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Влияние низких цен на нефть на энергетическую безопасность Китая

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Резюме: Низкие цены на нефть существенно влияют на Китай как на одного из крупнейших потребителей, импортеров и производителей нефти. В то время как добыча Китая нефти падает, а импорт растет, одной из основных целей Китая является обеспечение его энергетической безопасности. Идея данной работы заключается в том, чтобы определить влияние низких цен на нефть на представление Китая об энергетической безопасности и выяснить, сможет ли новый метод ее обеспечения быть выгодным. Основной целью исследования является поиск оптимального для Китая метода обеспечения энергетической безопасности.

Ключевые слова: устойчиво низкие цены на нефть, Китай, энергетическая безопасность, добыча и импорт нефти

Impact of low oil prices on China's energy security

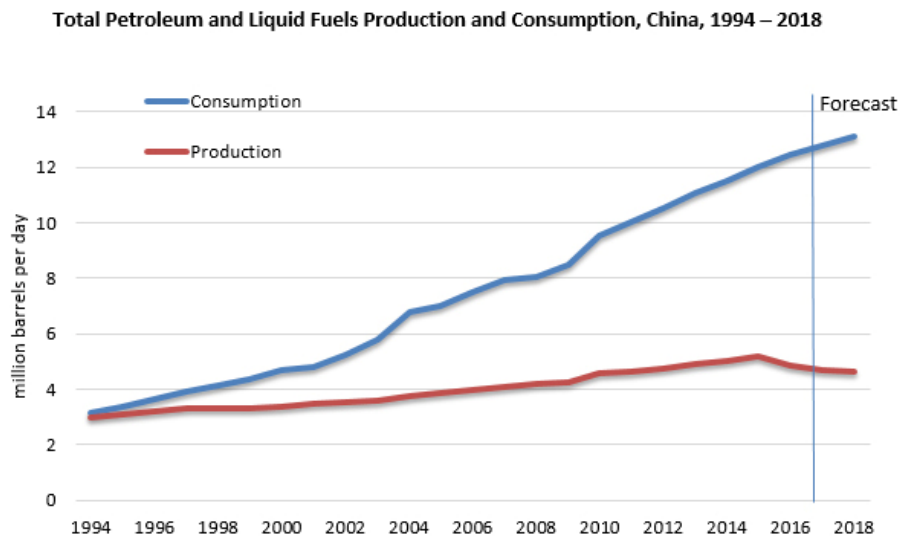
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Abstract: Low oil prices have a significant influence on China as one of the biggest oil consumers, producers and importers. With Chinese oil production falling and import growing, one of the main Chinese goals it to ensure energy security. This paper attempts to identify the impact of low prices on China's view on energy security and to determine whether the new way may be beneficial or not. The main objective of this study is to find an optimal way for China to secure its energy safety.

Key words: sustained low oil prices, China, energy security, oil production and import

Introduction

Like many other countries, China has been affected by dramatic changes in global oil prices. This shift turns out to be structural, and we have entered a new era of lower oil prices which is likely to last for years. China is one the world's top crude oil consumer and importer, but also an oil-producing country. This is why it is important to research whether low oil prices have a negative or a positive effect on China's energy security.



Source: Adapted from U.S. Energy Information Administration data (April, 2017)

Oil plays an important role in the Chinese economy and China's use of oil has continued to climb strongly. According to official figures, China's oil consumption grew by 5.7% in 2015 and by 1.3% in 2016.¹ China's demand on oil depends not only on heavy industry and construction, but also on a whole spectrum of consumer goods ranging from cars to plastic bags. As a result, China's domestic oil consumption is expected to rise at least by the end of the decade.²

The objectives of the paper are to study the development of the Chinese oil sector taking into account sustained low prices and to find out whether they have negative or positive consequences for China's energy security.

China's oil production and import

China's oil market is dominated by national and provincial companies: PetroChina, Sinopec, China National Offshore Oil Corporation (CNOOC) and

¹ PRNewswire (2017): Platts China Oil Analytics: China Apparent Oil Demand in December Rose 2.3%

² Gavekal (2016): The Future Of China's Oil Demand

Yanchang Petroleum. As global oil prices continue to stay at a level of about \$50 per barrel, Chinese oil operators face more challenges than their international counterparts as production costs for many wells in China are above oil prices. This has led to the fact that PetroChina, Sinopec and CNOOC had to reduce their production from many of their high-cost fields.³ According to the International Energy Agency estimates, China's oil output fell 335,000 barrels per day last year to about 4 million barrels per day.

