

# IDENTIFICATION OF FACTORS INFLUENCING OIL AND GAS PRICES AND THEIR MUTUAL CORRELATIONS

Ing. Josef KOŠŤÁLEK, Ph.D.

Ing. Pavla KOŤÁTKOVÁ STRÁNSKÁ, Ph.D.

UCT PRAGUE – DEPARTMENT OF  
ECONOMICS AND MANAGEMENT



# DATA + STATISTIC METHODS => CONCLUSIONS

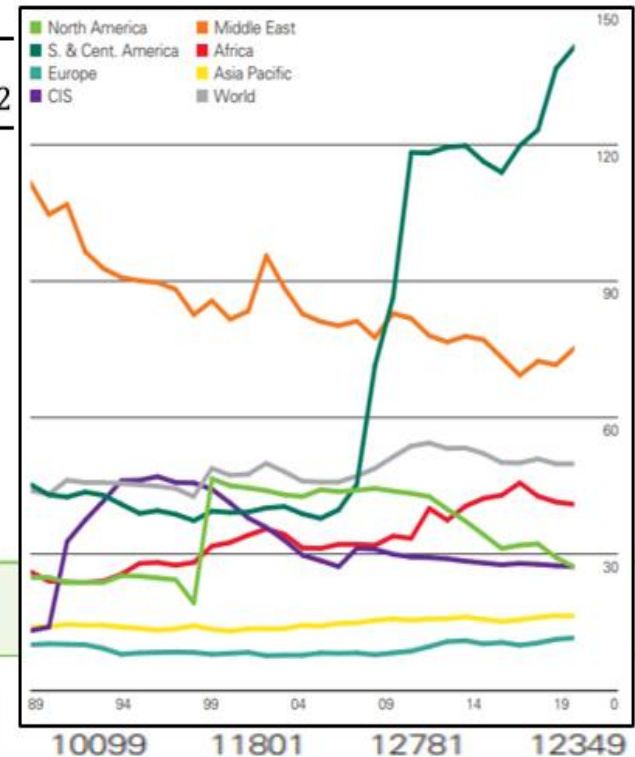
$$b_1 = \frac{s_y}{s_1} \cdot \frac{r_{y1} - r_{y2} \cdot r_{12}}{1 - r_{12}^2}$$

$$b_2 = \frac{s_y}{s_2} \cdot \frac{r_{y2} - r_{y1} \cdot r_{12}}{1 - r_{12}^2}$$

$$a = \bar{y} - b_1 \cdot \bar{x}_1 - b_2 \cdot \bar{x}_2$$

$$r_{y.12} = \sqrt{\frac{r_{y1}^2 + r_{y2}^2 - 2 \cdot r_{y1} \cdot r_{y2} \cdot r_{12}}{1 - r_{12}^2}}$$

$$vN = \frac{T}{T-1} \cdot \frac{\sum_{t=2}^T (e_t - e_{t-1})^2}{\sum_{t=1}^T e_t^2}$$



Oil: Production in thousands of barrels per day\*

Thousand barrels daily	2009	2010	2011	2012				
Canada	3331	3457	3637	3860				
Mexico	2978	2959	2940	2911				
US	7267	7558	7883	8926				
<b>Total North America</b>	<b>13576</b>	<b>13975</b>	<b>14460</b>	<b>15697</b>	<b>17101</b>	<b>19004</b>	<b>19940</b>	<b>19460</b>
Argentina	730	712	667	657	644	638	646	610
Brazil	2019	2125	2173	2132	2096	2341	2525	2591
Colombia	671	786	915	944	1010	990	1006	886
Ecuador	488	488	501	505	527	557	543	548
Peru	155	165	159	157	171	175	153	141

- **FACTORS INFLUENCING OIL PRICES:**

- DEMAND (CONSUMPTION)
- MINING (PRODUCTION)
- STOCK LEVEL
- DOLLAR COURSE
- POLITICAL SITUATION

