



Determinants of oil price subsidies in oil and gas exporting countries[☆]

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ABSTRACT

This paper investigates the implicit subsidization of refined products in oil and gas exporting countries. Most of these countries, as well as some other countries (mostly developing countries, but one could argue that US gasoline prices do not account for external costs), distribute large subsidies. Subsidies that are offered for a long period, are not only inefficient, but also dangerous due to gradual increases in the energy demand. Low domestic prices have led to immense oil demand growth that cannot continue if these countries wish to continue exporting. Only very high price jumps can stop this development, but politically these price jumps are very costly, if not suicidal, for many governments. Indeed, we argue that the currently low oil prices not only harm oil and gas exporting countries, but also provide a unique opportunity to eliminate this costly subsidy policy at manageable political costs. This paper begins with theoretical, normative and positive explanations of low domestic energy prices, and then addresses how to phase out subsidies, again from a normative and positive perspective. Finally, we empirically address the obstacles that individual countries may face when attempting to eliminate subsidies by quantifying the factors (political, economic, and social) that influence the existing subsidies.

1. Introduction

Imagine that oil and gas exporting countries had eliminated subsidies in the first half of 2008 (with prices up to \$140 per barrel) or even later between 2010 and 2013, when domestic prices were very low, and some countries (e.g., Saudi Arabia) even lowered the domestic price of gasoline. The price jumps would have had to be very large. A consequence of this history of low refined product prices is that a few Persian Gulf countries became the most energy-intensive countries (both per capita and per unit GDP), far ahead of industrialized (and thus energy-intensive) economies, such as the US or the countries of the EU. Furthermore, low domestic prices have created enormous oil demand growth that cannot continue if these countries want to keep exporting. Fig. 1 plots the oil demand in oil-exporting countries, and Fig. 2 illustrates the energy intensities. The historical trend shows a constant increase in domestic oil consumption in the major oil-exporting countries. Among all, Saudi Arabia, Russia and Iran are the three largest oil consumers.

Comparing Figs. 2a and 2b reveals the following findings:

1. Oil-exporting countries fall into two groups; those with low¹ and

- high² energy intensities (energy consumption divided by the GDP).
2. The energy intensity in Iraq has considerably decreased following economic recovery after the domestic war. Additionally, the energy intensity has substantially increased in Venezuela, and this increase was associated with national violence and a substantial decrease in economic growth.
3. In oil-exporting countries with the exceptions of Ecuador and Angola, which are less dependent on oil revenues, energy intensities are highly sensitive to oil prices, which, in turn, considerably affect the GDPs in these countries.
4. On average the energy intensity has constantly increased in oil-exporting countries.
5. The energy intensity has remarkably decreased in Qatar and Russia. The decreases in these countries are associated with economic growth, the development of energy efficiency targets, fossil fuel subsidy (FFS) reform, and legal frameworks.

Therefore, considering this waste of energy, the low oil prices that have predominated since January 2015, not only harm oil exporters, but also provide their policy makers (as well as those in other countries that subsidize fuels for various reasons) with a “golden opportunity” to

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¹ The energy intensity was less than 250 toe/real million US\$.

² The energy intensity was above than 300 toe/real million US\$.

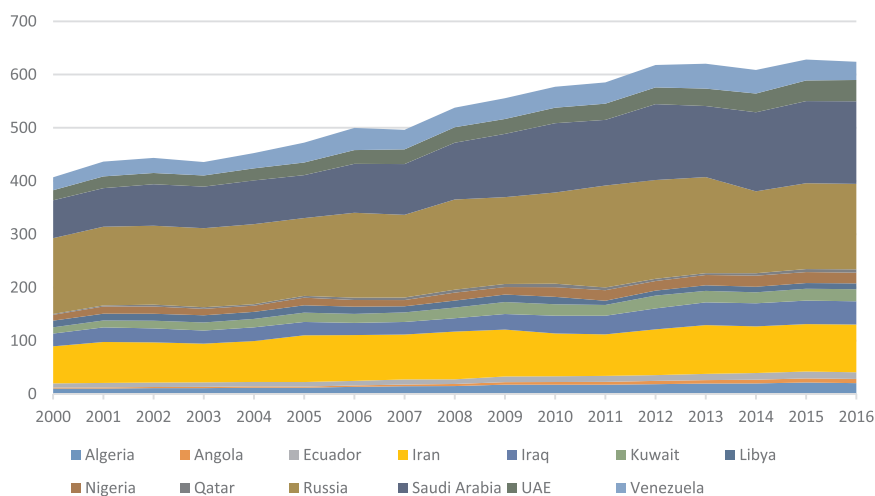


Fig. 1. Oil consumption in major oil-exporting countries (Mtoe).