Moreover, China's oil production is expected to fall by 7 percent this year, extending a record decline in 2016. Still, this production cut may have a positive impact on the future of the industry as the OPEC countries also agreed to cut their production for the first six months of 2017 which has led to a price increase to about \$50-55 per barrel compared to last year's average of \$45.⁴

However, if oil prices average \$55 per barrel in 2017, China's oil production will continue to go down by about 5% from 2016. If the prices average \$60 per barrel, China's output will stay flat.⁵

Falling Chinese output will lead to increasing crude oil imports in 2017. China's oil imports in 2016 already grew at the fastest pace in six years which made the nation the world's biggest buyer. And the trend is likely to continue as low oil prices are expected to be sustained.

China's production "floor"

Like any other country, one of China's major goals is to secure its energy sector. One of the ways China used to follow was a production floor.

The conventional oil development in China has entered the stage of high water content and high recovery degree. That's why it is more difficult to keep stable production in the long term. Due to the complex petroleum geology in China, it is difficult to increase the output of low-grade crude oil in line with the level of shale oil in the USA. Moreover, the recovery cost of such low-grade crude oil is high. Taking into account low international oil prices, production capacity and reasonable economic benefit, China was going to keep the yearly output "floor" at about 4 million barrels per day and maintain a stable production for 20–30 years. Given the trend of rigid growth of oil consumption, this "floor" could be

³ Export.gov (2016): China – Oil and Gas

⁴ Bloomberg Markets (2017): China's Oil Collapse is Unintentionally Helping OPEC

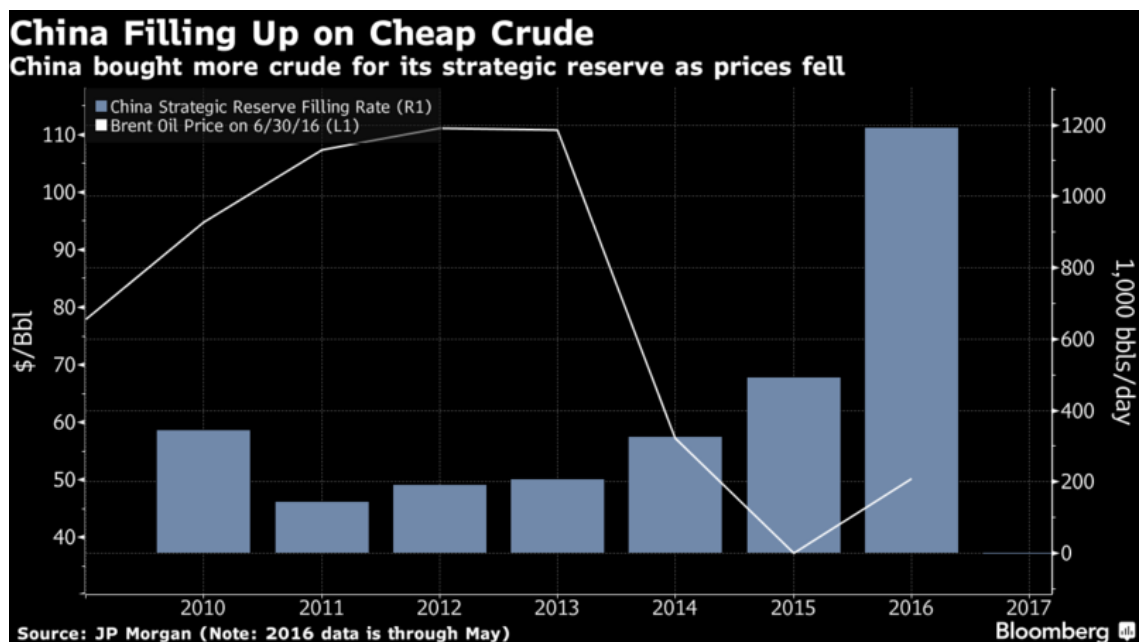
⁵ S&P Global (2017): Outlook 2017: Changes for China's Oil Sector in the Year of the Rooster

helpful in realizing sustainable development of China's oil industry and also in controlling the dependence on foreign oil to about 70% by 2030. Therefore, it used to be of important strategic significance to guaranteeing China's energy security.⁶

In 2014, Chinese dependence on foreign oil reached 59%. As oil prices remain low and domestic crude oil production continues to decline due to the fact that the cost of China's four major oil-producing areas which account for about 70% of PetroChina's output is at the edge of profit-loss balance. If the other major companies, CNOOC and Sinopec, have the same proportion, crude oil production which can be considered effective from the economic point of view accounts only for about 3 million barrels per day. That means that China had to support the industry in order to reach the "floor" of 4 million barrels per day.

