2014

Oil Prices and the Impact of Rising Economies

Metasebia Tabor
Valparaiso University

Prices and the Impact of Rising Economies

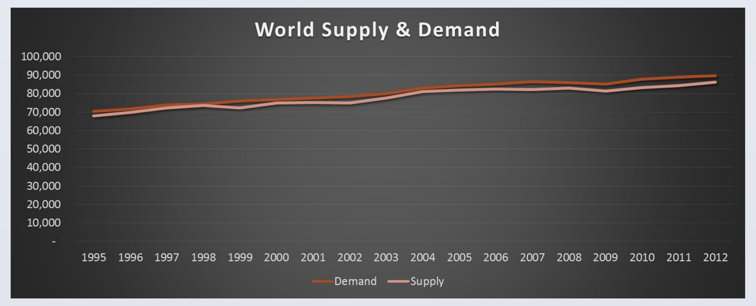
Metasebia Tabor

INTRODUCTION

- The first commercial oil well was drilled in Romania in 1857, since then oil has been playing a crucial role in the global economy.
- High oil prices can slow economic growth, cause inflationary pressures and create global imbalances.
- High oil prices and tight market conditions have also raised fears about oil scarcity and concerns about energy security in many oil- importing countries.
- The supply-demand factor seems to be popular among the factors that outweigh the impact of Organization of Petroleum Exporting Countries (OPEC).

OBJECTIVES

"We have moved from a marginal supply side to a marginal demand side". Edgard Habib, Chief Economist of ChevronTexaco



Supply-Side OPEC's 'Magic Hand':

- OPEC assigns production quotas to its member countries with the intention of limiting the supply of crude oil to the world market thereby creating higher oil prices to its members.
- It can easily boost oil prices by lowering its production quotas or by not increasing its quotas in response to an increased global oil demand.

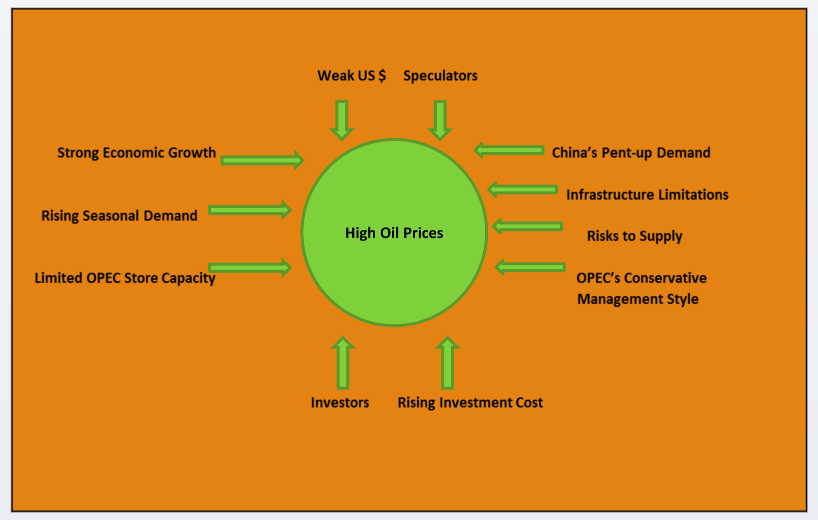
Demand-Side-The "China Factor"

- China's demand for oil is expected to reach 13.6% of world demand by 2030.
- Political: the liberalization of the energy market in China, an important step towards an effective energy policy.
- Transportation Sector: energy consumption in the transport sector is expected to grow by 4.7% per year, finally reaching a maximum of 19.3% by 2030.
- Increased household incomes is expected to lead to an increasing rate of motorization by 5%.

Future Implications:

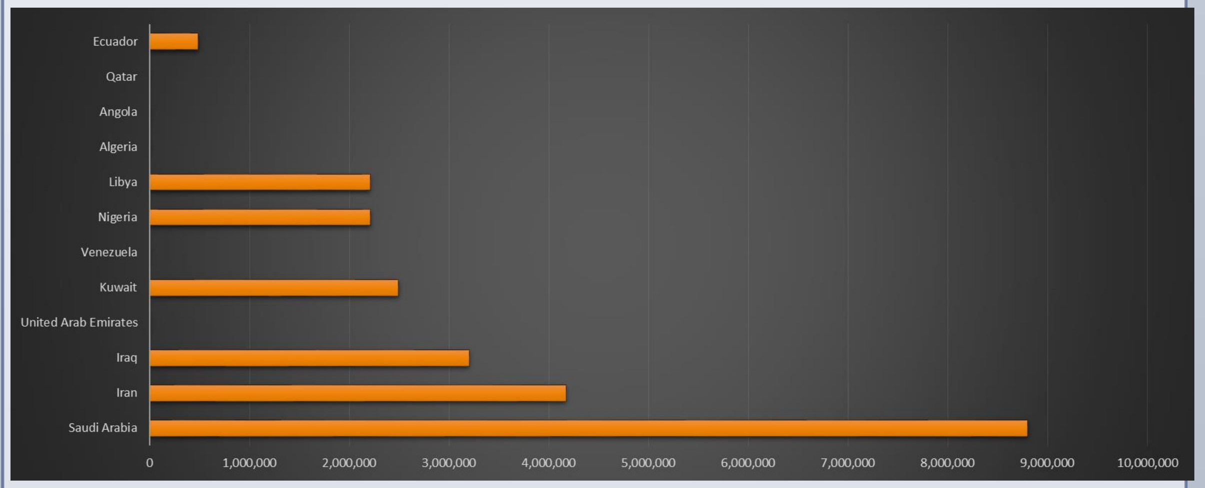
- China overtakes the US to become the world's largest oil consumer by 2025 and Russia by 2027 to become the second largest gas consumer.
- China contributes 43% of the net increase in global consumption as its share rises from 21% today to 27% in 2030.
- Oil will remain dominant in the transport sector, despite its share slip from 92% in 2011 to 90% in 2030 as the share of gas increases to 6%.
- Import dependence will rise to 20% of consumption from today's level of 6% as China overtakes the US to become the world's biggest energy importer by 2015.

