



Economics & Strategy

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“Crude exports from OPEC, Russia and Mexico will fall by 2.5 million barrels per day by the end of the decade as soaring domestic demand cannibalizes export capacity.”

OPEC's Growing Call on Itself

by Jeff Rubin and Peter Buchanan

The call on OPEC has long been referred to as a measure of pressure on world supply, being the difference between world demand and non-cartel production. But increasingly, what bears watching is OPEC's growing call on itself, which is simply the difference between what OPEC produces and what it consumes. Not only is the cartel, along with other key producers like Russia and Mexico, struggling to grow production, but at the same time their own internal consumption rates of oil are soaring. So much so that crude exports from the group as a whole, accounting for roughly 60% of current world oil production, are likely to fall by as much as 2.5 million barrels per day by the end of the decade—resulting in significantly higher oil prices.

Higher global oil prices and the growing move to limit greenhouse gas (GHG) emissions may be keeping a lid on fuel consumption in North America, Europe and Japan, but these economies are no longer driving the bus when it comes to growth in global crude demand. Last year, oil consumption actually fell in the

OECD for the first time since the aftermath of the 1982 global recession. However, unlike then, last year most OECD economies experienced robust economic growth—a testament to the growing disconnect between economic growth and oil usage in the world's richest and most sophisticated economies. Crude consumption is unlikely to grow by more than half a per cent per year for the rest of the decade in the OECD.

Over the last five years, however, the demand for oil is exploding in the developing world, growing at six times the pace of demand in the OECD countries. Oil consumption grew by 4% outside of the OECD and is widely expected to continue to grow at that pace for the rest of the decade. Consequently global demand is now growing at 2% per year, almost double the global average since 1980, despite the huge slowdown in demand growth seen in much of the developed world. At current trends, the developing world will surpass the OECD as the major consumer of oil within a decade (Chart 2).

Chart 1 Two Very Different Consumption Trends

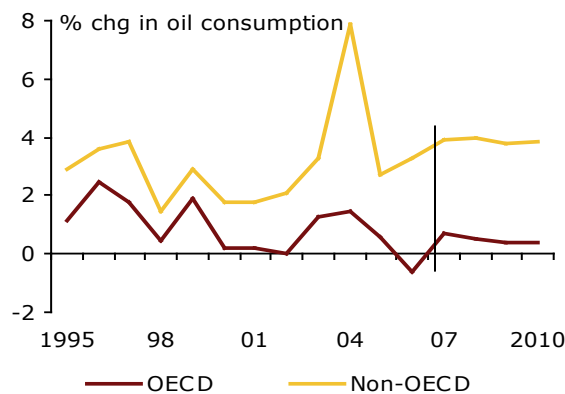
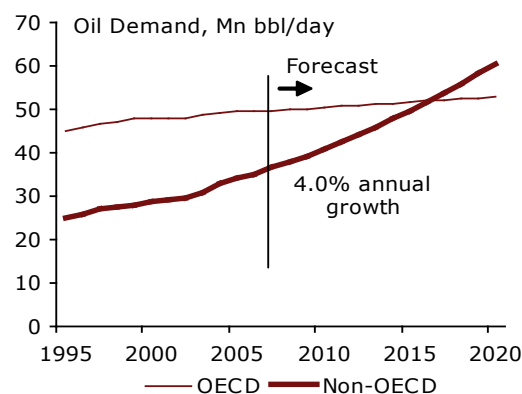
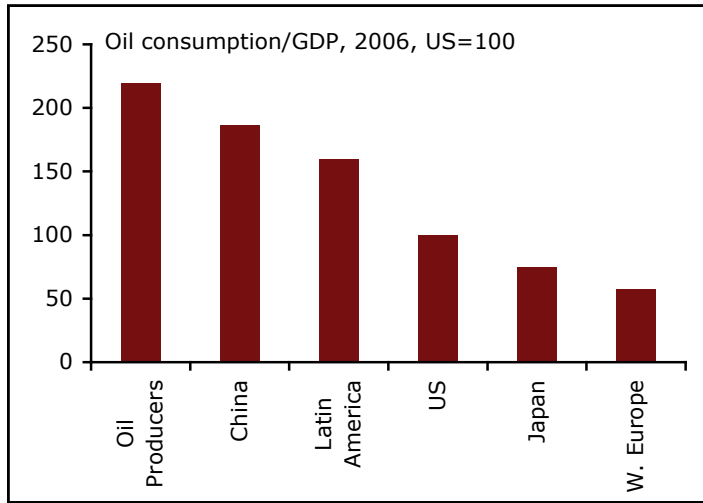