China's new view on energy security

However, nowadays China seems to have changed the definition of energy security. Using low oil prices, it continues filling its strategic petroleum reserves.



In 2016 China doubled purchases for SPR, while Chinese crude imports in general rose by 16 percent.⁷

Moreover, the government's energy plan sets the target for China's oil production in 2020 at about 4 million barrels per day, down 6.8 percent from

⁶ Jianjun Chen, Nan Wang, Hongjun Tang, Jun Li, Bo Xiong Impact is sustained low oil prices on China's oil & gas industry system and coping strategies (2016)

⁷ Bloomberg (2016): Oil Bulls Beware Because China's Almost Done Amassing Crude

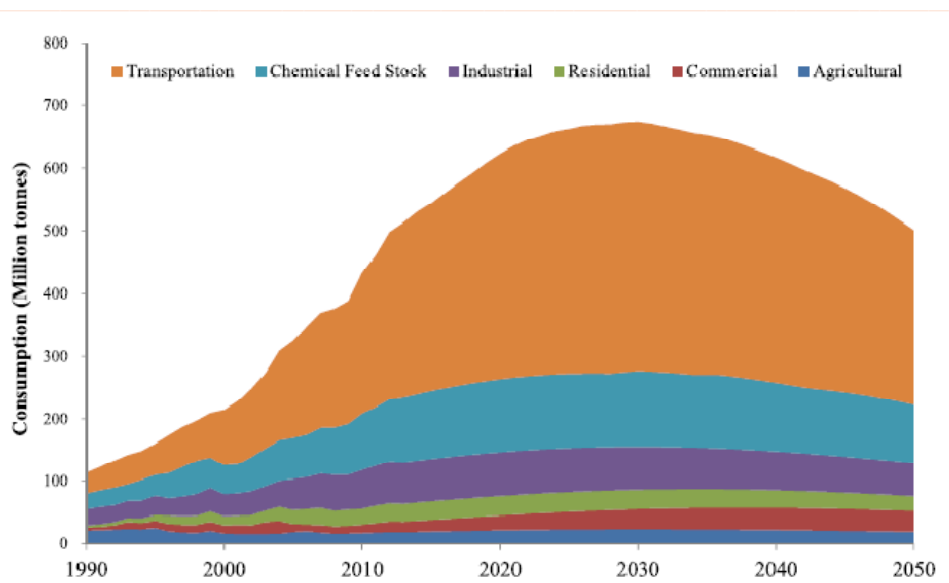
2015 and nearly even with last year. This plan also implies that net imports would rise by 17 percent over the five-year period and reach the level of 7.8 million barrels per day, while demand would grow by 8 percent to 11.8 million barrels per day.

The result is that import dependence would increase to over 66 percent from 64.5 percent last year, meaning that China will buy two barrels of oil abroad for every barrel it produces at home. Looked at another way, China's increase in oil consumption over the five-year span will have to come entirely from imports.⁸

However, the Chinese government believes that growing strategic petroleum reserves will be able to protect China's energy sector from risks connected with growing dependence on imports.

Moreover, according to CNPC Economics & Technology Research Institute, oil demand in China will peak around 2030 which means that the demand is going to increase even in the following decade.

Oil consumption in China (relevant data and forecast)



Source: CNPC Economics & Technology Research Institute

Only after 2035 oil products consumption will begin to decline rapidly due to continuously improved fuel economy and accelerated popularization of alternative fuel and electric vehicles.⁹ That means that the main goal of the Chinese government is to secure oil imports for the next 20 years.

⁸ Radio Free Asia (2017): China Ignores Risks as Oil Imports Rise

⁹ CNPC Economics & Technology Research Institute (2016): World and China. Energy Outlook 2050

China's methods to ensure oil imports

Now China's response to sustained growth in net oil imports is to focus its energy security policy on ensuring security of supply. For example, China has been diversifying its imports with its national oil companies and national banks by extending oil-for-loan deals with Angola, Venezuela, Brazil, Russia, and Kazakhstan.¹⁰

Some of the oil-backed loan deals have also facilitated the NOCs' and other state-owned firms' involvement in the host countries, involving infrastructure projects (in Ecuador for example), upstream contracts for Chinese firms (Brazil), and some to the purchase of Chinese equipment (Venezuela, Brazil). Perhaps the most significant success of the oil-backed loans has been the opening up of the ESPO pipeline from Russia to China, and the subsequent increase of crude flows between the two countries.¹¹

Chinese NOCs have also been acquiring production assets abroad and have entered various production-sharing contracts overseas. China still relies on Russia, Saudi Arabia, Iraq, Angola, Oman and Iran for two-thirds of its imports. The difference is that China now produces some of the oil it imports in four of those countries—Russia, Iraq, Iran, and Angola which allows the country to secure its energy supplies.

