as the hub and energy conduit. A core feature of China’s vision is creating an overland energy network with eastern resources, supplied primarily by Turkmenistan, Kazakhstan, Uzbekistan, and Russia. We examine both China’s overland strategy and its recent “Silk Road” proposal, which have not yet been adequately covered in the literature; thus, this article contributes to existing scholarship by filling these gaps.

Our next two objectives are intertwined: to analyze how energy-producing developing countries in Latin America and Sub-Saharan Africa have fared with heavy Chinese investment – and then to use these insights to assess the potential impact of Chinese energy investment on the three Central Asian states, which are considered close to attaining emerging market status (Horton and Dunn, 2013; IMF, 2014). Our findings indicate that the expansion of a country’s energy exports combined with increased trade with China can be a “mixed blessing”: a boon to some sectors but disadvantageous for others. We also raise several red flags. The article proceeds as follows: first, we introduce the research methods used in our study. Second, we delineate China’s energy security strategy, both domestically and internationally. We then explain the four progressive stages of China’s approach to foreign sources of energy. We pay particular attention to the most recent stage, in which China envisions itself as an energy hub for Asia, with supplies sourced from Eurasia, including Turkmenistan, Kazakhstan, and Uzbekistan. As these three countries will play a key role, we examine their energy relations with China. We then discuss the impact of Chinese investment on these three countries and apply insights gleaned from the experience of resource-exporters in Latin America and Sub-Saharan Africa. We conclude by exploring how Chinese investment may affect the Central Asian states’ attainment of emerging market status.

2. Methods

To accomplish our objectives, we employ an exploratory research design based on (1) prior research reviews and (2) case analysis. The exploratory research design was selected because it is well-suited for studying material on which little research has hitherto been conducted (McNabb, 2004). Our analysis of China’s global energy strategy and its energy relations are informed by an extensive review of a wide variety of materials, including Chinese-, English and Russian-language sources, including Chinese and US government documents and reports, academic articles and research papers, international datasets, energy industry specific publications, international lending agency and think tank reports, and news media reporting.

To assess the potential impact of China’s energy investments on Central Asian

exporters, we conduct a comparative case analysis of the impact of similar energy investments, by China, on the political, economic and social development of energy exporters in Latin America and Sub-Saharan Africa. Whereas a great deal has been written about Chinese investments abroad, in general, scant attention has been paid to the impact of energy investments on developing countries. However, through careful scrutiny of the existing literature, we ascertain distinct similar effects. To assess China's potential impact on Turkmenistan, Kazakhstan, and Uzbekistan, we apply the insights of our comparative analysis.

3. China's Pursuit of Energy Strategy

Since the middle of the 1990s China's growing concern about energy security has impelled its leaders to develop a variety of policies for various energy sectors, including oil, gas and electrical power. Because of its growing and foreseeable long-term dependence on oil and gas imports, these issues have become a priority in a number of official documents, such as the five-year plans. The domestic and external economic and political measures that should enhance Chinese energy security were delineated, for example, in the Ninth Five-Year Plan (1996-2000) and repeated in the Tenth (2001-2005) and Eleventh (2006-2010) (Andrews-Speed, 2004; Cheng, 2008). In addition, national energy policy has been the topic of two 'energy white papers' released by the Chinese government in 2007 and in 2012 (The Information Office of the State Council, 2007; The Information Office of the State Council, 2012).

3.1. Domestic Measures

The domestic policy priorities cover a variety of topics, ranging from encouraging investment in indigenous oil production to promoting renewable energies. First, China seeks to develop and implement energy conservation and efficiency programs (Cheng, 2008). Second, it has established and will soon complete several strategic petroleum reserves (Cheng, 2008). Third, China strives to promote renewable technologies and sources, in which it has hitherto been extremely successful. Indeed, the renewable energy industry is a key element of China's strategy to move from a low-cost manufacturing-based economy towards a more high-tech innovative economy (Zhang et al., 2013). Fourth, China re-organized its energy industry by transforming its state-owned national oil companies (NOCs) into vertically integrated companies operating both upstream and downstream: the China National Petroleum Corporation (CNPC), China National Offshore Oil Corporation (CNOOC Group) and the China Petroleum and Chemical Corporation (Sinopec). More than half of China's domestic oil and three-quarters of its natural gas are produced by CNPC and its subsidiary, PetroChina. Fifth, China has attempted to maximize its indigenous oil production by reforming its pricing and tax system (US EIA, 2014). In sum, to enhance China's energy security, the government undertook significant steps to better manage its domestic consumption and