Chart 2 Developing World Demand to Exceed OECD Demand Within a Decade



http://research.cibcwm.com/res/Eco/EcoResearch.html

Chart 3
China & Petroleum-Producing Economies
Are Very Oil-Intensive

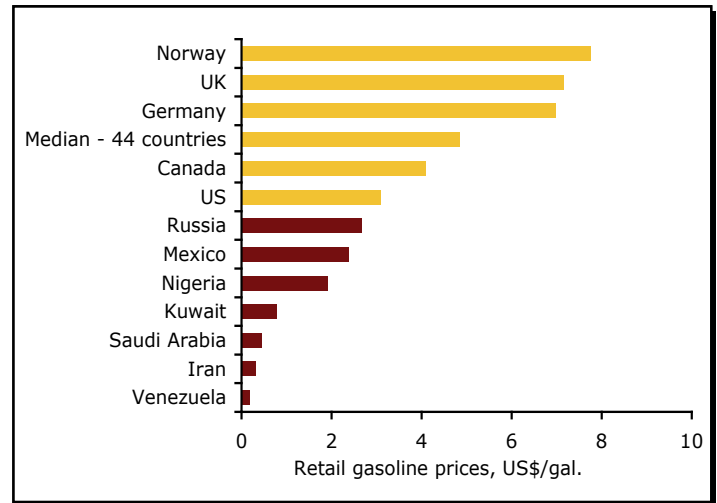


In part, the strength of oil demand in the developing world reflects the much greater oil intensity of their economies, particularly economies like China which houses much of the world's industrial production. Contrasted with the services-based economies of North America or Western Europe, China's GDP is nearly twice more oil-intensive (Chart 3). Overlay that with near-double-digit rates of economic growth and the pull on oil demand from the Chinese economy is enormous.

But an equally important factor behind the strength of crude demand growth in much of the developing world is the fact that oil prices are significantly cheaper than in OECD countries, which buffers consumers from the full impact of soaring world oil prices. This is particularly true among major oil-producing countries themselves, which often heavily subsidize their domestic consumers. At 23 US cents a gallon in Caracas, you are paying the equivalent of US\$10 per barrel oil, roughly one-seventh of world oil prices. While not everyone can match Hugo Chavez's generosity at the pump, others in OPEC aren't far behind. When you fill up at the pump in Saudi Arabia or Iran it's only 40-45 US cents a gallon (Chart 4).

Against this price backdrop it should come as no surprise that oil demand in major oil-producing countries number among the strongest in the world, even by comparison to other non-OECD countries. Demand has grown at a soaring 5% annual rate in Iran over the last half-decade, growth rates that are also seen in Saudi and the United Arab Emirates (UAE).

