

## Oil Price Increase: *Can Something be Done to Minimize its Adverse Effects?*

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In the last 20 months, petroleum products had gone through several rounds of price increases in the Philippines. By July 2000, in fact, the average price of diesel fuel has increased by 59 percent from its January 1999 level while the pump price of gasoline products has risen by an estimated 46 percent over the same period.

Because petroleum products are widely used and are basic to almost every human activity, increases in their prices have far-reaching effects and get translated into increases in the general price level of services and commodities, wages and others.

Not surprisingly, therefore, the series of price increases has triggered public protests, in particular, the "welga ng bayan" by public utility operators and fueled

debates and discussion on the merits of the present deregulated price policy on oil products in the domestic market.

Two reasons were cited for the increases. *One* is the increase in the world price of crude oil in the international market. And *two* is the depreciation of the peso-dollar exchange rate.

The Philippine government tried to delay the price increases and to reduce the rate of increases as much as possible through dialogues and moral suasions with the big oil companies in the country. However, these did not help much and the round of increases continued until the latest one sometime in mid-July this year.

The question now is: with the certainty of the oil price increases already a given, what has been done to mitigate the adverse effects of such increases? And has the government exhausted all means to lessen, if not totally eliminate, the negative impact?

This *Policy Notes* touches on the second question and argues that there may still be one way of lessening

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Jennifer P.T. Liguton helped in repackaging this *Notes* based on PIDS Discussion Paper Series No. 2000-32 with the same title by the author. The views expressed are those of the author and do not necessarily reflect those of PIDS or any of the study's sponsors.

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the negative effect which the government may adopt. This is through the policy instrument of tariffs on imported oil products.

In a series of simulation exercises which we recently ran, using the Philippine computable general equilibrium model (PCGEM),<sup>1</sup> we looked into various scenarios where certain policy instruments or combinations thereof were considered to see if and how they could help lessen, if not totally eliminate, the negative effects of the oil price increases.

Based on our computations, it shows that reducing the tariffs on imported oil products, which is one form of lessening regulation, would lead to the best consequence and would result into a lesser negative impact on the whole as evidenced in the:

- \* lower reduction in gross domestic product (GDP),
- \* lower increase in prices, in particular, petroleum prices,
- \* lower negative implications on the government budget balance,
- \* lesser income inequality effects, and
- \* lower negative welfare effects.<sup>2</sup>

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## Effects of the oil price increases

As previously mentioned, the recent increases in the prices of oil products were brought about by the actual change in the world oil price which reached

148.8 percent increase and the depreciation in the peso-dollar exchange rate which registered 4.8 percent from the period January 1999 to May 2000.

To be able to show how tariffs on imports may be used as a policy instrument to mitigate the negative effects of the oil price increases, it is best to spell out the economic and welfare effects of the two root sources of the oil price increases at the outset.

### Macroeconomic effects

In terms of the macroeconomic effects, two important points need to be highlighted. One is that in terms of internal revenues (taxes), the government coffers experienced a decline. And two is that as far as tariff rates (on imports) are concerned, the government had a sudden "windfall profit."

What explains this difference?

In view of the change in world oil prices, real GDP declined by -2.3 percent. Because of this negative growth, an economic slowdown was experienced, thereby causing direct (domestic) tax government revenue to decline.

<sup>1</sup>The Philippine computable general equilibrium model (PCGEM) is a nonlinear general equilibrium of the Philippine economy. The model has 34 production sectors, 3 factor inputs (labor, variable capital and capital), and 10 household types in decile groupings. Labor and variable capital are endogenous, while capital is fixed.

<sup>2</sup>One caveat, though, is that as in any economic model, the policy implication here was derived with all other things held constant except for the variables analyzed. In reality, of course, everything is dynamic and constantly changes.

Meanwhile, tariff revenue is basically a function of import volume, world price of commodities, tariff rate and the exchange rate. When the price of crude oil increased in the world market, the country's level of oil imports suffered a huge decline. Despite such decline, however, the revenues earned from tariffs nonetheless increased, what with the overwhelming 148.8 percent increase in the world price of oil. As such, even if tariff rates stayed the same, tariff revenues increased by almost 20 percent, giving government a "windfall profit" in terms of revenue.

