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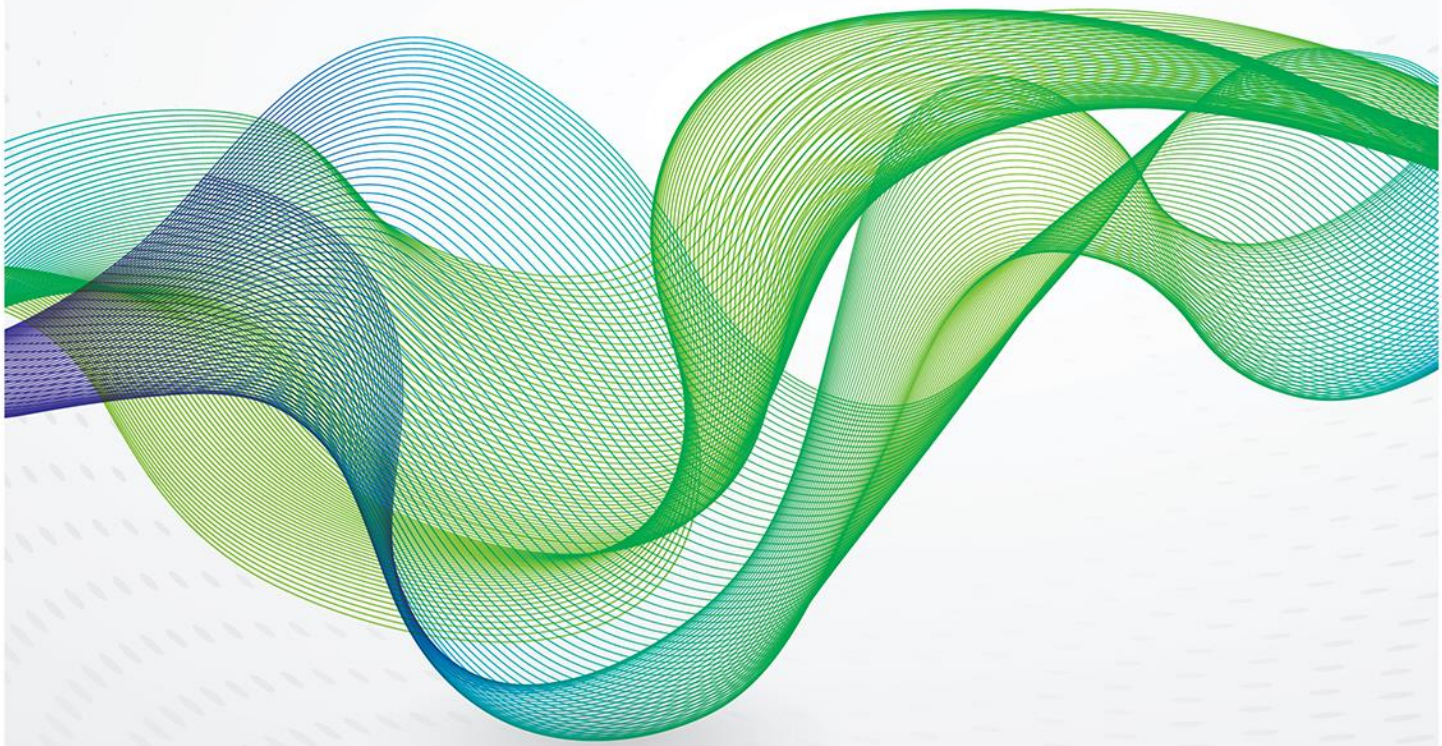
A Brief Political Economy of Energy Subsidies in the Middle East and North Africa



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Abstract

Energy subsidies are among the most pervasive, and most controversial fiscal policy tools in the Middle East and North Africa (MENA). In a region with few functioning social welfare systems, subsidized energy prices continue to form an important social safety net, albeit a highly costly and inefficient one. In the MENA region's oil and gas producers, low energy prices have also historically formed an important element of an unwritten social contract, where governments extracted their countries' hydrocarbon riches in return for citizens' participation in sharing resource rents. While it is clear that energy subsidy reform will not be the only variable at play, its potential socio-economic dividends are important factors enabling some common regional objectives – sustainable fiscal policy, fiscal space to invest in key areas, and a more efficient and equitable distribution of scarce resources – to be achieved, helping to promote a more stable political status quo in the long term. If accommodated by effective mitigation measures, reforming energy subsidies in the MENA region's middle-income economies could be a powerful tool for governments – addressing those very profound socio-economic grievances that have contributed to the outbreak of political protest. In this paper, we look at some of the MENA region's potential avenues into reform. While the past has demonstrated the political difficulty of reforming energy prices, recent experience also shows that the reform of energy subsidies can be done, if accompanied by a set of enabling factors.

