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CASE STUDY

Energy subsidies in the Middle East and North Africa

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ABSTRACT

The policy of maintaining tight control of domestic energy prices has been widely spread in the Middle East and North Africa. Energy subsidies that keep domestic energy prices below market prices serve as a strategic tool to promote industrialization and diversification, to protect the income of citizens, and to distribute state benefits to the population. However, whilst they may be seen as achieving some of these objectives, this paper argues they do so in a costly and highly inefficient way. Energy subsidies distort price signals and lead to a systemic misallocation of resources. They also tend to be regressive, and the mounting fiscal burden they cause makes them increasingly unsustainable from a budgetary point of view. For this reason, a reform of energy pricing is in many MENA countries increasingly unavoidable – despite being a politically and economically delicate task. The diversity of MENA suggests that no single reform agenda will fit all countries in the region equally.

1. Introduction

The essential role played in economic and social development by the various types of primary fuel and electricity provides many governments with several arguments in favour of subsidizing energy prices and maintaining a tight control of the domestic energy sector. Low energy prices, particularly for electricity and petroleum products, help the lowest income groups gain access to modern forms of energy. Furthermore, they help governments protect the incomes of citizens, especially those in the lowest parts of the income distribution, thus contributing to poverty alleviation. Maintaining control of energy prices could also help offset commodity price fluctuations and smooth consumption against wide price fluctuations in international markets. In many resource-rich countries, low energy prices are used as a tool to distribute state benefits to the population without the need for extensive administrative capabilities. They are also used to promote industrialization and diversification aimed at generating employment opportunities and enhancing an economy's global competitiveness. Finally, controlling energy prices is often considered as an important tool for macroeconomic management, especially to control inflation.

Whilst energy subsidies in the MENA may be seen as achieving some of their intended positive objectives, we argue in this paper that they do so in a costly, highly inefficient and unsustainable manner. Energy subsidies distort pricing signals and result in misallocation of resources preventing the country from optimizing the use of its resources. They can lead to underinvestment in some of the region's energy sectors, to fuel shortages and encourage large-scale cross-border fuel smuggling. Although energy subsidies constitute an important social safety net for the poor, they are regressive in nature because in many instances richer households tend to capture the bulk of subsidies. Furthermore, in many cases, fuel subsidies can remove substantial resources from 'pro-poor' sectors such as health and education, and from social and infrastructure projects that are more beneficial to households in low-income brackets. Energy subsidies have also negative environmental impacts by encouraging wasteful consumption of fossil fuels. Perhaps most visibly in recent years, the mounting burden of fuel and electricity subsidies has rendered energy subsidies unsustainable in budgetary terms.

In the following section, we examine more closely what energy subsidies entail and how they are financed (Section 2.1), how far they are spread across the MENA region (Section 2.2), and how they adversely affect the MENA economies (Section 2.3). In Section 3, we discuss some of the options MENA countries will face in the coming years in view of a reform of domestic energy pricing mechanisms.

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2. Energy subsidies in the MENA

Energy subsidies are a diffuse concept [10]. Their definition and measurement remain contested by various sides, which is evident in the continued inability of major international organizations such as World Bank, the IEA and OPEC to agree on common terms.[2] In this paper, we follow De Moor and Calamai in their narrow definition of a subsidy as '*any measure that keeps prices for consumers below the market level or keeps prices for producers above the market level or that reduces costs for consumers and producers by giving direct or indirect support*' [13, p. 1].

2.1. Issues of measuring and financing energy subsidies in the MENA economies

It is clear from the above definition that many governments' actions can be categorized as involving assistance, including cash subsidies, credit subsidies, tax subsidies, procurement subsidies, and in-kind subsidies. Some of these are *on-budget*, or *explicit subsidies* that constitute explicit transfers made by the government to either the producer or the consumer receiving the subsidy, registered on the state's budget. For instance, a government may mandate that a public utility set the selling price below the cost of production. The government then finances the public utility's losses by transferring funds from the budget.[3] For net energy importers, these funds can be secured by cutting government expenditure in other areas, increasing direct or indirect taxes, and/or by borrowing in local or international markets.

Energy subsidies can also be cross-financed between different energy user groups. *Cross-subsidies* occur when tariffs below the cost of production are charged, for instance, to household users, and the revenue shortfall is offset by increasing industrial/commercial sector tariffs to above-cost levels. Other types of cross subsidies are found in uniform national pricing systems, when a single tariff structure is applied to consumers whatever their location (urban, rural, etc.) or when utility companies raise tariffs to recover lost revenues from non-paying customers. Countries such as Lebanon, Yemen, Egypt, Libya and Syria all charge their industrial customers considerably higher electricity prices than residential customers, suggesting some form of cross-subsidization from the former group to the latter. Since in all these countries public utilities do not recover their costs, this form of cross-subsidization is nevertheless imperfect, and does not prevent the sector from systemic loss-making.