Source: IEA annual energy statistics (2017)

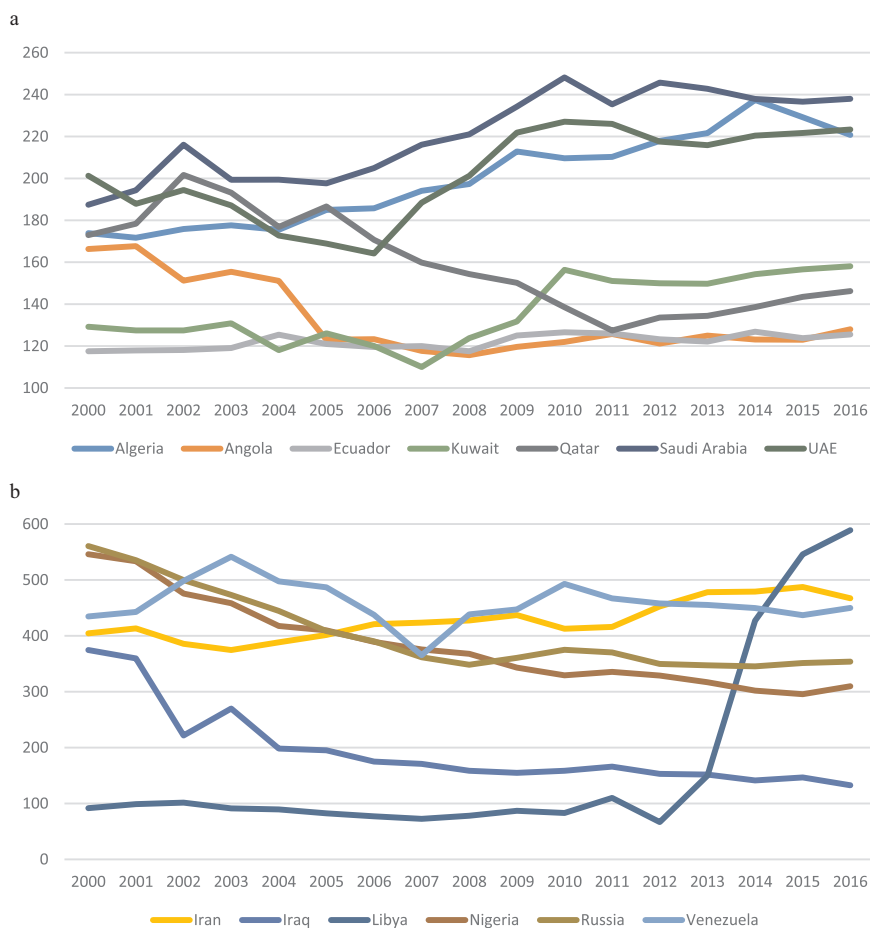


Fig. 2. a. Energy intensities of GDP- low energy intensity group (toe/real million US\$). b. Energy intensities of GDP- high energy intensity group (toe/real million US\$). Note: Base year is 2016. For better illustration Iraq has been considered in this group.

Source: Calculated by Authors

eliminate or at least lower their energy subsidies. These countries annually spend billions of dollars on FFSs without considering the environmental and economic consequences that this practice generates. For instances, according to the IEA Annual Energy Statistics (2017), Iran, Saudi Arabia, and Russia only in 2015 spent \$52.4, \$48.6, and \$30.3 billion, respectively in fossil fuel consumption subsidies.

Evidence, e.g., demonstrations and public unrest in Indonesia,

Venezuela, Jordan and Egypt when governments tried to cut subsidies (it was a hot topic during the recent elections in Malaysia but in the direction of re-introducing subsidies), highlights that removing subsidies is hard task for policy makers.

Given the importance of this issue, this paper attempts to identify the determining factors of implicit FFSs in selected oil and gas exporting countries, many of which are currently suffering from fiscal deficits and

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