THE DETERMINANTS OF OIL PRICE SUBSIDIES IN OIL EXPORTING COUNTRIES

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Overview

Most of the oil exporting countries countries hand out large subsidies. Subsidies offered for a long time are not only as inefficient, even dangerous due to sluggish energy demand: the low domestic prices have built up an enormous oil demand growth, which cannot go on if these countries want to keep exporting. Only very high price jumps can stop this development, but are politically very costly if not suicidal for many governments. Indeed, we argue that the currently low oil prices do not only harm the oil exporting countries, but provide a unique opportunity to eliminate this costly subsidy policy at manageable political cost.

Methods

Stylized facts of energy subsidies in oil exporting countries are complemented by economic and politico-economic explanations, inter alia: reasons for domestic price differentiation, as amean to buy political support and the difficulties of eliminating a once installed regime of subsidies.

Annual data from 2003 to 2015 for a sample of 13 oil producing countries (mainly OPEC members) used in this study. All variables have been expressed in logarithmic form. We study the factors influencing gasoline subsidies through variables that affect gasoline prices. It is useful to study gasoline pricing, because gasoline is the most important transportation fuel, and there are data for many countries for the time period of investigation. Using panel unit root tests, the order of integration of the variables is identified. Then a Panel EGLS method has been applied. Generalized Least Squares (GLS) is typically designed to generate an optimal unbiased estimator of β when the model suffers from variance heterogeneity. Before proceeding to tests of panel conitegration to determine the relationship among the questioned variables, the examination of panel unit root tests is required to determine whether our variables are stationary. Two types of panel unit root tests were conducted: Levin, Lin Chu (2002), and Im, Pesaran et al. (2003). In addition, we apply a Panel estimated generalized least square (EGLS) regressions with cross section weights to be able taking account of autocorrelation and heteroscedasticity in understudied countries that have different levels of fossil fuel subsidies.

Results

Political stability has a negative impact on gasoline subsidies, i.e., the more politically stable a country is, the lower id the level of fossil fuel subsidies. Energy subsidies are of the most universal, and most debatable fiscal policy instruments in oil exporting countries.

Higher oil rents (share of oil revenues from GDP) increase in gasoline subsidies. In oil exporting countries the subsidies are implicit, the difference to the opportunity cost of selling oil internationally. Therefore, in periods of high oil prices, the share of oil revenues from GDP increases.

When oil prices fall dramatically, the governments in oil exporting countries have to fund the completion of the infrastructure long-term investments commenced during the boom years. Hence, spending from accumulated foreign assets will increase. But, spending too much from foreign assets will force them to increase the domestic fossil fuel prices.

The speed of subsidies elimination will depend on a range of influential variables such as the fiscal position of the government, and the political and social environment in which reforms will take place. Slow removal of subsides allow consumers to change but maybe insufficient to trigger the relevant change of their consumption behavior and the replacement of their appliances.

Conclusions

The major implication of the empirical analysis for the implementation of more sensible policies and in particular for abolishing these subsidies is the factors conducive for such policies – democracy, rule of law, liberty (economic and individual) - are lacking in many of the considered countries. However, without proper policies enacted in the near future, domestic demand will explode. Of course, things that cannot continue forever must stop, and once severe financial constraints arise, this subsidy policy must stop. However, such a stopping will trigger turmoil if not revolutions. Developed countries, e.g. USA or the introduction of carbon taxes. Given the already high petrol taxes in Europe and the increasing share of electric cars, which do not contribute under the current regime to the maintenance of road infrastructure, European governments just have to introduce road tolls that internalize the corresponding external (fatalities, congestion etc.), which are currently part or at least justification of the petrol tax.

As a consequence, only minor adjustments, maybe even a reduction, of the petrol tax is necessary in most European countries.

References

1. Levin, A., Lin, C. F., & Chu, C. S. J. (2002). Unit root tests in panel data: asymptotic and finite-sample properties. Journal of econometrics, 108(1), 1-24.
2. Im, K. S., & Pesaran, M. H. (2003). On the panel unit root tests using nonlinear instrumental variables.
3. "Case Studies on Energy Subsidy Reform—Lessons and Implications – Supplement", International Monetary Fund IMF, 2013.
4. Abodunde, T., Wirl, F., & Koestl, F. (1985). Energy demand elasticities: A reassessment. OPEC Energy Review, 9(2), 163-185.
5. Benes, K., Cheon, A., Urpelainen, J., & Yang, J. (2016). Low oil prices: An opportunity for fuel subsidy reform. International Growth Centre Blog.
6. Rentschler, J., & Bazilian, M. (2016). Reforming fossil fuel subsidies: drivers, barriers and the state of progress. Climate Policy, 1-24.