Global Oil Market: Other Factors



Source: Global Oil Prices and the Impact of China.

OPEC Member Countries Oil Production in Barrels per Day



Oil Demand: Regions Vs. China

Regions	2006	2007	2008	2009	2010	2011	2012	Change 2012 over 2011
North America	25,002	25,109	23,860	22,959	23,464	23,397	23,040	-1.5%
S. & Cent. America	5,332	5,651	5,892	5,921	6,222	6,405	6,533	2.0%
Europe	16,406	16,081	15,959	15,260	15,094	14,712	14,152	-3.8%
Former Soviet Union	3,906	3,981	4,059	3,889	3,963	4,261	4,391	3.1%
Middle East	6,449	6,696	7,185	7,526	7,861	7,992	8,354	4.5%
Africa	2,920	3,068	3,218	3,302	3,463	3,359	3,523	4.9%
Asia Pacific	25,124	25,989	25,881	26,205	27,766	28,754	29,781	3.6%
China	**7,439**	**7,823**	**7,947**	**8,229**	**9,272**	**9,750**	**10,221**	**4.8%**
OECD	49,880	49,682	48,070	46,042	46,460	46,117	45,587	-1.2%
Others	7,798	8,120	8,157	8,529	9,016	9,532	9,843	3.3%
Non-OECD	35,259	36,893	37,983	39,021	41,373	42,762	44,187	3.3%
European Union	15,023	14,700	14,610	13,880	13,741	13,377	12,796	-4.3%
World	**85,138**	**86,575**	**86,052**	**85,064**	**87,833**	**88,879**	**89,774**	**1.0%**

Source: Statistical Overview World Energy 2013

Empirical Methodology

"In GOD we trust. All other must bring data." W. Edward Deming

Variables & Expected Signs:

Name	Expected Sign	Description
GDP	+	GDP in US$ at country level from 1995
Price	-	Price of oil in US$ per barrel at the world level
Manufacturing	+	Value added in % of GDP at country level
Electricity	+	Electricity from oil (%) at country level
Vehicles	+	Vehicles per 1000 people at country level

- Sources: 2010 BP Statistical Review of World Energy & World Bank Statistical Report
- Sample: 60 Countries
- Data: Quantity of oil demanded, quantity of oil supplied, oil price per annum
- Explanatory variables: GDP, electricity from oil in percentage at country level, manufacturing valued added in GDP (%) and vehicles per 1000 people.

RESULTS

- Oil prices are linked to the level of economic activity.
- Through backward induction, this means that the quantity of oil demanded is directly related to the economic activity, explained by the above variables.
- The higher the quantity of oil demanded the higher the economic growth measured through the gross domestic product (GDP) or GDP per capita.

CONCLUSIONS

It is evident that supply side of the global oil market is being marginalized by rising global oil demand.

The increase in demand is directly linked to intensified and growing economic activities measured through GDP.

Demand from developing countries, mainly that of China and to a lesser extent India, has a higher influence in shaping the global oil price.

REFERENCE

John Beirne, Christian Beulen, Guy Liu (2013). Global Oil Prices and The Impact of China.

Ronald A. Ratti, Joaquin I.Vespignani (2013). Liquidity and Oil Prices: China's Influence over 1996-2011.

Jeff Cogan, (2011). The Emperor Has No Clothes: The Limits of OPEC in the Global Oil Market.

Olivier J. Blanchard Jordi Gali (2007). The Macroeconomic Effects of Oil Shocks: Why are the 2000s so Different from the 1970s?

James D. Hamilton (2008). Understanding Crude Oil Prices.

Josha Bechmann, Rober Czudaj (2013). Is there a Homogeneous Causality Pattern Between Oil Prices and Currencies Oil Importers and Exporters?

Jaromir Benes, Marcelle Chauvet, Ondra Kamenik, Michael Kumhof, Douglas Laxton, Susanna Mursula and Jack Selody (2012). IMF Working Paper: The Future of Oil: Geology versus Technology.