JOINT ECONOMIC COMMITTEE

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RESEARCH REPORT #
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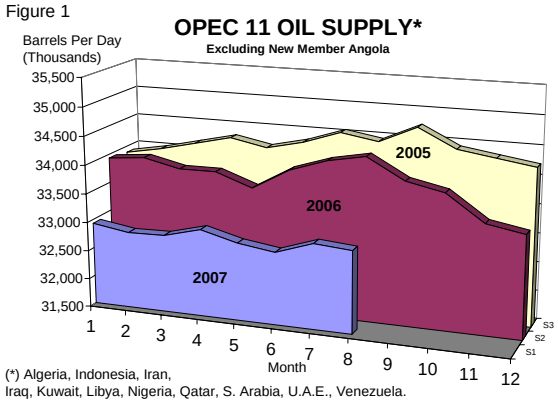
EXPLAINING THE HIGH PRICE OF OIL
—AN UPDATE—

OPEC's lack of transparency. The explanation of the high oil price is largely a matter of OPEC's constrained response to increases in Asian oil demand, but not entirely. It is also a matter of the reactions to high oil prices around the world. Initially, it was unclear if the jump in oil demand would last, which limited new oil field investment. However, uncertainty over OPEC's oil price and market share objectives further slowed non-OPEC oil investment. In 2005, the oil price was in the mid-$50 range. The cartel had officially suspended its oil price target range of $22 to $28 per barrel in January of 2005 and not set a new one. Since then, OPEC's strategy has become obvious, and additional facts are in about other oil export nations, the oil price policy of emerging economies, and the nature of oil demand in the developed world. The salient features of the oil price surge have come into focus, despite OPEC's lack of transparency.

Oil supply constraints. Since 2005, the oil market has experienced an enormous price rise, to more than $90 per barrel recently; world oil consumption has continued to increase; and the world so far has avoided economic recession. OPEC is clearly pursuing higher oil prices, though without admitting it. With the price above $90 per barrel, OPEC refuses to produce more oil.[1] Figure 1 shows OPEC's rate of supply, which since 2005 has been *reduced* each year. (In January, Angola joined OPEC but has not been subject to an oil production quota in 2007. Its oil output has been excluded from Figure 1.)

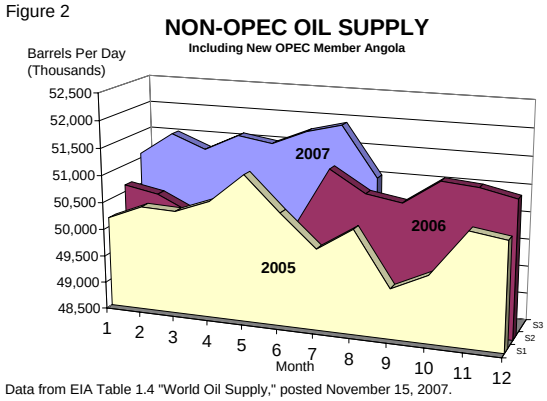
Figure 1



(*) Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, S. Arabia, U.A.E., Venezuela.

Oil on the world market is so scarce because OPEC restricts production. That lifts the value of all oil in the ground, including oil outside OPEC, which is more costly to recover. The enhanced value tends to spur more development and production until the cost equals the higher price. Non-OPEC oil production indeed has increased, as Figure 2

Figure 2



Data from EIA Table 1.4 "World Oil Supply," posted November 15, 2007.

shows, but rent-seeking governments have slowed the increase. Governments divert to raise oil output quotas, despite continuing pleas from oil importing nations for more supply.

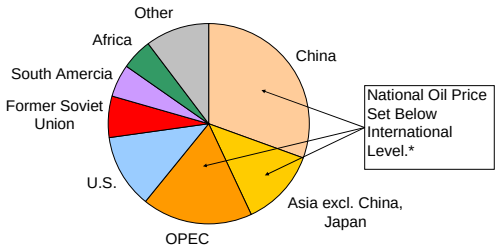
[1] Who would have predicted this in 2005? OPEC announced the decision at its December 5th meeting not

some of the value of oil recovered to their treasuries. Royalties, taxes, and forced state production sharing agreements drive a wedge between the market price and the revenue received by those who invest to get the oil out of the ground. Higher oil prices have led governments to enlarge this wedge which tends to offset the simulative effect higher prices have on production. Beyond that, the process of resetting the financial conditions under which oil companies may operate can be time consuming and introduces added uncertainty for private investors. In the worst cases, high oil prices have facilitated outright resource nationalism, because they lower the bar for less efficient national oil companies to turn a profit. This has led to market foreclosure and even forced transfer of private oil assets. *The overall effect of these government actions is to lessen competition for OPEC. The cartel can pursue high prices with much less concern for losing market share*.