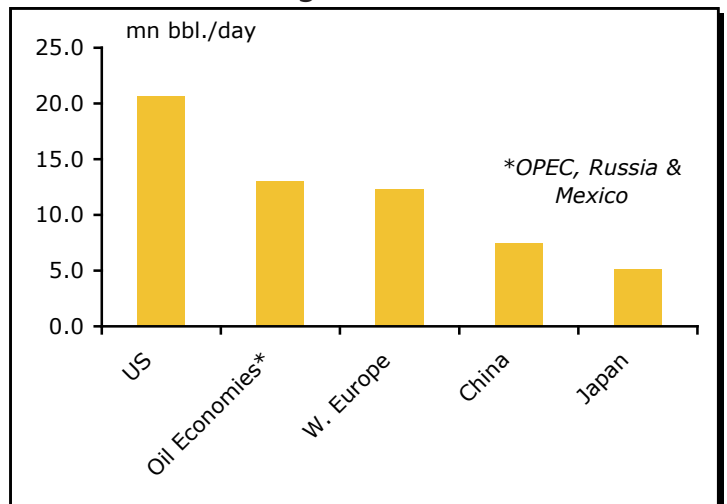
Chart 4
Gasoline Prices Around the World



Suddenly oil-producing countries are themselves becoming major oil-consuming countries. Last year OPEC members, along with independent producers Russia and Mexico, consumed over 12 million barrels of oil per day—roughly 60% more than China and slightly more than all of Western Europe. As a group, they now represent the second-largest oil market, second only to the US (Chart 5).

With domestic consumption growth of nearly 5-6% standard in the Middle East, OPEC's future export capacity is increasingly called into question. Particularly now that the cartel seems to no longer be able to raise production

Chart 5
Oil Producer Countries
World's Second Largest Oil Market



as readily as it has in the past. Saudi Arabia, by far the largest OPEC producer, is struggling to maintain a daily production rate near 9 million barrels per day, and beyond Saudi, the cartel has scant excess capacity. Production in some of its largest fields like the Burgan field in Kuwait are already well into decline and there is widespread speculation that production at Saudi's mammoth Ghawar field may soon fall as well.

Iran's domestic fuel needs have grown so rapidly that the country finds itself in the bizarre position of having to be a massive importer of refined gasoline even though it is one of the world's largest producers of crude. Within OPEC as a whole, domestic demand has already grown by over 40% during the last decade and at current growth rates, will cannibalize a million barrels per day of export capacity by the end of the decade (Chart 6).

The expected decline of as much as a million barrels per day in OPEC exports over the remainder of the decade falls on the heels of already significant reductions in export gains from the cartel over the last decade. Whereas OPEC was able to grow exports by 3% per year between 1995-2000, exports since then have hardly grown at all and are now poised to decline (Chart 6).

In recent years, Russia, now the world's largest oil producer has filled the supply gap created by OPEC's growing call on itself. But now Russia too is showing much the same trends seen in many other oil-producing countries that subsidize prices.

Growth in Russian oil production has slowed abruptly from the breakneck rates of 10% per year a decade ago

to a much more modest, if not sustainable, 2%. However during this period, domestic oil demand has picked up briskly, in line with the resurgence in the Russian economy, where real GDP has grown at an average real annual rate of nearly 7% over the last three years.

Domestic oil consumption is growing at a not-too-shabby 4% annual pace, only marginally slower than seen in many Middle Eastern domestic markets. And considering that Russia's oil consumption per capita is still only a quarter of that of the US, there is lots of headroom for future Russian demand growth. With internal demand growing at about twice the pace of production, the country's crude exports are likely to fall after 2008 (Chart 7), with domestic demand growth claiming all of the country's production gains. And the pace of new reserve development in the country is likely to slow now that President Putin has effectively nationalized the industry and shut foreign investment out.

Soaring Russian exports were instrumental in averting even higher oil prices this decade when export growth from OPEC slowed to a crawl. From 2000-2006, Russia accounted for fully 70% of the increase in exports from the group (OPEC plus Mexico and Russia—Chart 6). A 3-million barrel-per-day increase in production accounted for just under half of the rise in global crude production during the period. But its now much slower growth in production and rapid rise in internal consumption (Chart 7) preclude the country from playing a similar role in world energy markets over the balance of this decade, just as exports from OPEC are now likely to fall by a million barrels per day by decade-end.