efficiency, as well as to encourage greater domestic production; however, it also reluctantly accepted that it would have to import oil.

3.2. Becoming an Importer and Investor

Observers who assert that China's overseas activities can be divided into stages identify distinct periods: 1992-1997, 1997-2002 and 2002-2006 (Ma and Andrews-Speed, 2006). In general, we agree with this analysis; however, we modify the scheme by identifying the key attribute of each stage, extending the third stage by six years and adding a fourth, which argue began in 2013.

3.2.1. First Stage, 1992-1997

The era between 1992 and 1997 is marked by the inexperience of government officials. During this period, China began importing oil via direct contract purchasing, with over 30 percent of its imports stemming from Indonesia and 40 percent from Oman and Yemen. In contrast, Saudi Arabia, which is currently China's largest supplier, delivered only a small amount of oil, about 2 percent (Lai, 2009: 30). Around this time, China also began importing from Angola (which by 2014 was China's second-largest oil supplier). In addition to importing oil, through its NOCs China began acquiring small assets and developing oil fields in Canada, Peru and Indonesia (IEA, 2011). We assert that this stage is characterized by inexperience because government authorities were not only distrustful of "the international energy order (Kennedy, 2011:148)", they also lacked familiarity with that order. For example, according to the International Energy Agency (IEA), the initial forays by Chinese NOCs were not directly supported by government planners, who "did not envision overseas upstream investment as a sound strategy to meet the growing Chinese demand (IEA, 2011: 13)." In the next stage, however, the government shifted its position.

3.2.2. Second Stage, 1997-2002

The second stage, from 1997 to 2002, is notable for Chinese officials' growing awareness of the value of operating in foreign countries and of having control over production. Reluctance is replaced by engagement and, in 1997, "Going Abroad" became a national strategy (Baker Institute, 2007). During this stage, China began securing "equity oil" deals, whereby China acquires ownership of the produced oil, which it can either sell on the international market or ship home. As China became more interested in diversification and securing oil supplies, Chinese delegations visited resource-rich countries and signed bilateral "strategic oil partnerships" that significantly strengthened petroleum cooperation and opened the door for China's NOCs to invest upstream, leading to signed oil agreements with numerous countries, including Saudi Arabia, Kazakhstan, Russia, Algeria, Nigeria, Sudan, Kuwait, Iraq and Iran. These deals encompassed exploration of onshore oil and gas fields as well as the construction of oil and gas import pipelines (Ma and Andrews-Speed, 2006).

