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The Price of Oil: If it's Broken, Why Not Fix It?

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The price of oil is too important to be left to market forces. Since the early 1970s, the world oil market has repeatedly failed to send price signals that allocate economic resources efficiently. Governments of oil-importing nations should correct this market failure by fixing oil prices in internal markets at target levels high enough to set in motion technological and structural changes in the way their economies use oil and gas, while incentivizing increased domestic production. The result will be steadily declining imports, and greatly increased certainty for decision-makers in the internal oil and gas markets. The policy tool for achieving this is simple: an excise tax on oil imports equal to the difference between the target price and the prevailing world market price. For political reasons, it would be expedient to combine this with a windfall revenue tax to confiscate domestic producer revenue above the target price.

What Is Broken

Unlike democracy, the free market is not an end in itself, but a means to achieving economic efficiency. When a market fails to do this, as many often do, it must be fixed by government. The whipsaw prices generated by oil market forces between July 2007 and December 2008 have drowned out with noise any meaningful signals that prices may be trying to send to guide decisions by individuals and businesses about what to consume and how to invest. And it is not only short-term prices that are being whipped. Here is how the futures market priced crude oil for delivery in July 2012 at different times over the last 20 months:

July 2007 $ 65/bbl
January 2008 $ 87/bbl
July 2008 $141/bbl
February 2009 $ 64/bbl

Nor is it not only in oil futures markets that long-term forward curves move up and down in lock-step with “next-month” prices. The long-term oil price predictions of economists in oil companies, banks and prestigious energy-consulting companies all fluctuate in response to short-term fluctuations (and generally in concert with each other).

The lead-times between decisions and consequences for the stock of capital that produces and consumes energy are between 3 and 10 years. When long-term oil prices rise by 215% and then

retreat to their original level over a period of 20 months, how can these price signals possibly lead to efficient decision-making and resource allocation? These volatile signals confound decision-making by oil and gas producers, consumers, manufacturers of energy-using technology, electric power producers, developers of alternative energy projects and technology, and bank financiers to all of the above. Market forces have produced destabilizing transfers of wealth from importers to exporters, with damaging political consequences in many importing countries, and with troubling geopolitical consequences in some exporting countries. And 2007-8 is only the most recent episode in a pattern of market failure since the early 1970s.

How to Fix It

To correct the market's chronic failure to price oil efficiently, governments of oil-importing nations should fix the price in internal markets using a simple policy tool: an excise tax on oil imports equal to the difference between a target price that each government would choose and the prevailing world market price. Where imports are the marginal source of supply to a market, the price of imports sets the price for all production and consumption within that market. The oil excise tax will therefore fix a floor price for oil, and guarantee that producers and consumers in the internal market will never face a price less than that floor price. The stable pricing environment that results will enable the rational decision-making that the market fails to provide when left to its own devices.

The target price should be high enough to set in motion technological and structural changes in the way economies use oil and gas, while incentivizing increased domestic production. However, the target should not be so high as to have a meaningful braking effect on economies. The evidence of the last 18 months suggests that such a target lies in the range of $80-100/bbl. However, to smooth adjustment paths, it would be wise to begin with a $50/bbl target, and to increase this annually to reach the $80-100/bbl range after five years.

The higher price – and the elimination of uncertainty as to the long-term evolution of prices -- will cause market participants to make decisions with long-term effect to reduce domestic consumption, boost domestic production, and reduce imports. For the USA, a target price of $50/bbl in 2009 rising to $90/bbl by 2014 could easily result in 10% less consumption and 10% more domestic production compared to a "do-nothing" scenario in which American consumers and producers are left to guess how long it will take for the market to strengthen and begin lifting prices above the current range of $30-40/bbl. The result of a 10%/10% response to an excise tax would be 2.5 million b/d less in 2014. At a world price of $40/bbl, this would mean $36 billion less US consumer wealth transferred to oil exporters annually. If in the "do-nothing" scenario exporters would have managed by 2014 to increase the price to their target of $80/bbl, the wealth kept at home as a result of the excise tax would be $72 billion annually. And if the domestic consumption or production responses to the target price are greater than 10%/10%, the saved domestic wealth would be commensurately greater.

