

## *Is China in Recession? A cursory look at its energy statistics*

By Douglas B. Reynolds

According to CNBC (2016), China's oil company, CNP, states that China is expected to have oil consumption for 2016 at a level of 11.32 million barrels per day (mbd), which CNP says represents a 4.3% increase above 2015's oil consumption implying that China used 10.85 mbd in 2015. CNP also says that the 2015 level was 4.8 per cent higher than 2014, implying that China consumed 10.3 mbd in 2014. However, BP statistics show China used 11.05 mbd in 2014, not 10.3 mbd. Furthermore, if we believe the BP statistics for 2014, then that means that China consumed almost 2% less oil in 2015 than in 2014. Therefore, it is possible that China used less oil in 2015 compared to 2014, rather than more oil, even though China's GDP growth rate in 2015 was stated to be 7%. In addition, Reuters (2016) says that China imported 20% more oil in February 2016. However, this can just as easily signify a lack of internal oil production as a growing demand. So either China's previous oil statistics are wrong or China is in a recession.

According to Dargay et. al (2007), developing countries with an average level of income between \$4,000 and \$12,000 per capita (2015 dollars), such as South Korea thirty years ago or Japan right after World War II tend to have an increase in automobile ownership at about twice the rate of income growth. Furthermore, the gasoline usage for such a country usually averages one gallon a day per car. Right now, China is in that income range. So, if we believe China's GDP growth statistics, that it is growing at 7% per year for 2015, and that China has 170 million automobiles, then there should have been roughly an extra 20 million cars in China in 2015. But if China had an extra 20 million cars, then it should have consumed an extra 20 million gallons of gasoline a day or an extra half million barrels of oil a day just for transportation alone, let alone for extra heating, chemical production and industrial process. So either China's previous oil statistics are wrong, or China is in a recession. That is, China's economy is not slowing, China is in recession.

Some pundits might justify the reduction in oil use by proclaiming that China is becoming more fuel efficient, or becoming more consumer and service oriented. Consider the idea that China's economic structure is changing. South Korea provides a good example. The Korean economy was said to be an export driven economy, and indeed for the 15 years prior to Korea's 1996 accession into the OECD, a rich country organization, Korea averaged 12.5% per year increase in exports. However, even after Korea's accession to the OECD, it still averaged 10.5% per year export growth. So even a developed country, which used export driven growth to become developed, will continue to grow using exports after it is developed. Therefore, China too should be using exports to drive its growth no matter what stage of development it is in. However, China's export growth rate in 2014 was only 4%, and according to the Economist (2015), China's growth rate of exports looks to have declined during 2015. Therefore, based on oil consumption and the decline in exports during 2015, China looks to have had a recession in 2015. But there is more.

According to the Economist (2015), China used 10% less coal in 2015 compared to 2014 and imported 28% less coal. The Guardian (2016) states that China's coal use "fell 3.7% in 2015, following a 2.9% drop in 2014," ostensibly to clean up its environment. Such a decline in coal use, though, for the purposes of cleaning up the environment would require that natural gas consumption increase in order to compensate for electric power demand. Since China's 2014 natural gas usage was 185 billion cubic meters, then in order to compensate for such a large drop in coal use, China would have had to have doubled or even tripled its natural gas usage in order to keep the economy growing at 7%. However, much of the LNG exporters in the Pacific Rim are not able to sell their natural gas and a natural gas pipeline from Russia isn't complete, so where is all the natural gas coming from?

The oil and coal statistics (if we believe the BP statistics over CNPs) are interesting in comparison to historic growth rates and energy use. Before 1700 the United Kingdom growth rate according to Maddison (2004) was half a percent per year. After the early coal-induced Industrial Revolution started, from 1720 to 1850, the growth rate of England was 1 percent per year, and the GDP per capita doubled. The growth in coal use, though, was 2% per year, i.e., double the growth rate. The growth rate of the United States from 1900 to 1950, during the early oil-induced second Industrial

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Revolution of the 20<sup>th</sup> century, was 3% per year, but that required a 7% per year increase in oil use, i.e., double the rate of growth in GDP, but also continuing increases in coal use. In both early industrializing cases, these economies saw growing international trade, advances in technologies and freer market-based economies. Plus, in both cases the economic growth required more coal.

The Soviet Union, for example, was able to use 10% more oil per year even while its coal use was estimated to be increasing at 5% per year for much of the 20<sup>th</sup> Century, and it grew at about 7% per year. China from 2004 until 2014 used 5% more oil per year while its growth rate averaged close to double digits. Although China energy intensity looks to have declined, Czerckleyi (2016), it would normally need more energy if its consumer service industry were to grow. Either history is wrong or there is something amiss with China's statistics and we need to state the obvious: China is in a recession.

The reason China is not accurately revealing its growth statistics is a mystery. It reminds one of the Cold War when the Soviet Union routinely did not give out its economic statistics, which were considered a state secret due to the relation between economic growth and the Soviet Union's military capabilities. The Soviets also sometimes kept their oil production and oil reserve data secret too. Back then Sovietologists had to "read between the lines," to figure out what was really happening with the Soviet Union politically and economically. Although, just to be fair, journalists also had to read between the lines to know what Washington or NATO leaders were thinking. Nevertheless, now we need to read between the economic and energy statistics to figure out what is really happening in China.

One reason for China to keep a tight lid on its economic statistics is because it does not want another Tiananmen Square style protest to rock its single party system, but that doesn't explain why Western economists who follow China closely are not declaring a recession. If we read between the lines of Western economists who are watching China closely, they too might be afraid to rock the China boat for fear of riots in China. However, another pertinent reason that Western economists may fear to speak out on China is that Western banks and Western financial institutions, which have investment or financial dealings with China, could be pushed into financial crisis.

Nevertheless, it should be every economist's responsibility to proclaim accurate statistics on China's GDP. Misleading information about China can only make the world's economy worse off over the long run, not better off. The evidence suggests that China was in a recession in 2015. Indeed if China's economy declined by 7%, then that might suggest a reduction in oil use of a half million barrels a day which fits the oil data more closely. That also helps explain the dramatic decline in oil prices over the last two years.

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