Chart 6
OPEC Consumption, Production and Exports

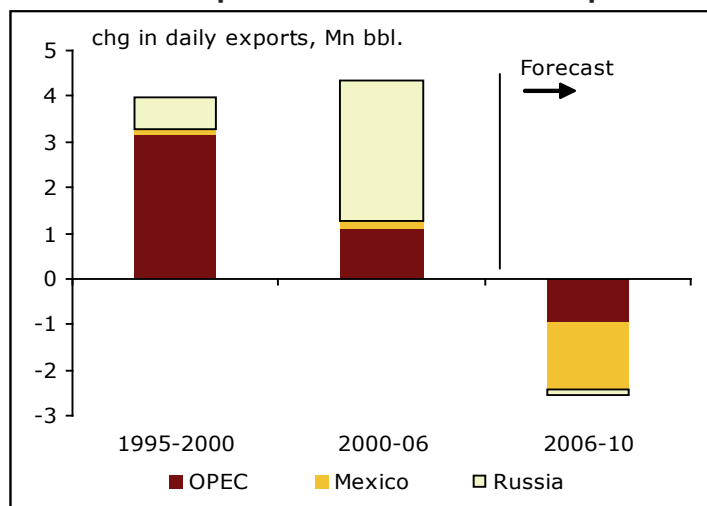
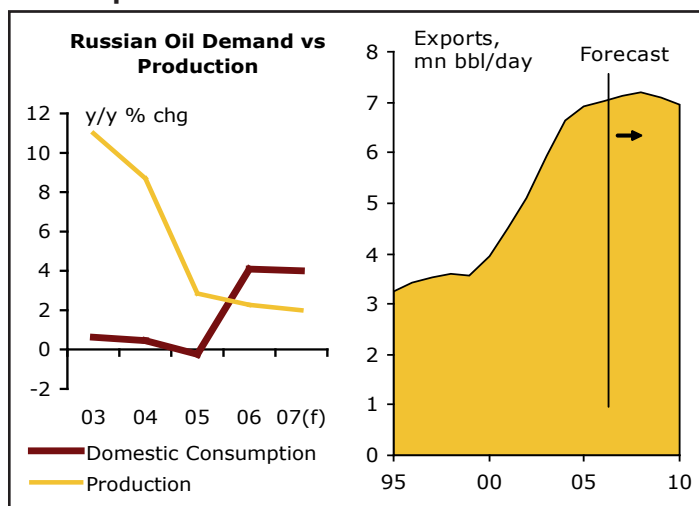


Chart 7
Russian Production, Domestic Consumption and Exports



Mexico faces even greater obstacles in maintaining its export levels than Russia. Production in the giant Cantarell field, home to half of the country's 3.5 million barrels per day of crude production, is already in the throes of rapid depletion, with production having already plunged by half a million barrels per day.

Some forecasts are calling for as much as a further million-barrel-per-day production loss from Cantarell by the end of the decade. Add in high rates of internal oil demand growth and the country's export capacity looks to be lethally challenged. Mexico's crude exports, which have already been falling since 2004, could well become insignificant by 2010—a loss of some 1.5 million barrels per day to world markets.