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1. Introduction

Energy subsidies are among the most pervasive, and most controversial fiscal policy tools in the Middle East and North Africa (MENA). Among their original objectives, protecting the income of low-income households and fostering domestic industrial growth, continue to render their reform difficult, from a political, economic, and social perspective. In a region with few functioning social welfare systems, subsidized energy prices continue to form an important social safety net, albeit a highly costly and inefficient one. In the MENA region's oil and gas producers, low energy prices have also historically formed an important element of an unwritten social contract, where governments extracted their countries' hydrocarbon riches in return for citizens' participation in sharing resource rents – through direct state transfers and social welfare benefits (including free health and education), and the provision of low-cost domestic energy, see for instance, El-Katiri et al. (2011).

The four years and more since protests erupted in Tunisia in December 2010, and the widespread regional unrest later summarized under the popularized term the 'Arab Spring', has placed the issue of greater socio-economic justice at the heart of MENA politics. Energy subsidies play a crucial role; widely perceived as being a fundamental economic and social benefit, they have placed huge pressure on government finances, undermining the fiscal sustainability of many of the region's lower middle-income countries. While the MENA region's large oil and gas producers face much less immediate fiscal pressure to reform their domestic pricing frameworks, rationalization of their domestic energy consumption will become increasingly important in the future, as their continued reliance on resource export revenues ties the policies affecting their domestic consumption patterns to their long-term fiscal, and hence political, stability. Furthermore, the recent fall in the oil price, if it persists, will increase the urgency to adjust spending patterns and reform energy subsidies.

While it is clear that energy subsidy reform will not be the only variable at play, its potential socio-economic dividends are important factors enabling some common regional objectives – sustainable fiscal policy, fiscal space to invest in key areas (education, health and social welfare) and a more efficient and equitable distribution of scarce resources – to be achieved, helping to promote a more stable political status quo in the long term. If accommodated by effective mitigation measures, energy subsidy reform in the MENA region's middle-income economies could be a powerful government tool, which could address those very profound socio-economic grievances that have contributed to the outbreak of political protest. For the net oil importers in the region, the recent fall in the oil price has the effect of reducing their energy import bills and easing the pressure on public finances, providing governments with an opportunity to start and accelerate energy pricing reforms.

In this chapter, we look at some of the MENA region's potential avenues into reform. While the past has demonstrated the political difficulty of reforming energy prices, recent experience in several MENA economies also shows that the reform of energy subsidies can be implemented, if accompanied by a set of enabling factors. The rest of the paper proceeds as follows: Section 2 provides a brief background on energy subsidies in the MENA region; Section 3 looks at some of the reform experience in the region; Section 4 concludes.

2. A brief background on energy subsidies

Issues in measuring energy subsidies

There is no commonly agreed definition of what constitutes a subsidy and its measurement remains problematic, which is evident in the continued inability of major international organizations such as the World Bank, the UNDP, and OPEC to agree on common terms.[1] A widely used definition is that of de Moor and Calamai, which defines 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' (de Moor and Calamai, 1997).

It is clear from the above definition that many governments' actions can be categorized as involving assistance, including subsidies (in-kind, cash or credit, or relating to tax or procurement). 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 general budget.[2]

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. 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.[3]

Implicit subsidies are less transparent and more difficult to calculate. They typically occur in oil and gas producing 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 it for losses. The implicit subsidy represents the *opportunity cost* (the economic rent/revenue wasted by failing to sell oil at higher market prices); this entails 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 such as: reducing the budget deficit and the size of the public debt; increasing expenditure in more productive areas such as infrastructure, education, and health; distributing it directly to its people through cash transfers; or reducing, where applicable, taxation (Gupta et al., 2003). Implicit subsidies also create important domestic pricing signals – for instance favouring energy-intensive industrialization strategies or reducing the marginal private cost of energy for individuals – in the same way as explicit subsidies do, hence influencing economic agents' energy consumption patterns.

Based on the price-gap approach – which measures the gap between the subsidized price and a

[1] IEA/OPEC/OECD/World Bank (2010) 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'.

[2] The budget records of many countries (such as Egypt) show how this concept underlies the measure of subsidies in the economy.

[3] 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.

benchmark price to reflect the opportunity cost, defined as the supply cost of an energy product (including transport and distribution costs) – a recent IMF report estimates pre-tax energy subsidies in the MENA region as having reached USD237 billion in 2011, equivalent to 48 per cent of world subsidies, 8.6 per cent of regional GDP, and 22 per cent of government revenue (Sdralevich et al., 2014). These figures, however, should be treated with caution given the many caveats in using the price-gap approach in some contexts. Issues such as the production of joint products (for instance crude oil, natural gas, and NGLs), the availability of spare capacity in some Arab producing countries (mainly in Saudi Arabia), and the ability of key Arab oil exporters to influence international oil prices could affect the measurement of subsidies.[4]

Many oil and gas producers would dispute that the opportunity cost is the appropriate benchmark with which to compare domestic prices; they would argue that as long as producers charge their domestic clients a price above the cost, no subsidy occurs. Some see this viewpoint as 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 (SCM Agreement, no date). Based on this definition, some 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' (Dargin, 2010).