Taking into account continued American global naval supremacy, Beijing's highest strategic priority is to ensure energy security by connecting friendly major oil and gas producers to China via pipelines transiting through land routes beyond the effective military reach of the United States. Currently, China is highly dependent on oil imports from the Persian Gulf and Africa which are carried mainly by tankers over sea lines of communication and through maritime choke points controlled by the U.S. Navy. An energy imports cut-off enforced by a naval blockade would trigger a rapid collapse of China's economy.¹²

Sino-Russian oil contracts

Russia, Iran and Kazakhstan are the main oil exporters to China via pipelines. It means that China is likely to increase its cooperation with these countries. The

¹⁰ Center for Strategic and International Studies (2017): Energy Fact & Opinion: China's Net Oil Import Problem

¹¹ The Oxford Institute for Energy Studies (2016): China's loans for oil: asset or liability?

¹² The Diplomat (2017): Deconstructing China's Energy Security Strategy

East Siberia-Pacific Ocean (ESPO) pipeline connecting Russian oil fields in eastern Siberia to northeastern China (current planned capacity of 2.6 million b/d by 2020) symbolizes the beginning of the Sino-Russian oil partnership. However, in order to satisfy all of China's energy import requirements by 2035, the capacity of the ESPO oil pipeline network would have to be quadrupled to 10.4 million b/d.

Still, China has already secured considerable oil imports from Russia by using oil-backed loans. An initial contract was signed between CNPC and Rosneft in 2009 for the delivery of about 0.3 million barrels per year until 2030 in return for a long-term credit agreement amounting to \$25 billion. In 2013 (after the acquisition of TNK-BP) Rosneft once again turned to China for financial assistance. It expanded its contract with CNPC by adding a further 0.3 million barrels per year of sales over 25 years, starting from 2014. In 2014 Rosneft signed up to supply a further 0.2 million barrels per year to Sinopec, another Chinese oil corporation. Both deals implied prepayments from CNPC and Sinopec. However, it remains unclear whether the deal with Sinopec has been ratified or not, as there is no specific record of payment being made or oil being delivered.¹³



Source: The Oxford Institute for Energy Studies

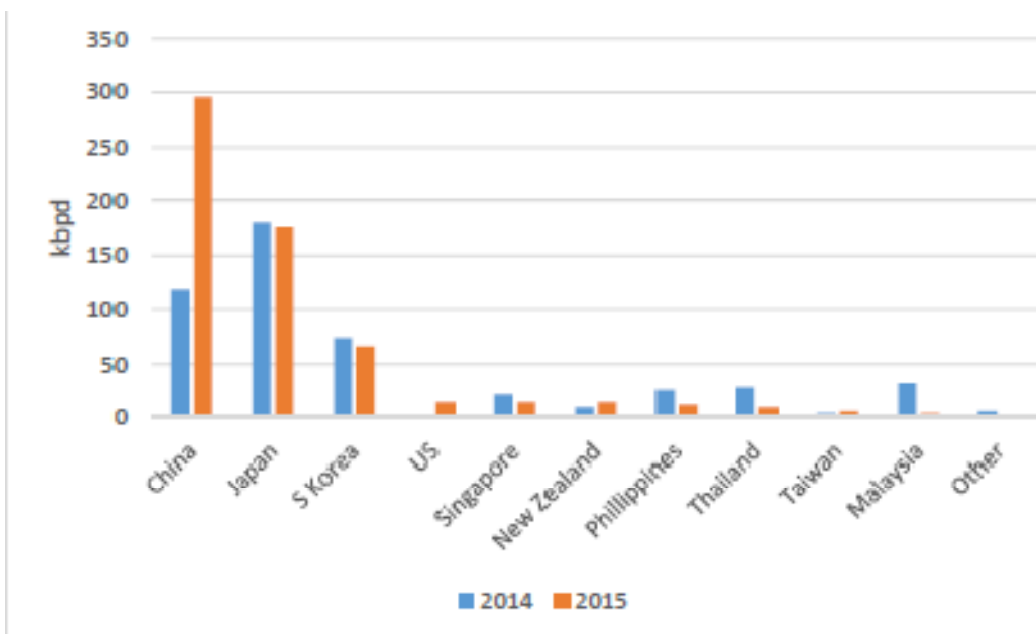
These deals show that China does rely on Russia as one of its main oil suppliers as it considers it to be reasonable from the economic point of view. Moreover, China already had a chance to reduce the price of these supplies. In

¹³ The Oxford Institute for Energy Studies (2016): Energy Relations between Russia and China: Playing Chess with the Dragon

2011 CNPC claimed that it was being charged too high price and, as a result, it began to underpay by \$13 per barrel. After heated negotiations, the parties to the contract agreed to new conditions of payment at the start of 2012 under which Rosneft would offer a discount of \$1.5 per barrel, while CNPC would repay the debt for supply of oil from the beginning of 2011. This situation shows that while being Russia’s main oil buyer via the ESPO pipeline China is able to manipulate prices.