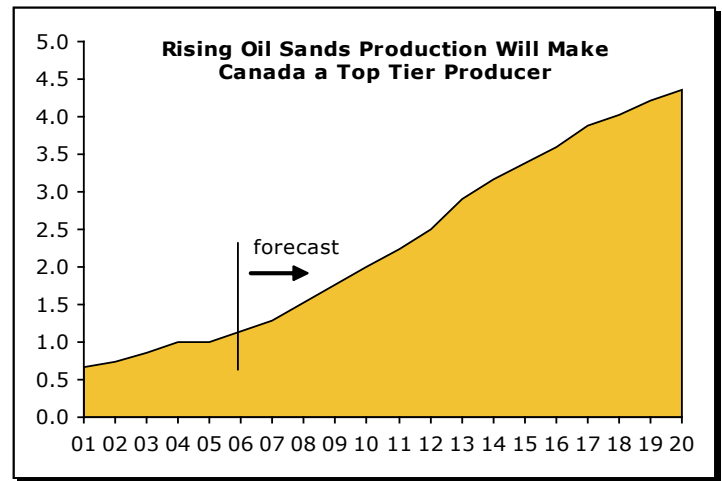
Together Russia, Mexico and OPEC account for almost 60% of world oil production, with combined output of just over 47 million barrels per day and total exports of roughly 35 million barrels per day. While the group as a whole should be able to maintain total production rates close to current levels, exports from the region are likely to drop by as much as 2.5 million barrels per day over the balance of the decade. Exports will effectively be crowded out by soaring domestic oil consumption, dually charged by rapidly rising domestic incomes and by highly subsidized oil prices (Table 1).

With global crude demand now growing at a brisk 2% pace, and conventional supply declining, it's far from

obvious where that 2.5 million barrel-per-day shortfall, not to mention new supply to accommodate demand growth, will come from. One of the few areas where production can be expanded significantly is the Canadian oil sands, a vast reservoir of bitumen whose extraction and refining economics are becoming increasingly attractive as world oil prices continue to set new highs.

Already at over a million barrels per day, production is slated to triple over the next decade and by 2020 could well be producing over 4 million barrels per day of synthetic crude, catapulting Canada to the front ranks of oil producers (Chart 8).

**Chart 8
Growth in Canadian Oil Sands Production**

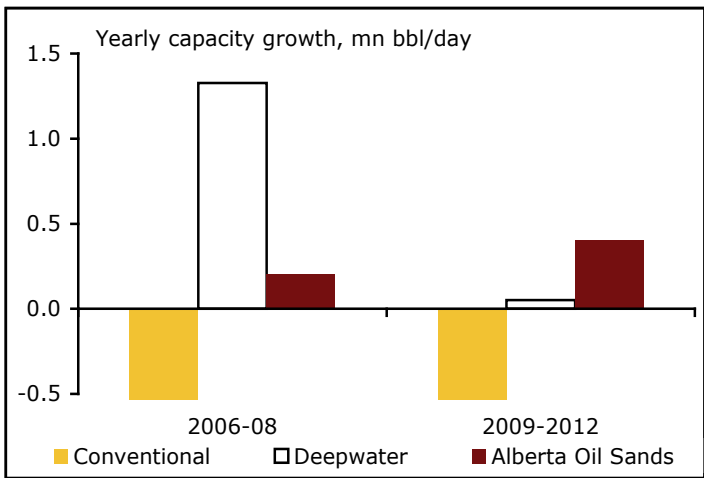


**Table 1
Traditional Suppliers Export Capacity Will Decline (mn bbl/day)**

| | | 1995 | 2000 | 2006 | 2008(f) | 2010 (f) |
|---------------|------------------------|-------------|-------------|-------------|-------------|-------------|
| OPEC | Oil Production | 27.7 | 31.5 | 34.2 | 34.4 | 34.8 |
| | Own Consumption | 5.2 | 5.9 | 7.5 | 8.2 | 9.0 |
| | Oil Exports | 22.5 | 25.6 | 26.7 | 26.2 | 25.8 |
| Mexico | Oil Production | 3.1 | 3.5 | 3.7 | 3.0 | 2.4 |
| | Own Consumption | 1.7 | 1.9 | 2.0 | 2.1 | 2.2 |
| | Oil Exports | 1.4 | 1.5 | 1.7 | 0.9 | 0.2 |
| Russia | Oil Production | 6.3 | 6.5 | 9.8 | 10.2 | 10.2 |
| | Own Consumption | 3.0 | 2.6 | 2.7 | 3.0 | 3.2 |
| | Oil Exports | 3.3 | 4.0 | 7.0 | 7.2 | 7.0 |
| Total | Oil Production | 37.0 | 41.5 | 47.7 | 47.6 | 47.3 |
| | Own Consumption | 9.9 | 10.4 | 12.2 | 13.2 | 14.3 |
| | Oil Exports | 27.1 | 31.1 | 35.5 | 34.4 | 33.0 |