Implicit subsidies are less transparent and more difficult to calculate. They typically occur in oil and gas exporting countries, where mostly state-owned oil and gas companies produce, refine and market petroleum products. For instance, the national oil company can be mandated to sell petroleum products for the domestic market at below international prices but above production costs. In this case, the national oil company does not incur financial losses, and hence the government does not need to make an explicit transfer to compensate the national oil company for losses. The implicit subsidy represents the *opportunity cost*, i.e. the economic rent/revenue wasted by failing to sell oil at higher market prices; it involves a transfer from the government to the final consumers without such a transfer appearing explicitly on state oil companies' records or in the government budget. If this foregone revenue had been collected, it could have been used by the government in a variety of ways — for instance to reduce the budget deficit and the size of the public debt; to increase spending in more productive areas such as infrastructure, education, and health; to distribute it directly to its people; or to reduce, where applicable, taxation [21]. Implicit subsidies also create important domestic pricing signals, for instance favouring energy-intensive industrialization strategies; and reducing the marginal private cost of energy for individuals, in the same way as explicit subsidies do, hence influencing economic agents' energy consumption patterns.

The governments of many oil and gas producers would dispute that the opportunity cost is the appropriate benchmark with which to compare domestic prices. Instead, they suggest the use of the *long run marginal cost (LRMC) of production* as an appropriate benchmark for the pricing of domestically produced goods and services. Therefore, as long as producers charge their domestic clients a price above the LRMC, no subsidy occurs. This viewpoint is seen by some as legally consistent with the definition used by the World Trade Organization (WTO), which considers subsidies a financial contribution by a government or any public body within the territory of a Member which confers a benefit [40]. Based on this definition, some analysts argue that as long as the price charged to consumers is not below production costs, then it is difficult 'to justify that a benefit had been conferred to domestic producers' [12].

2.2. The prevalence of energy subsidies in the MENA

The IEA provides some basic statistics regarding the spread of energy subsidization practices around the world. Their measurement is by nature incomplete and sketchy, given the many caveats in defining and measuring subsidies. Based on the price-gap approach, their subsidzation rates provide a basic measure of the price gap between domestic prices for fossil fuels and their price in international markets.[4] Fig. 1 below shows the size of the subsidies based on this measure. MENA countries are among the largest subsidizers of energy in the world. Seven of the IEA's list of the ten largest subsidizers in 2010 are found in the MENA region, led by Kuwait, Iran, Saudi Arabia, and Qatar. Each of these four countries in 2010 charged their populations less than a third of international prices for fuel and electricity.

The effect of subsidies on MENA fuel prices can be illustrated by a cross-country comparison of average retail prices for gasoline and diesel (see Fig. 2). Prices for fuel in the sample for 2010 were lowest in the Gulf countries, with Iran holding the record of charging the world's lowest petrol and diesel prices. Iran has since 2010 undergone a far-reaching energy pricing reform which aims to eventually bring all domestic energy prices in line with their production cost (electricity) and their international prices (oil, oil products and natural gas).[5] Considerable variance between gasoline and diesel prices exists in some of the Mashreq countries (Syria, Jordan, and Lebanon) and North Africa (Tunisia, Morocco), where diesel is often used in agriculture and in domestic power generation. If compared with a most basic indicator of cost (an average world crude oil price of 30 US cents/litre in 2010) it is clear that most MENA oil producers charge domestic users below the opportunity cost price of crude oil sold on international markets — a substantial loss in terms of foregone export revenue. Countries such as Egypt and Yemen which are

[2] A joint report by IEA/OPEC/OECD/World Bank for the 2010 G-20 Summit in Toronto notes the existence of a major disagreement among international organizations concerning the choice of the reference price, and consequently 'a commonly agreed definition of subsidies has proven a major challenge in the G-20 context and countries have decided to adopt their own definition of energy subsidies'. IEA, OPEC, OECD, and World Bank (2010) [24, p. 8].

[3] In many countries' budget records, this concept underlies their measure of subsidies in the economy, e.g. in the case of Egypt.

[4] The price-gap approach constitutes the most commonly used method for calculating subsidies due to its simplicity. It compares the observed price for a good or a service against a certain benchmark or reference price, in the IEA's case an international benchmark price. As discussed above, organizations such as OPEC dispute the validity of this type of benchmark and suggest the more appropriate benchmark to use for oil and gas producers would be their respective marginal cost of production. IEA, OPEC, OECD and World Bank (2010) [24, p. 8].

[5] For a detailed discussion of the Iranian subsidy reform, see Refs. [20,33]. See also Section 3.