3.2.3. Third Stage, 2002-2012

From 2002 to 2012, Chinese energy development became more aggressive and ambitious; this stage is characterized by the growing confidence of the Chinese government. For example, rather than cutting deals with other governments, China negotiated directly with foreign companies. This stage also witnessed China's expansion into new locations and new technologies. Geographically, China strengthened existing cooperative relationships and reached out to new countries including Algeria, Gabon, Argentina, Brazil, Turkmenistan and Uzbekistan (IEA, 2011). China also began seeking projects that would increase its technological expertise and had the backbone to undertake riskier projects. In this phase, "the scale and nature of the projects expanded from the low risk, conventional projects to unfamiliar projects involving deep-water exploration" (Ma and Andrews-Speed, 2006: 23). CNPC extended its overseas downstream operations and Chinese NOCs actively sought partnerships in which they could gain technical expertise, particularly in LNG and deep-water exploration (IEA, 2011). The third stage also saw the beginning of China's "loans-for-resources" strategy, and it signed such agreements with Russia, Kazakhstan, Turkmenistan, Venezuela, Brazil, Ecuador, Bolivia, Angola, and Ghana. Its largest known loan-for-oil and loan-for-gas deals are a \$15 billion deal with Kazakhstan in exchange for 200,000-250,000 bpd of oil and a \$40 billion arrangement with Venezuela in exchange for 600,000 bpd of crude oil and products (Lee, 2012:87; US EIA, 2014). According to the US Energy Information Agency (EIA), "by the end of 2012, Chinese NOCs had secured bilateral oil-for-loan deals amounting to around \$108 billion (US EIA, 2014: 10)." The Chinese government was also confident enough to encourage resource-rich countries to invest in Chinese domestic downstream assets; thus, in addition to "loans-for-resources", China began engaging in "market-for-resources". Allowing foreign entities to invest in downstream assets is a step that many countries, including Russia, are reluctant to embrace. China's motivation has been to quickly upgrade its domestic energy industry. Thus, Saudi Aramco is working with Chinese partners on refinery and crude stockpile facilities; Russia's Rosneft is involved with refineries and gasoline retail stations; and Venezuela's PDVSA is developing refineries. In 2006, China became a net gas importer, which prompted a new emphasis on gas as the top energy cooperation priority: for example, LNG imports and the development of overseas gas fields. Since the mid-2000s, China has courted Central Asian gas producers – its interest in this region driven at least in part by its desire to develop overland supply routes and thereby avoid maritime chokepoints in the Pacific. We aver that a second purpose of China's investments in Central Asia has been to lay the foundations for a fourth stage of its international energy strategy, which is to become the energy hub of an integrated Asia. As this stage began very recently – in 2013 – our focus is on China's greater vision.

4. The Fourth Stage: China's Plans for a new "Silk Road"

China's fourth stage of energy development can be characterized as visionary; not only does it strive to secure its own imports, it seeks to integrate the Asian region

and become an East-West energy hub – a conduit for supplies to other Asian countries. This vision was manifested through a series of proposals introduced in 2013. In September 2013, China's President, Xi Jinping, visited several Central Asian countries and signed deals, including for energy, worth over \$60 billion – confirming the impression that China can outspend Russia and the US in this region (Belafatti, 2013) and can afford to “bankroll” large projects (Mukhametrakhimova, 2012). This visit, which has been aptly described as a “victory lap” (Olcott, 2013), was the culmination of several years of careful and strategic positioning by China to be able to secure both the cooperation and the resources of several Central Asian states. It is no coincidence that during this same tour, Xi Jinping announced plans for a new economic zone, the “Silk Road”, that would connect Central, East, South and West Asia. The Chinese “Silk Road” project would be both more comprehensive and ambitious than either Russia's “Eurasian Union” or the United States' “New Silk Road” projects. Early indications of the energy part of this plan surfaced at several Shanghai Cooperation Organization (SCO) summits and meetings. For example, at the 2007 SCO summit, members “agreed to create a ‘unified energy market’, bringing energy resources from energy-producing member countries to consuming countries (Van Agt, 2014: 66).” In addition to supplies from Central Asia, China plans to tap Middle Eastern resources (Salman and Geeraerts, 2015). With its “Silk Road” proposal, China has incorporated energy into its larger plan; indeed, energy is an integral component of the plan.

