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Domestic Gasoline Prices

Do U.S. energy regulations reduce the price of U.S. gasoline below world prices? The 15,000 employees of the new Energy Department undoubtedly take it for granted that they do, but Charles E. Phelps and Rodney T. Smith of the Rand Corporation argue otherwise in a recent *Wall Street Journal* article. Yet despite their useful insights, Phelps and Smith may be wrong in concluding that U.S. citizens pay world prices for gasoline. Their article (and a supporting *Journal* editorial) tend to overlook the effects of the "entitlements" program, which actually does bring the U.S. price below the world price. But at the same time, the program subsidizes purchases of foreign oil and simultaneously taxes purchases of domestic oil. Perhaps the cost of subsidizing OPEC oil is not worth the benefit of lower-priced gasoline at the pump.

The *Journal* editorial accompanying the Phelps-Smith article emphasized the relevant fact of price determination: prices are set at the margin. Of course, any analysis should be based upon that basic economic reality. It should be realized, however, that the entitlements program is designed specifically to change marginal costs.

Ceilings on domestic prices

When the Federal government first set up its energy program in the wake of the Arab oil embargo, it attempted to reduce retail prices of gasoline by placing ceilings on the well-head price of "old" oil — oil from wells drilled prior to the enactment of those price ceilings. However, this regulation by itself is not enough to reduce the price of retail gasoline below the world price. When producers set retail prices, they tend to ignore the cost of their cheaper domestic crude and base the price of retail gasoline only upon the higher cost of the crude they buy in world markets.

This is because the cost of crude oil that matters is the marginal cost — the cost of the most expensive barrel the refiner buys. This means that in the absence of other regulations, the higher price of world crude — not the regulated price of domestic crude — will determine the price of gasoline. Since the oil refiner is going to price all his gasoline at the same price, the ceiling on domestic crude has no effect on the retail price of gasoline and simply provides a windfall gain for those refiners lucky enough to get the regulated domestic crude.

Entitlements

But another regulation must be considered in addition to the price ceiling on domestic crude oil — the entitlements program. While the details of this regulation are complex, the procedure at its heart is quite simple. The government figures out the total value of the privilege to refiners of being able to buy low-priced domestic crude, and

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requires the recipients of this benefit to split it with those who bought high-priced foreign crude.

Suppose refiners buy 20 million barrels of domestic crude at $5.00 a barrel and 10 million barrels of foreign crude at $10.00 a barrel. Then the average price of crude is $6.67. The entitlements program requires that the "winners" who get the domestic oil pay the same price, $6.67, as the "losers" who get the foreign crude. As a result, the *average* cost of a barrel of crude, $6.67, is also the *marginal* cost, since the most expensive barrel also costs $6.67. The word "entitlement" refers to the right to purchase domestic regulated oil – but the term is inexact because the regulation makes foreign crude no more expensive than domestic regulated crude. The program's salient effect is to reduce the marginal price of crude to the average – in this case $6.67 – and thus to reduce the retail price of gasoline.

The entitlements program is designed to give refiners the incentive to translate the ceiling on domestic crude prices into lower prices for retail gasoline. It *works*, and ironically, it works because – in contrast to many government regulations – it uses competition to achieve its end. This can be seen by examining the effects of the entitlements program, first in a world with a single oil refinery, and then, in the real oil industry with many competing refineries.

Using our earlier example, we see that in a single-refinery world the cost of a barrel of foreign crude is $10.00 a barrel, with or without an entitlements program. The transfer of money from winners to losers in the case of a single U.S. firm in a non-competitive world would be mere bookkeeping. But when more than one firm is involved, the refiner's cost of foreign crude is borne in part by his competitors. In a competitive situation, other refiners would also pay a higher price for their crude when one refiner increases his purchases of foreign crude. The effectiveness of the entitlements program stems from the fact that it takes advantage of competitive forces, rather than seeking to frustrate them.

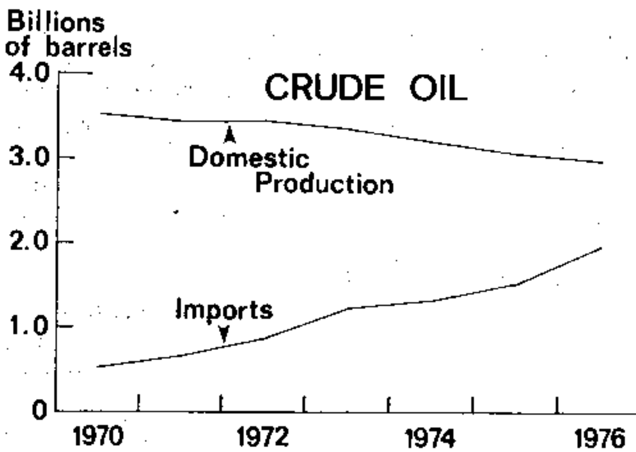
Benefits and costs

So in the short run, the entitlements program reduces the retail price of gasoline. Against that benefit, there is an important cost – the discourage-

ment of U.S. oil production. The entitlements program taxes purchases of American crude oil and subsidizes purchases of foreign oil. This creates an incentive for foreign oil producers to discover and produce more oil, and for domestic oil producers to discover and produce less. As the percentage of total oil from old domestic wells begins to decline in response to this disincentive, the average cost of (foreign and domestic) oil bought by refiners begins to rise. In the end, regulated domestically-produced oil supplies could decline to an insignificant level. Then the average purchase of crude would be made at the world price, and the regulated price of U.S. gasoline would indeed be consistent with world prices.

Thus the Phelps-Smith conclusion — that competition inevitably drives the U.S. price of gasoline to the world price level — would hold in the long run. But a strong argument can be made that, *at present,* U.S. prices are less than they would be in the absence of regulation. To deny the effectiveness of the price-control legislation is to shift the focus of national attention away from an equally important question: is it in the nation's best interest to lower the retail price of gasoline by subsidizing foreign-oil producers?

Kurt Dew



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