

# Recent Development of World Oil Demand and Supply

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## Overview

Crude oil price collapses again in recent month of 2015. According to the data source from EIA, the price of Brent drops from \$61.65 US/bbl in July 1, 2015 to \$41.59 US/bbl in August 24, 2015, while WTI drops from \$59.48 US/bbl in June 30, 2015 to \$38.22 US/bbl in August 24, 2015. Although these prices upside down then, the downward oil price trend is believed to be persisted for a while. Many news point out that the price drop is due to the slower economic growth in China, the more shale oil production in US, and the appreciation of US dollars. Rather than using the second or third information sources by these public media news or many experts, this paper would like to reveal the real impact factors for influencing the recent world oil downward trend by analyzing the possible data movement from JODI data bank. Since the data bank of JODI provides more recent world demand and supply data for almost all countries in the world, and offers us many detail oil related data such as import, export and stock, it is believed that we can dig out more helpful information to find out the main factors causing the recent world oil price drop.

## Method

1. Collect the historical crude oil price data from EIA and draw some diagrams
2. Collect the historical monthly data of crude oil demand (refinery intake), production, import and export monthly data from JODI data bank.
3. Rank the crude oil demand, production, import and export data of every country based on the most recent month (i.e. September, 2015), and choose the top 10, and 20 countries for oil consumption, oil production, oil import and oil export from the first month of 2002 to the most recent month (i.e. September, 2015).
4. Draw the figures of monthly crude oil demand, production, import and export data for all main crude oil consumers and producers.
5. Combine some important quantity trend with the price trend and make some comparisons.
6. Judge the future trend from those pictures above and the literature review.
7. Make conclusion by considering more other short term impacts such as the possibility of geographic tension in Middle East and the appreciation of US dollars.

## Results

Following above process, we draw many diagrams to examine the relationship between the quantities (oil demand, oil production, oil import, and oil exports) of the top 10 and 20 countries and the price (BRENT and WTI). Generally speaking, most of the pictures show insignificant relationship between the quantity and price. However, some interesting relationships are found. We find positive relationship between the import of China and the world oil price before 2008. It should be notified that the import of US is also increasing at the period before 2007. After 2009, the import increased by China and the significant strategic oil production cut by Saudi Arabia pull the oil price back to the high price again. The significant crude oil production increased by US and more crude oil produced by Saudi Arabia results the price collapse in the Mid-year of 2014. More oil production results in the significant decrease of the oil import of US. Although the import increased by China makes up most of the import decreased by US, crude oil price is still collapse in the second half year of 2014. The data indicates the strong positive relationship between US's significant production increase and the oil price, and shows that oil price drops if the import gap between US and China becomes smaller, and vice versa.

## Conclusion and Remarks

Crude oil price collapses recently. Although some OPEC members strongly recommend for output control, most OPEC members tend to maintain its members' production quota and keep the OPEC production at the level of 30 million b/d. Considering the oil consumption, production and the

other related information, the quantity provided by OPEC will very likely bring much more world oil supply than the need from the world oil market. Since oil market consumption and production can't be adjusted quickly. We believe these fundamental market demand and supply would help the world oil price to persist in a lower level for a while even though the low price strategy applied by OPEC may scare out some new investment of oil exploring behavior.

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