Price controls in emerging economies. An additional facilitator of the oil price spiral is that the governments of developing countries shield their economies from the price increase. Asian countries, including for example Taiwan and South Korea, have a long history of holding down the price of resources to support economic growth. Only recently have some relaxed, though by no means dismantled, regulation of their energy markets. Mainland China had held its state-controlled fuel prices flat for 17 months, since May 2006, while the international crude price rose 30 percent. In November, it raised domestic diesel and gasoline prices only by 10 percent. Given that the Chinese economy has not been fully exposed to the steeply rising international oil price and continues to grow rapidly, it is little wonder that China's oil consumption continues to increase. The Asian Development Bank estimates the cost of oil subsidies in India at $17.5 billion per year.[2] The governments are supported in their policies by the large foreign exchange reserves their export-led economic growth has generated. China's foreign exchange reserve alone is $1.4 trillion and growing.[3]

The OPEC countries themselves keep the oil price low at home. These countries have exceedingly low oil production costs and price their domestic fuel accordingly. OPEC designs their restrictive oil output quotas to drive up the international price, not the domestic prices.[4] Consequently, consumption at home treats oil as an abundant resource, which in truth it is. OPEC members account for a large share of the increase in world oil consumption. OPEC's oil consumption increase since 2002 when the oil price commenced its climb, is second only to China's and larger than that of all the other Asian countries combined. Figure 3 shows the gross increment in the rate of oil consumption from 2002 to 2006, 6.9 million barrels per day (mbd), by source. There was a decrement in several countries (0.5 mbd in total) for a net

Figure 3 **SHARES OF OIL CONSUMPTION GROWTH 2002 TO 2006**



(*) Oil price controls and subsidies also exist elsewhere.

Source: Calculated from EIA data.

[2] "Asian Oil Subsidies," *Financial Times*, December 4, 2007; also see Shai Oster, Patrick Barta, and Russell Gold, "As Oil Price Sets New High, Stress Hits Developing Nations," *WSJ*, November 1, 2007.

[3] Typically, the government controls retail prices and subsidizes domestic oil companies in some form.

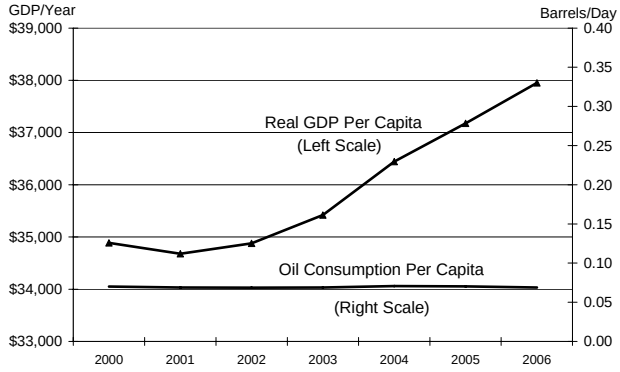
[4] The national oil monopolies in OPEC member states do not engage in price arbitrage, i.e., ship oil intended for domestic use abroad.

increase of 6.4 mbd. China, the rest of Asia (excluding Japan whose oil consumption fell), and OPEC account for two-thirds of the world's net growth in daily oil consumption since 2002. *In none of these regions do consumers face anything approaching the full international oil price.*

Inelastic demand in developed countries. The oil demand of the major industrialized countries is saturated. The G-7 countries' growth path does not require more oil. The rate of oil consumption in these most advanced economies is essentially unchanged in the last five years. The U.S. is the oft cited exception, but what sets it apart from the other G-7 countries is population growth. Substantial population increases drive U.S. oil consumption, not economic growth per person. While real GDP per capita has greatly increased, U.S. oil consumption on a per capita basis has not, as Figure 4 shows.

Figure 4

GDP AND OIL CONSUMPTION IN THE U.S.

