JODI Oil Training Workshop

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Importance of JODI Oil in Energy Market

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- Introduction
- Advantages of JODI Oil data
- The use of JODI Oil data in research and energy market
- Conclusion

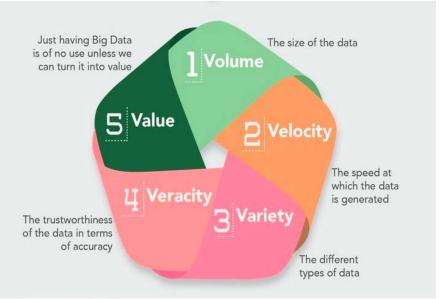
Introduction



- The 21st Century has witnessed an explosion of energy-related data.
- The consolidation of this data is often lacking.
- Full integration of timely fundamental data is critical to
 - understanding market movements
 - developing accurate short- and long-term forecasts
 - better understanding issues related to oil industry.
- Numerous oil-related data need to be brought into the picture
- The oil industry is fast becoming data-intensive and data driven.

Introduction

- 1. Volume
- 2. Velocity
- 3. Variety
- 4. Veracity
- 5. Value





- Recent developments in oil, gas and energy markets have placed energy on the top of the international political agenda.
- Countries are reassessing their energy policies (investment in upstream, downstream) and new energy measures are being discussed (alternative fuels, taxes, subsidies...).
- More reliable and timely data on main petroleum flows would be needed.
- Energy markets/studies require more detailed energy data.

Advantages of JODI data



- Provide timely and reliable data on major oil and gas flows, which are relevant to the market
 - Production
 - Consumption
 - Trade
 - Storage
 - Refinery
- For more than 100 countries and with strong overall coverage
- JODI data official and direct information with comprehensive metadata country notes
- Monthly data with just 2 months time lag.
- Freely accessible
- JODI contains unique information that cannot be accessed elsewhere

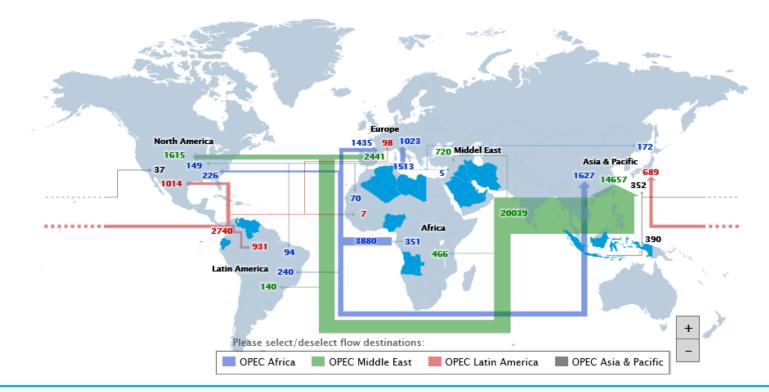


- Crude oil production: Large coverage, about <u>92%</u> of total crude oil production is covered in JODI database
- **Demand**: Around <u>83%</u> of total demand is covered in JODI database, including some of the new consuming countries
- Inventories: In addition to the OECD, a few non-OECD countries are also covered
- **Refinery**: Around <u>86%</u> of total refinery intake and output are covered in JODI database
- Trade: Large coverage, about <u>88%</u> of total oil exports and imports are covered in JODI database

An example of granular oil data: OPEC Member Countries oil flows



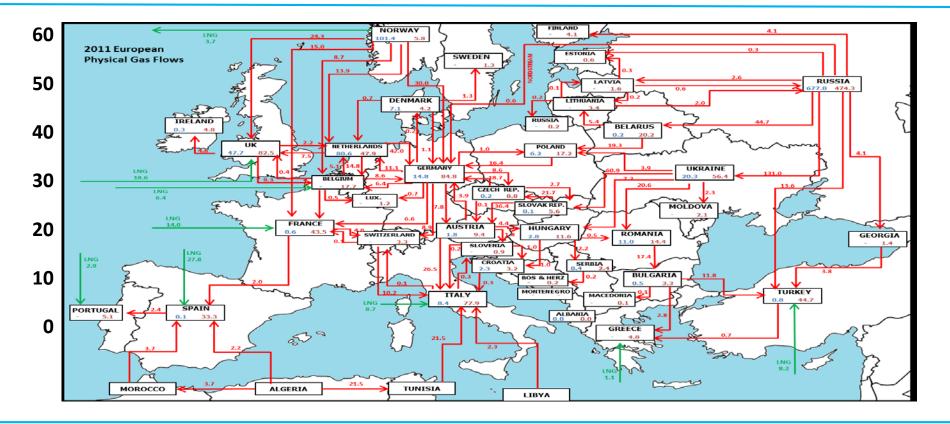
OPEC Members' flows of crude and refined oil, 2015 (1,000 b/d)



