Future Prices and Availability of Transport Fuels

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What can be said about future oil prices is that they are uncertain and all but certain to be volatile.
Rising incomes especially in Asia are driving demand for motorized transport.

Source:
Sustainable Mobility Project calculations.
Globalization is driving demand for freight transport.

Trillions (10^{12}) of Tonne-Kilometers/Year

Average Annual Growth Rates

<table>
<thead>
<tr>
<th>Region</th>
<th>2000-2030</th>
<th>2000-2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>2.5%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Africa</td>
<td>3.4%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Latin America</td>
<td>3.1%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Middle East</td>
<td>2.8%</td>
<td>2.4%</td>
</tr>
<tr>
<td>India</td>
<td>4.2%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Other Asia</td>
<td>4.1%</td>
<td>3.7%</td>
</tr>
<tr>
<td>China</td>
<td>3.7%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>2.7%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Former Soviet Union</td>
<td>2.3%</td>
<td>2.2%</td>
</tr>
<tr>
<td>OECD Pacific</td>
<td>1.8%</td>
<td>1.6%</td>
</tr>
<tr>
<td>OECD Europe</td>
<td>1.9%</td>
<td>1.5%</td>
</tr>
<tr>
<td>OECD North America</td>
<td>1.9%</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

Note:
Excludes air, waterborne and pipeline.

Source:
Sustainable Mobility Project calculations.
Just as U.S. oil production peaked in 1970, it appears that non-OPEC production will peak by 2010.
Some see a peak of not only conventional oil but a sharp peaking of all liquids from fossil hydrocarbons.
Others foresee a plateau not a peak.
We can be relatively sure that OPEC will not “fill the gap”.

![Cumulative Production and Revenues, 2003-2025: Middle East OPEC Members](chart.png)

- **Reference Case**: $6.6 Trillions of 2003 Dollars, 235.4 Billions of Barrels
- **High A Oil Price**: $6.7 Trillions of 2003 Dollars, 189.8 Billions of Barrels
- **High B Oil Price**: $7.1 Trillions of 2003 Dollars, 171.9 Billions of Barrels
Filling the gap will unconventional oil will not be easy and may not be acceptable.

EIA IEO2006 Projections of World Conventional and Unconventional Petroleum Supply in 2030

- Low Oil Price: 120.6 million barrels per day
  - Unconventional: 7.1 million barrels per day
  - Conventional: 113.5 million barrels per day
- Reference: 106.5 million barrels per day
  - Unconventional: 11.5 million barrels per day
  - Conventional: 95 million barrels per day
- High Oil Price: 80.8 million barrels per day
  - Unconventional: 21.1 million barrels per day
  - Conventional: 59.7 million barrels per day

Scenario:
- Low Oil Price
- Reference
- High Oil Price
Shrinking or static non-OPEC supply will magnify the cartel’s market power.
Future transport fuel prices will be volatile and uncertain.

- Peaking of conventional oil supply outside of OPEC is real.
- Increased OPEC market power.
- Massive investments in unconventional fuel production are needed in unpredictable markets.
- Much will depend on
  - Actions to mitigate GHG emissions
  - Technological progress
THANK YOU.