Source: 2006 and prior years, BP Statistical Review of World Energy; more recent data are CIBC WM estimates/forecasts

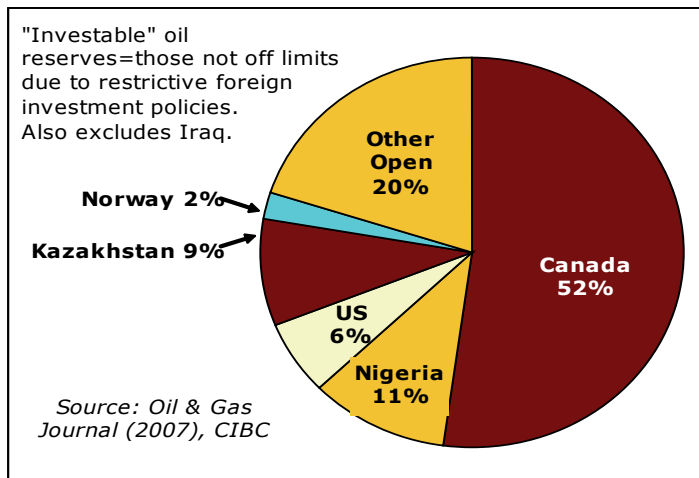
Chart 9
Cdn Oil Sands Producers to be Single Largest Source of New Supply



Within the next decade the expansion of Canadian oil sands production will surpass deep water wells as the single largest source of new global supply (Chart 9). And, unlike in many other major oil-producing countries, virtually all of the increase in Canadian oil sands production will be slated for exports, likely in its entirety to the US market. Canada's domestic oil needs shrunk last year and are unlikely to grow significantly in the future as the Canadian economy becomes more and more subject to carbon abatement legislation and practice.

While such practices will also impact oil sands producers they will enjoy more than ample economic protection from soaring oil prices, as export capacity declines among traditional oil exporters due to both depletion and rapidly rising internal rates of consumption. The production and upgrading of Canadian oil sands is about twice as energy intensive, and hence GHG emission intensive as conventional oil production in Canada, due to the significant amount of energy that must be used to first separate the bitumen from the surrounding sand and then to upgrade the extracted bitumen into synthetic oil. The production and upgrading of each barrel of oil sands emits approximately one-tenth of a ton of CO₂. In the new carbon constrained economy of tomorrow, such emissions will carry a cost much higher than they do today. But even at US\$40 a ton carbon—a level even higher than that recommended by the Stern report in the UK, that would translate into only a US\$4-per-barrel

Chart 10
Investable Oil Reserves in the World



carbon cost for oil sands producers. In a world of US\$100 oil, that's a relatively small cost to pay.

What also makes the Canadian oil sands even more attractive is not simply their geological assets but their regulatory environment in Canada. In most places in the world these days, there is a growing political consensus that oil and gas assets should be owned and operated by the state. Depending on one's view of the investment climate in Kazakhstan and Nigeria, Canada represents anywhere from 50-70% of the investable oil reserves in the world (Chart 10).

For most multinational oil firms, the world is rapidly shrinking. Increasingly they are shut out of the backyards of all the state-owned oil patches and then have to bid against those state firms in places still open for investment. Canada remains one of those few places, where governments have been content to take their share of economic rents through royalties and not be concerned about the ownership per se.

Increased global reliance on high cost sources of unconventional supply will be accelerated by the decline in the export capacity of traditional oil producing countries. Soaring rates of domestic oil consumption in those countries will soon put Canada's oil sands in the global energy spotlight.

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