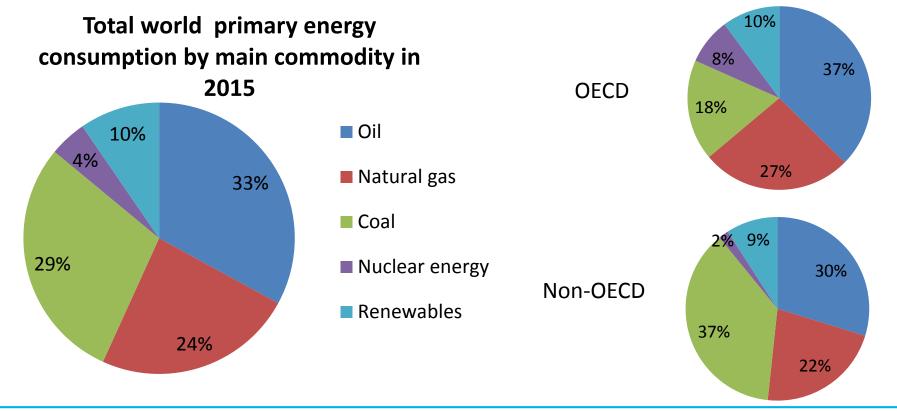


- JODI-Gas offers global coverage of gas production, imports, exports, stocks and demand on a monthly basis, covering around <u>80</u> countries representing nearly <u>90%</u> of global gas markets.
- There are industry reference data sources including BP statistics, Cedigaz, IEA statistics and EIA statistics, however, none of these natural gas data sources cover monthly data with such extensive geographical coverage as the JODI-Gas World Database.

Natural gas trade movements in Europe



The role of other commodities in the overall energy mix



Examples in OPEC energy database

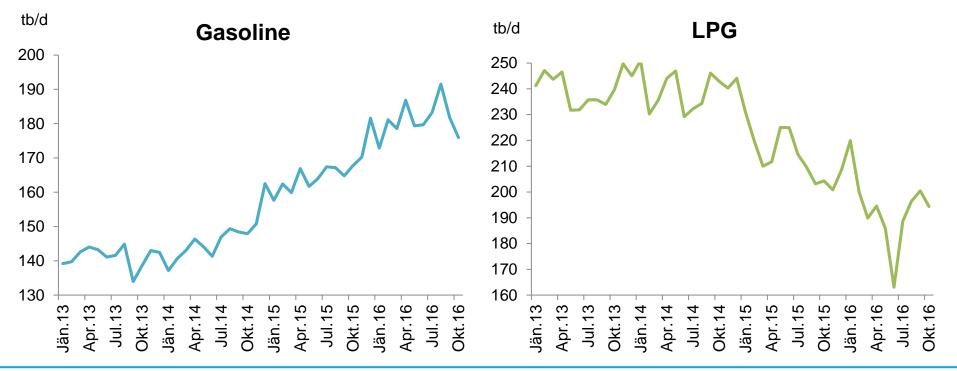
- Supply
- Demand
- Stock

Examples in research and analysis

- Oil and gas demand
- Refinery
- Trade

JODI data in OPEC's oil demand database

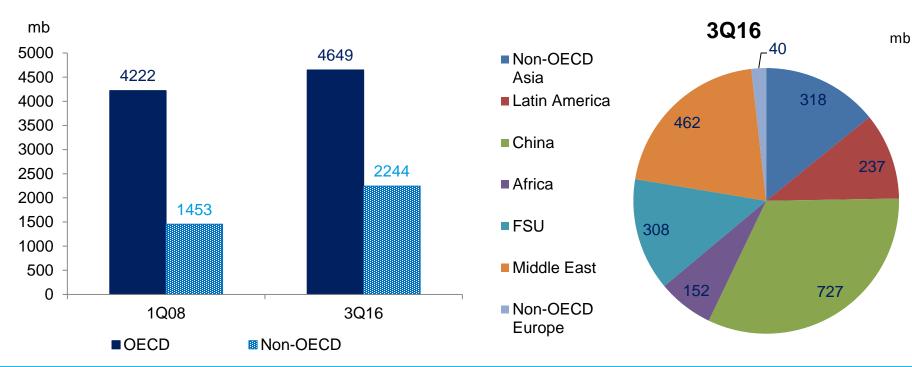
Data for main petroleum categories in JODI essential in understanding oil market; e.g. Thailand



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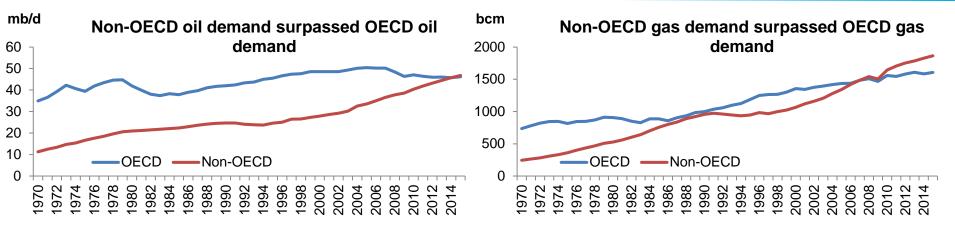
JODI data in OPEC's oil stocks database