In order to find alternative buyers, Russia has signed several contracts with other countries that can lift crude oil from Kozmino Bay. The figure below shows the liftings of crude oil from Kozmino Bay by destination in 2014 and 2015, and highlights that while China is certainly the largest player, and grew its imports from this source significantly in 2015, Japan and South Korea are also important buyers, while a number of smaller Asian countries also purchase ESPO Blend crude.

ESPO crude sales from Kozmino Bay by destination

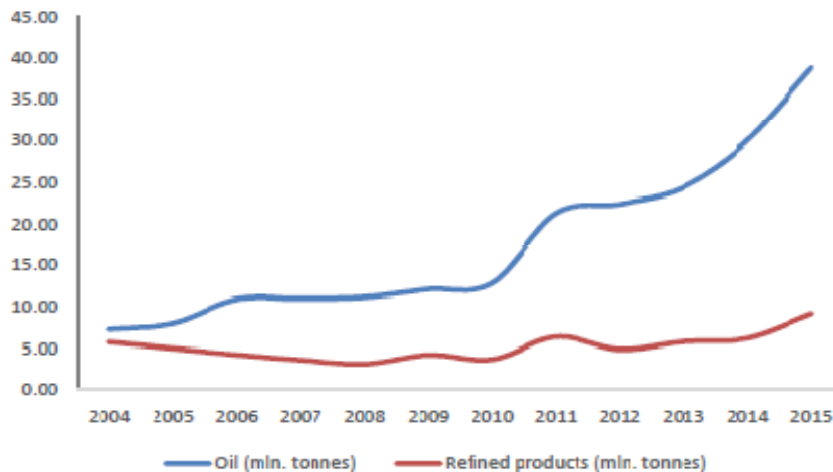


Source: The Oxford Institute for Energy Studies

Now, when Russia has other buyers via the ESPO pipeline, China has less might to renegotiate the price, especially taking into account that a considerable amount of money has already been prepaid. Moreover, with the current level of oil prices, it remain questionable whether China’s oil-backed deals with Russia were profitable from the economic point of view or were meant to diversify China’s oil import and enhance its energy security.

In 2015 Russia became the second largest oil exporter to China, second only to Saudi Arabia. The figure below shows the rapid growth in oil and oil product sales that have been exported to China over the past decade, with the readiness of Russian companies to accept payments in Chinese currency being a significant factor in the sales growth.¹⁴

Russian crude oil and product sales to China



Source: The Oxford Institute for Energy Studies

However, China is not going to depend on a single supplier and is searching for more partners. From China's energy security perspective, Iran represents an ideal hedge, as it is outside the control of both the United States and Russia. Moreover, Iran, which has endured the crippling effects of U.S.-led energy sanctions, clearly needs an alternative to energy exports to Europe.

One more potential increase in supplies may be expected from Kazakhstan which already supplies to China about 0.24 million barrels of oil per year. Further cooperation between the countries may bring more benefits to both of the countries.

Conclusion

China's economy may receive a competitive advantage if the oil prices remain at the level of \$50-55 per barrel. It will continue buying cheap oil both to fill strategic reserves and stimulate economic growth. The growing reserves will ensure China's energy safety and in case of circumstances beyond China's control the country will have enough oil resources to maintain its economic activity.

¹⁴ The Oxford Institute for Energy Studies (2016): Energy Relations between Russia and China: Playing Chess with the Dragon

Moreover, China is going to diversify its energy sector and develop alternative energy sources. According to official forecasts, China's oil consumption will increase till 2030, but then it will be partially replaced by other sources. This is one more way for China to secure its energy supplies.

However, now China needs to develop its cooperation with countries like Russia, Iran and Kazakhstan who are ready to export oil by pipelines, because this way of transportation allows excluding marine risks and ensuring sustained level of oil supplies.

Taking into account sustained low oil prices, China's new view on energy policy may be a beneficial one, but it needs certain control, as suddenly stopped shipments still may pose a threat for the country's economy.

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