At the same time that the excise tax avoids wealth transfer out of a country, it would transfer wealth from oil and gas consumers to producers and taxpayers within the country. The relative gains and losses would depend on the country's domestic production as a percentage of its consumption, and tax rates. For the USA, where domestic oil and gas production currently represents around 50% of consumption on a value-weighted basis, a target internal price of $50/bbl in 2009 would transfer $23 billion annually from consumers to US oil producers, and perhaps another $ 5 billion annually to US gas producers. It would also transfer approximately $47 billion annually from oil and gas consumers to taxpayers, assuming other taxes are reduced by equivalent amounts so that the net effect of the excise tax is neutral. By 2014, assuming the

10%/10% response in consumption and production, and a world price of $80/bbl, a target domestic price of $90/bbl would transfer around $25 billion annually from US oil gas consumers to US producers, and $45 billion annually from US consumers to US taxpayers.

For political reasons (the strength of which will depend on the share of domestic production in supplying each domestic market), it may be expedient to combine the excise tax on imports with a tax to confiscate domestic producer revenues above the target price. This ”windfall revenue” tax is neither necessary nor detrimental to achieving the economic security objective of the excise tax. However, most would agree that confiscating domestic producers’ revenue above the target price would be an appropriate quid pro quo for guaranteeing that it will never be less than the target price.

Some Bad Reasons Why This Is Not a Good Idea

1. No politician or bureaucrat can know what the "right price" is for anything. Only the market can determine this.

Markets only find the right price in text-books. Adam Smith explained how the “invisible hand” produced prices that allocated resources efficiently in the markets for food and clothing in 18th century Europe. But it has been apparent since the 19th century that markets for capital, for example, cannot be efficient without strict regulation. So why should we be surprised to learn that 20th and 21st century markets for energy fail to allocate resources efficiently?

Nor is the extensive body of academic literature devoted to the question of the efficient long-run price of oil very helpful for policy-making. The rules prescribed by that literature (e.g. [Hotelling]) produce prices very different from those we find in the market, so it is tempting to believe they might be useful for policy-makers. But these rules depend on the usual abstractions (e.g. the assumption of “perfect knowledge”) and ignore a variety of “externalities” that policy-makers must consider. In reality, there is no single "right price" for oil. However, given where we are today, what we can say with some confidence is that any price high enough to set in motion technological and structural change in the way our economies use oil, but not so high as to cause short-term damage, is a right price.

2. By setting a target price higher than the market price, we merely invite exporters to raise the market price to the target price.

If you believe this, you don’t understand how the world oil market works. Oil exporters (OPEC, Russia, and other fellow-travelers) have their own target price, which is now reportedly between $60 and $80/bbl. But they are currently struggling to achieve the cohesion needed to shut in production sufficiently to achieve this target. The import excise tax we propose would make it still harder for the exporters to achieve their target because it will reduce demand for their exports. Exporters will not see our target prices as an invitation, but as a challenge. In order to raise their market price to match our target price, exporters will have to demonstrate more cohesion – and accept more sacrifice -- than would be necessary to control the price of oil if we simply leave the world market to its own devices (and those of the exporters).

3. The “free-rider” problem: importing nations who choose not to raise the internal price will enjoy the benefit of the lower world market price, thereby gaining a comparative advantage over nations who do choose to raise the internal price.

Oil importers who decide to ride free in this way will gain a short-term comparative advantage, and many will choose to do so (e.g. China, India, Brazil). But this is not the kind of game in which no-one wins unless everyone plays. There are good reasons for countries to choose long-term economic security over insecurity, even if their neighbours do not. The oil price spike of 2007-8 was far more destabilizing in the USA both economically and politically than in the EU. This was because EU countries have always taxed oil consumption much more than the USA, giving rise to denser patterns of habitation, higher reliance on public transportation, a more fuel-efficient vehicle fleet and a much lower oil-intensity of economies compared to the USA. But few in the EU see their higher internal energy prices as a "comparative disadvantage."

4. With America diving into the worst economic downturn since the 1930s, this is not the time to hit the struggling American consumer with massive energy price hikes.

Using the assumptions described above, around 60 % of the wealth extracted from USA oil and gas consumers would in the short term be transfered to taxpayers, so the impact on economic activity would be neutral to a first approximation. The remaining 40% of the wealth transfer would be to domestic producers who, in response to long-term certainty of higher prices, can be expected to invest this revenue in exploration and production, stimulating the economy. And if policy-makers see evidence that producers are returning an extraordinary share of the revenue to shareholders rather than investing in exploration and production, supplemental income tax levies on oil and gas producers would be justified.