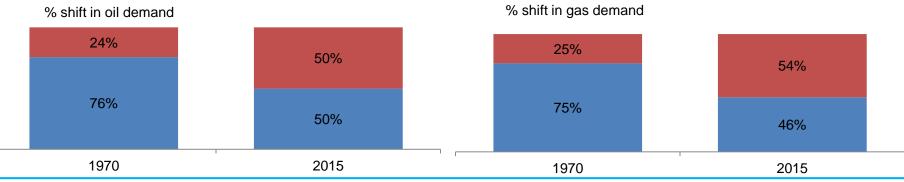
Availability of key Non-OECD data in JODI directly relevant to oil market developments





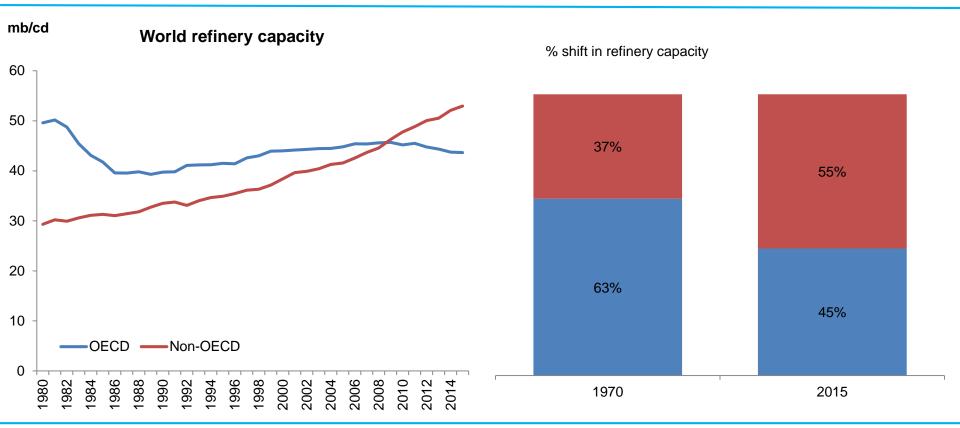
JODI data in OPEC research: Emergence of Non-OECD countries





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Increase in Non-OECD refinery capacity



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Global oil trade

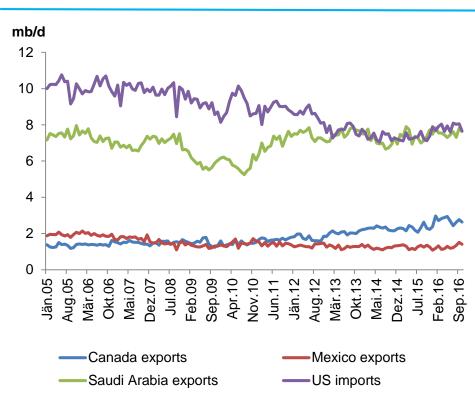
OPEC's importance meeting global oil demand, 1980-2015



40% 25% y = 4.07x - 0.04y = 3.20x - 0.00135% 20% 30% 15% **Global demand growth** 25% 10% **Global demand growth** 20% 5% 15% 0% -4% -2% 4% 6% -5% 10% 5% -15% 0% 2.2% -4% 2% 4% 6% 8% 10% **-**5% -20% -10% -25% -15% -30% **OPEC** export growth **OPEC** export growth

OPEC's importance meeting global gas demand, 1990-2015

Crude oil trade according to JODI



Multiple regression

Source	SS	df	MS	Number of obs = 127
				F(3, 123) = 154.33
Model	113989816	3	37996605.2	Prob > F = 0.0000
Residual	30282771.8	123	246201.396	R-squared = 0.7901
				Adj R-squared = 0.7850
Total	144272587	126	1145020.53	Root MSE = 496.19

USImports	Coef.	Std. Err.	t	₽> t	[95% Conf	. Interval]
CanadaExports	-1.949506	.199812	-9.76	0.000	-2.345022	-1.553991
MexicoExports	1.414089	.2372712	5.96	0.000	.9444253	1.883753
SaudiArabiaExports	0041264	.0812134	-0.05	0.960	1648834	.1566305
_cons	10179.09	588.4237	17.30	0.000	9014.338	11343.84





- JODI Oil & gas databases contain official country data and valuable information, which cannot be found easily elsewhere
- Extensive usage of JODI oil data in OPEC Secretariat's research
 - Update of databases
 - As input for studies
- Granularity of data can always be improved
 - Existing databases (time lag, coverage, reliability,...)
 - Coverage of other energy commodities a necessity as result of increasing interaction

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Thank You.



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