The “Silk Road” proposal was introduced five months after the announcement of two other significant economic “corridors”: in May 2013, China's Premier, Li Keqiang, announced during a visit to Islamabad the creation of a “Sino-Pakistan economic corridor”, while with his Indian counterpart, Manmohan Singh, Li proposed the inception of a “China-Bangladesh-India-Myanmar economic corridor”. These land-based “corridors” and “roads” would be complemented by a “Marine Silk Road” comprised of ASEAN countries, which was proposed by Xi Jinping during a visit to Indonesia in October 2013 (Russian International Affairs Council, 2013). In short, China has spent several years strategically cultivating relationships throughout Asia and endeavors, with the cooperation of its neighbors, to integrate and network Asian markets. Energy resources will flow from the west and goods will flow both eastwards and westwards, with China as the central hub. As Central Asia plays a critical role in this plan, we examine Chinese relations with these countries more closely in the next section. Russian resources will also comprise part of China's overland energy network. Indeed, Vladimir Putin might even claim (if asked) that the notion of an “Asian Energy Club” – Russia and the Central Asian energy producers – to supply Asia was first introduced by him at earlier SCO summits. A close reading of the “energy dance” between China and Russia over Eurasian resources for China suggests that both sides were, at different points in time, reluctant to commit. Russia seemed to vacillate between China and Europe/Japan and China seemed interested in accessing Central Asian resources without Russia's involvement (for an account of parts of this dance, see Kozyrev, 2008). This stalemate has recently been resolved – even before the March 2014 Ukraine crisis – and it appears that Russia will indeed become a major supplier to China. Because of space constraints

and our interest in exploring the “China investment effect” on the Central Asian countries, we focus here on Turkmenistan, Kazakhstan, and Uzbekistan.

5. China’s Energy Relations with Central Asian Suppliers

5. 1. Turkmenistan

China’s interest in Turkmenistan, the world’s fourth-largest holder of natural gas reserves, dates to 1992, when CNPC and Mitsubishi proposed to export Turkmenistan gas to China. The first gas export agreement, however, was sealed fifteen years later in 2007 when Ashgabat and Beijing agreed to construct the 1,833 km long Central Asia-China gas pipeline, connecting Xinjiang with Turkmenistan and transiting Kazakhstan and Uzbekistan. The Turkmenistan portion of the pipeline was built with Chinese funding and is operated by a set of joint ventures between CNPC and state-owned Turkmenistan companies. In 2009 China began receiving Turkmenistan gas and by 2012 this amount reached 21.3 bcm/y of gas, equivalent to 51 percent of Turkmenistan’s total gas exports. This volume is about half the total volume of China’s gas imports. In 2008, CNPC and Turkmenistan signed an agreement to increase the volume of Turkmen gas to 40 bcm/y by 2015. In addition to exporting Turkmenistan gas, China has also become active in gas field development and production. In 2009 China provided a \$4 billion loan for the first development phase of the South Yolotan gas field, the world’s second-largest gas field with proven reserves of seven trillion cubic meters, and in 2011 China added a \$4.1 billion dollar loan (US EIA, 2013b). In September 2013 China and Turkmenistan decided to significantly expand the Central Asia-China pipeline to 65 bcm/y by 2020. Even before this agreement was signed, China had become Turkmenistan’s leading trade partner in 2012, with \$10 billion bilateral trade turnover.

5.2. Kazakhstan

China has also become a significant investor in Kazakhstan, which is rich in both oil and gas. China’s serious interest in Kazakhstan began in 1997, when it signed an agreement to build the Kazakhstan-China oil pipeline, which had an initial capacity of 252,000 bpd. It is currently being upgraded to carry 400,000 bpd. In 1997, CNPC also purchased 60 percent of Kazakhstan’s Aktobe Oil and Gas Corporation Limited (a subsidiary of the KazMunayGas national energy company) which develops the Aktobe oil field (estimated reserves of 1.17 billion barrels). In 2005, CNPC obtained control over the Kazakh oil company Petro Kazakhstan and acquired a 100 percent share of the North Buzachi oil field. In 2007, China and Kazakhstan agreed to construct a gas pipeline – with an initial capacity of 10 bcm/y expandable to 15 bcm/y – that will eventually link to the Kazakhstan section of the Central Asia-China pipeline network (The Information Office of the State Council, 2013). In 2009, CNPC lent \$5 billion for the construction of this pipeline; and, in 2012, another \$1.8 billion was allocated.