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price increase is welfare-decreasing. However, in this case, the decline in welfare is much bigger among the higher income classes than among the lower income groups. This is understandable since richer households use larger amounts of everything than the poorer ones.

### Income

Meanwhile, as far as incomes of the people are concerned, the simulation results show that they went down, the impact of which may be described as regressive. This means that the decline in incomes was much larger among the poorer segments of the population (represented by hh1) than among the upper segments (hh10). The percent decline among hh1s registered -2.6 percent while among the hh10s, -2.3 percent. Nowhere is this more clearly manifested than in the Gini ratio wherein the coefficient rose from 0.43992 to 0.44048, signifying a further deterioration in income inequality.<sup>3</sup>

### Welfare effects

With regard to overall welfare as denoted by two welfare indicators,<sup>4</sup> the results show that the world oil

### Tariffs as a policy tool

Looking at the abovementioned negative effects of the oil price increases, can something be done to minimize such impact?

A number of proposals have recently surfaced, one of which is the proposed national oil exchange scheme which is equivalent to the reimposition of regulation or re-regulation.

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Re-regulation could generally take two forms. One is through quantitative restrictions while another is through the price system. The setting up of an oil exchange is an example of quantitative restrictions whereas the imposition of new or higher taxes, tariffs and the like is one means of re-regulation working through the price system.

What our study did was to analyze the impact of reducing the tariff levels, a form of *reducing regulation*

<sup>3</sup>Gini ratio is a measure of the level of income inequality. The closer the ratio approaches the value of "0.5," the greater is the level of income inequality. Conversely, the more it declines from the value of "0.5," the lesser inequality exists.

<sup>4</sup>The two welfare indicators are: (1) one approach takes the new prices and incomes after the world price change is introduced and asks how much income must be taken away or added in order to return households to their pre-change utility level; and (2) another approach looks at the old or pre-world price change level and computes the change needed to achieve new equilibrium utility levels.

through the price system, and the observed impact was that of being favorable in terms of welfare, income distribution and effect on the budget, which is currently the biggest concern of the government.

Meanwhile, what our paper did not do was to analyze what would have happened had the government reimposed quantitative restrictions. Economic theory, however, will tell that this would have led to a higher welfare cost.

In short, the results of our simulation exercises reveal that among the various scenarios that we considered, the one calling for a *temporary reduction in the current 3 percent tariff rate on oil products may be the most direct way of partially minimizing the adverse impact on the overall economy and people's welfare of the oil price increases.*

And the "windfall profit" earlier mentioned for the government in terms of the increased earnings from the tariffs<sup>5</sup> imposed on the oil importations are large enough that even if the government considers this reduction in tariffs on oil products, the government earnings from such source will still be positive. With a lower tariff rate on oil products, the country's level of oil imports might not drop as drastically as it had when the world price of oil increased. And because the level of oil supply in terms of imports will not suffer that much, the domestic price of oil products would not perhaps go up as much as it did and will. The chain reaction of this mechanism is such that the adverse consequential effects on the general price levels, incomes, employment and people's overall welfare will thus not be that much either.


## Conclusion

To be clear, our paper, as we have said, did not analyze the consequences of a reimposition of regulation through quantitative restrictions as called for by the

<sup>5</sup>A tariff, as we know, is a tax applied on an ad valorem basis or at a certain percentage on the total value of an import.

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proposed establishment of a national oil exchange. Suffice it to say, though, that the lesson to be noted from the results of our simulation exercises is that lesser regulation such as a reduction in the tariff rates leads to a higher welfare level. Conversely, a more direct government involvement, either through the price system or distribution like the proposed oil exchange, means lower welfare and higher societal costs.

The oil sector has already gone through a series of reforms, including the elimination of the Oil Price Stabilization Fund (OPSF) which gave the government its biggest headache in the early 1990s. The reimposition of this or a similar type of regulation would certainly thus be highly unproductive at the moment. It would also give wrong signals to investors who do not have a positive outlook on the Philippine economy at present because of unfavorable events, both manmade and natural in nature. 

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