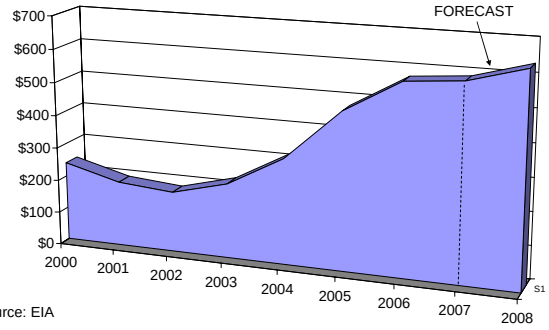


Substantially *reducing* oil consumption is another matter, however. Developed countries consume most oil in transportation where there are limited fuel substitutes at this time. Thus large scale fuel switching is not a near-term option. But real per capita GDP and income growth have supported the same volume of consumption by helping to pay for the higher fuel prices. *The oil price surge has not reduced oil consumption so far in the developed world either by a substitution effect or by an income effect.*

OPEC's price aggressiveness. It has long been assumed that OPEC will not risk letting the oil price rise to the level where it causes a recession. Unfortunately, OPEC has been taking that risk already. The implosion of the subprime mortgage market and other economic risk factors have prompted the Federal Reserve to ease its monetary policy, but OPEC has barely relented from its restrictive oil output policy. (At its meeting in September, the cartel granted a small increase in oil production.) Price increases have boosted OPEC's oil export revenues from about $200 billion to nearly $600 billion per year (see Figure 5), and the cartel is unwilling to moderate its rate of revenue

Figure 5

OPEC 11 OIL EXPORT REVENUE
BILLIONS OF DOLLARS



Source: EIA

generation. The Energy Information Administration (EIA) forecasts OPEC revenue to rise even higher.[5] Apparently, OPEC surmises that a recession in the U.S. will not affect oil demand very much (as Figure 4 might suggest) and counts on the decoupling of growth in Asia from U.S. economic conditions. *Hence, OPEC's price objective is highly aggressive at a time of fragile economic conditions.*

Conclusion. The high oil price is explained by several factors that have combined to embolden OPEC and enable a price aggressiveness not seen since the Arab oil embargo. Rapidly rising oil demand from

[5] Saudi Arabia's oil export revenue alone is projected by the EIA to reach $200 billion in 2008.

China and other developing Asian countries was the precipitating event, but OPEC's refusal to increase oil production adequately and to provide any price guidance to the market slowed the market's initial supply response. As the oil price kept rising and the world economy proved capable of absorbing the increases, varying degrees of resource nationalism in certain oil exporting countries interfered with independent producers' ability to compete with the cartel. In addition, the oil importing countries generating the surge in oil demand have held their domestic fuel prices low, creating a gap between domestic and international prices. The OPEC countries themselves account for large increases in oil consumption and keep their domestic fuel prices at minimal levels. Little surprise then, that world oil consumption has not declined in response to higher international oil prices.

A big part of the story is the maturation of developed countries' oil demand and its concentration in the transportation sector where oil substitutes are not readily available. Developed economies have grown without using more oil and the increased income generated has helped to pay for the fuel price increases. This has shifted OPEC's attention to its growing market segment, the emerging economies in Asia. On the assumption of demand in the developed segment that is inelastic with respect to price and economic growth and demand in the developing segment of the world oil market that just keeps growing, OPEC believes that an extremely high oil price is sustainable. The concern that a U.S. recession could lead to an oil price collapse has faded.

But relying on the simple explanation that high oil prices are supported by Asian economic growth overlooks the potential for increased competition to the oil cartel as well as infirmities in demand.

The governments of oil exporting nations outside of OPEC have an interest in increasing the rate of oil production once they have reset the shares of the oil rents in the state's favor. With the price of oil high on the international market, a sense of forgone opportunity may spur oil production and exports.

The governments of oil importing countries that subsidize their domestic petroleum prices have to cover a widening gap between cost and price and a growing volume of oil imports. The increasing subsidy burden eventually may force substantial upward adjustment in domestic fuel prices.

In developed countries, rising income has helped to offset the rising oil price, but if income were to fall, oil consumption may drop as a result. Asia's export-led economies rely on the U.S. and Europe to buy much of their goods. A recession in either region could slow Asian growth and in turn reduce its demand for oil. The "decoupling" theory may prove fallacious. Moreover, China's economy has some problems of its own that may cause its growth to decelerate.[6] Last, technology will shrink oil's role as a transport fuel, it is only a matter of time. We do not know at what rate, but we do know that the technology will be globally transferable and that $90 oil is a powerful incentive.

[6] See "Chinese Economy Needs Reform," JEC Research Report #110-13, October 2007.