During Li’s visit to Kazakhstan in September 2013, the two countries agreed to sign 22 energy deals worth \$30 billion, and it was announced that China had triumphed

over India to gain an 8.33 percent stake in Kazakhstan's crown jewel, the giant Kashagan Caspian offshore oil field. This field is the world's fifth-largest and contains reserves estimated at 13 billion barrels. It is China's first offshore and its largest acquisition in the Caspian Sea basin to date (US EIA, 2013a). China is Kazakhstan's largest trading partner – even before the September 2013 agreements, China's total investment in Kazakhstan's energy sector was \$12 billion – and it is projected that in the near future, more than 40 percent of the Kazakh oil industry will be controlled by China (Heritage Foundation, 2013).

5.3. Uzbekistan

Uzbekistan is also of great interest to China, due to its significant oil and gas reserves – it is the third-largest natural gas producer in Eurasia, behind Russia and Turkmenistan – and its role as a transit country for the Turkmenistan-China gas pipeline. In 2008 CNPC, together with the Uzbek national energy company Uzbekneftegas, began construction of the 490-kmlong Uzbek segment of the Central Asia-China Gas Pipeline, which became operational in 2009. One year later the parties agreed that Uzbekistan would deliver 10 bcm/y of gas to China via the Turkmenistan-China pipeline. In September 2012, the President of Uzbekistan, Islam Karimov, further committed to raise the country's export volume to China to 25 bcm/y by 2016 (Jaroszewicz, 2012). Uzbekistan's oil is also of interest to China. Since the mid- 2000s, CNPC has been involved in exploring and developing the largest petroleum fields in Uzbekistan, including the onshore blocks of the Aral Sea and Mingbulak oil field in the Fergana Valley. During his September 2013 visit to Uzbekistan, Chinese President Xi Jinping signed a \$15 billion agreement to intensify energy cooperation in areas ranging from shale gas to renewable energies to the expansion of the Turkmenistan-China gas pipeline. In addition to energy deals, China has strengthened its position in other sectors of Uzbekistan's economy. In 2012, trade between the two countries amounted to \$3.4 billion and in September 2013 they agreed to increase this amount to \$5 billion by 2017.

In sum, China has become a major energy investor and trade partner for these Central Asian states. It is projected that as soon as 2020, China will be the largest consumer of Central Asian oil and gas. But what effect might the Chinese energy investment model have on these countries?

6. The Impact of Chinese Investment

Some observers posit that “an ambitious-but-realistic vision is that the [Central Asia] region's countries can use their natural resources to become dynamic emerging market economies over the next decade (Horton and Dunn, 2013:31; see also IMF, 2014).” The transition to emerging market status, however, requires more than a resource boom: also needed are rapid growth, industrialization as well as sufficiently developed political-economic and market institutions (Khanna and Palepu, 2010; Odling-Smee, 2013). Can the Central Asian countries achieve this transition with China as the

dominant trade partner and investor? Or will the role of these countries as the resource providers to the new “Silk Road” exacerbate their vulnerability to Dutch disease – whereby higher resource prices increase exchange rates and reduce the competitiveness of manufacturing sectors – and to resource curse effects? One pessimistic observer of China’s interest in these countries expressed the fear “that the Central Asian region will be transformed into a raw materials appendage of the Chinese economy (Paramonov, 2005:14).” We address these questions and issues by analyzing the experiences of other developing resource-rich countries – in Latin America and Sub-Saharan Africa – that have received significant Chinese investment in their energy sectors as well as increased trade.

6.1. Chinese investment in Latin America and Sub-Saharan Africa

As several observers, including the World Bank, have commented, Chinese investment in Latin American and Sub-Saharan African energy producers has been a “mixed blessing” (Tull, 2006; Zafar, 2007). We analyzed the general trends and drew several conclusions. We found that the main (and interrelated) advantages of Chinese investment are: the opening of a new export market for primary products, a boost to GDP, and the provision of a development model (see Zafar, 2007; Jenkins, Peters and Moreira 2008). Moreover, as Chinese products typically accompany investment, consumers may have access to goods that were previously either unavailable or deemed too expensive (Kaplinsky et al., 2007; Zafar, 2007). The inflow of goods combined with investment into resources and extractive industries – what we call the “Chinese energy cooperation model” – also present several potential disadvantages. First, the availability of Chinese goods may displace local manufacturing and lead to de-industrialization. A related effect is when reduced manufacturing impedes developing countries from cultivating their own export markets. We should also note, however, that the influx of inexpensive Chinese goods could become an advantage if local policy makers and industry leaders react by improving the competitiveness of their domestically produced goods (see Jenkins, 2010). Second, investment in capital-intensive sectors may benefit only a narrow swath of society, primarily the incumbent political and economic elites (see Kaplinsky et al., 2007; Zafar, 2007; Jenkins, 2010). While this second effect alone is sufficient to skew income distribution, the combination of the first and second effects further exacerbates inequality and wealth disparity. The third disadvantage relates to China’s “non-interference” policy when it invests in a country. Concerns have been raised that China’s “non-interference” approach may have harmful political consequences (Tull, 2006); specifically, the lack of political conditions – which is manna to many local leaders – may lead to a worsening of corruption and governance (Zafar, 2007). Finally, although Chinese NOCs are avidly seeking to acquire technological expertise, Chinese investment typically does not provide high-level technology transfer. Moreover, the average technological efficiency of NOCs – from any country, not just China – is typically less than for international oil companies (IOCs) (Baker Institute, 2007). Thus, investment by Chinese NOCs may not bring the advantages vis-à-vis technology of similar Western companies (Rugman and Li, 2007). Although Chinese

investment in Central Asia is relatively new, first reports suggest that the impact resembles that which is experienced by resource-exporters in Latin American and Sub-Saharan Africa.

6.2. The Central Asian Experience, Thus Far

The development of pipeline infrastructure to transport Central Asian resources to China has been directly linked to an increase of trade with China (Olcott, 2013). Similar to Latin America and Sub-Saharan Africa, the availability of low-cost goods has improved living standards (The Economist, 2013). However, the entry of Chinese goods on the market has placed pressure on local manufacturing (Mukhametrakhimova, 2012). In addition to a stark increase of imported Chinese goods, the Central Asian countries have also seen a flood of Chinese workers. The Central Asian countries struggle with underemployment and unemployment and many workers seek employment abroad (particularly in Russia); thus, the Chinese practice of importing workers has been met with resentment (The Economist, 2013). As one observer commented, Chinese loans to these countries for infrastructure projects also serves Chinese interests in securing contracts for Chinese firms and opening up new markets (Peyrouse et al., 2012) as well as, it seems, employment for Chinese workers. In sum, it appears that Chinese investment in the Central Asian states is also a “mixed blessing”. But what does intensified Chinese engagement bode for these states’ attainment of emerging market status?

7. Implications for Attaining Emerging Market Status

In simplified terms, the step from developing country to emerging market status requires rapid and sustainable economic growth and industrialization as well as some degree of functioning political and economic institutions and a sound market structure (Khanna and Palepu, 2010; Odling-Smee, 2013). As our analysis indicates, Chinese investment should result in the rapid growth of some sectors. However, it is questionable whether this growth will be accompanied by a rise in industrialization. Indeed, thus far it appears that the combination of investment and increased trade – particularly the opening of markets for low-cost Chinese goods – has not helped develop the secondary and tertiary sectors of these economies (Hauff, 2013) or build local competencies (Peyrouse et al., 2012). Unless the region’s leaders either impose protections (which would be justified if China engages in dumping) or undertake measures to encourage not just an improvement but an increase in local manufacturing capabilities, then deindustrialization is likely to occur. Whereas the Central Asian countries have little recourse to stop the influx of Chinese goods (aside from imposing anti-dumping restrictions), the inflow of Chinese workers is an issue that regional leaders can more directly influence. While it may be too late for ongoing contracts, it would behoove Central Asian leaders to secure employment for local workers and to upgrade their skills. These type of initiatives require forward-thinking and competent leadership, which directs us to the next issues: the likelihood of the Central Asian states

to attain adequately functioning institutions and governance structures. In Latin America and Sub-Saharan Africa, investment in extractive industries has primarily benefitted political and economic elites. In the Central Asian states discussed here, Chinese investment paired with China's "non-interference" policy has both bolstered the political survival of incumbent elites, by making them appear capable to their publics, and insulated them from Western demands for liberalization. The Central Asian countries have also not been part of the EU enlargement process and thus – unlike the countries in Central and Eastern Europe – have not undergone EU-spurred reforms (Van Agt, 2014). Conducting institutional reform typically requires a major impetus, but what are the sources of such motivation for Central Asian elites? In many ways, the pressure on local elites to reform may be lessened by Chinese investment in their countries. Moreover, as John Odling-Smee (2013:3), former Director of the International Monetary Fund's (IMF) European II Department warns, "growth without reform" can continue for decades and "complicates the task of convincing political leaders that major reforms are needed to generate sustained higher growth rates." In sum, without greater industrialization and institutional reform, we argue that it will be exceedingly difficult, if not impossible, for these countries to achieve the transition to emerging markets. We would also like to raise several red flags. The Central Asian states, because they lack strong institutions and were centrally planned economies – and are thus new to policymaking for market economies – are "especially prone" to the resource curse. Of the three we have discussed, Turkmenistan and Uzbekistan are the most vulnerable (Pomfret, 2011:12). As we have argued, the incentives for institutional reform are few. Moreover, the influx of Chinese goods and the ensuing negative impact on manufacturing may exacerbate Dutch disease effects, which, in the feedback loop between Dutch disease and the resource curse, may lock these countries into a resource curse dynamic.

8. Summation of Findings and Conclusion

The first objective of this article was to analyze China's pursuit of energy security and we found that China has employed both domestic and international measures to this end. We argued that, in its international activities, China has gone through a series of progressive stages, from importing neophyte to international energy heavyweight. This article particularly focused on the latest stage of China's international energy strategy, which we averred is to become the central energy point of a networked Asian region. This plan requires energy. After less than a decade of courting Eurasian energy producers – particularly Turkmenistan, Kazakhstan, and Uzbekistan – China has secured their cooperation and their energy resources for its "Silk Road" plan. Our next objective was to understand the impact of significant Chinese energy investment on energy-producing developing countries. We thus conducted a comparative analysis of the two regions in which such investment have occurred: Latin America and Sub-Saharan Africa. The pattern we identified comprises high levels of investment combined with the opening of markets for low-cost Chinese goods. This approach is unique and we termed it the Chinese energy cooperation model. While investments in capital-intensive energy

projects and the influx of goods is a boon for incumbent elites and everyday consumers, we found that the Chinese energy cooperation model carries potential disadvantages, particularly for local manufacturing and the development of local competencies. The Central Asian states are considered “close” to achieving emerging market status, which requires rapid economic growth, industrialization, and adequate institutions. Our final objective was to assess the potential impact of the Chinese investment on these states. We concluded that, unfortunately, the Chinese energy cooperation model would seem to bring only rapid growth, and only for certain sectors of the economy. Moreover, the Central Asian states need institutional reform – especially Turkmenistan and Uzbekistan – which would help the Central Asian states eventually make the leap to functioning market-based economies. However, Chinese investments have had an insulating effect for local elites, leaving open the question of who or what will have sufficient leverage to push for reform. China, with its “no interference” policy, will certainly not provide the impetus. The hydrocarbon resources of the Central Asian countries can bring both short- and long-term benefits, but long-term and sustainable benefits will only accrue if local leaders have longterm strategies for their countries. Some believe China’s experience can serve as a model for developing countries; thus, just as China’s leaders have formulated a vision for China’s longterm success – the Silk Road plan – it is hoped that Central Asian leaders can create corresponding visions for the long-term betterment of their countries and citizens.