Energy subsidies and MENA fiscal stability

As evident progressively throughout the 2000s, energy subsidies constitute a significant fiscal burden. With rising world market prices for oil and natural gas since the early 2000s, the MENA region's parallel surge in domestic demand has translated into a rapid growth in fiscal expenditure on energy subsidies in importing countries such as Morocco, Egypt, Jordan, Syria, and Lebanon. Egypt's expenditure on energy subsidies reached a staggering EGP143.7 billion (close to USD21 billion) in the financial year 2013/14 – a figure representing 19.5 per cent of total government spending, or almost the entire value of aid received by Egypt from Middle Eastern donors since mid-2012.[5] Morocco's energy subsidy bill at its peak in 2012 had become 'almost the size of the overall fiscal deficit, as much as spending on investment, and more than the spending on health and education combined' according to IMF figures. An initial round of energy price rises then reduced the cost of subsidies by nearly half to – still – around USD4.1 billion or 10 per cent of government spending in 2013 (MEES, 2014f). Yemen's energy subsidy bill for 2013/14 was most recently estimated at around USD3.5 billion, a third of government expenditure and in excess of the country's budgeted deficit of USD3.2 billion in the fiscal year (MEES, 2014h; Ghobari and El Gamal, 2014). The recent fall in the oil price provides a welcome relief for these oil importers, but such relief could prove temporary, given that the trajectory of oil prices remains highly uncertain.

A parallel problem related to current energy pricing in oil and gas producers – including net-importers of some fuels such as Egypt – is the medium- and long-term effect current pricing policies have on their own domestic production, and hence on future revenue stream. Low domestic energy prices in many oil and gas producers are a poor incentive for independent oil and gas companies to invest in new exploration and upstream development projects, particularly those projects that feed into a producing

[4] A recent report notes that 'the price-gap method has limitations which apply particularly in the case of countries with large endowments of energy resources', (IEA/OPEC/OECD/World Bank, 2010).

[5] MEES (2014a); authors' estimates of Gulf and Turkish aid paid to Egypt since the beginning of the Morsi regime until February 2014 (around USD24.5bn). It is important to note that in measuring energy subsidies, Egypt only considers the actual expenditure on subsidies and not the opportunity cost. Based on the opportunity cost, the size of the subsidy will be much higher.

country's low-cost domestic market. Natural gas is the energy source most affected by domestic pricing policies – reflected in the fiscal terms offered to investing oil and gas companies. Its development has hence lagged decades behind the Middle East's massive gas resource endowment. Poor fiscal terms on offer across the region's oil and gas producers, partly as a result of government's inability or unwillingness to provide more generous fiscal terms, undermines the long-term supply potential of the region – increasingly significant as a larger proportion of Middle East oil and gas becomes more expensive to produce.

The MENA economies' exceptionally high reliance on oil and natural gas – tradable fossil fuels whose world market prices fluctuate highly– has also made the region highly vulnerable to international commodity cycles. Energy subsidies have also been shown to be strong, pro-cyclical destabilizers in oil and gas-importing countries across the MENA, as government spending on subsidies increases during economic boom times along with rising demand, and declines as economic activity falls (Sdralevich et al., 2014, pp.21–22; IMF, 2013, pp.37–40). The positive correlation between growth and global oil prices in many MENA countries further amplifies this effect (Sdralevich et al., 2014). Several studies have demonstrated the negative consequences of pro-cyclical spending in developing economies (Lane, 2003; Abdih et al., 2010; Kaminsky et al. 2004; Erbil, 2011), including the effect of commodity cycles on political stability over the medium and long term.[6]

Energy subsidies and social equity

The widespread use of energy subsidies in developing countries continues to be widely defended on the basis of social safety and ensuring energy access. However, energy subsidies are largely inequitable as they naturally accrue most to the largest users – energy-intensive industries, and medium- to high-income households.[7] Petroleum product subsidies in particular benefit primarily the urban middle class, and households that can afford a car. In a recent study, the IMF found that the poorest quintile in Egypt, Jordan, Mauritania, Morocco, and Yemen receives only about 1–7 per cent of total diesel subsidies, while the richest quintile received subsidies of 42–77 per cent of the total. In Egypt, the poorest 40 per cent of the population receives only 3 per cent of direct gasoline subsidies, 7 per cent of natural gas subsidies, and 10 per cent of diesel subsidies (Sdralevich et al., 2014).

Energy subsidies, much of which leak to higher income groups and industries, could otherwise have been invested into channels – free public health and education, infrastructure improvements, or alternative tax reductions for small and medium-sized businesses – that would benefit all members of society. All these would provide substantially higher social and economic returns than perceived citizens' benefits bound to energy consumption. Separate funds could have been spent targeting low-income households more effectively, for instance, through comprehensive social safety nets. The size of energy subsidies in some MENA countries relative to other forms of expenditure is staggering.[8] In Egypt, total government expenditure on energy subsidies in 2008 equalled its combined expenditure on health and education, as did fuel subsidies in Jordan prior to the country's 2008 reform of fuel prices. Yemen's budgeted expenditure on fuel subsidies in 2008 amounted to more than 34 per cent of total

[6] E.g. Collier and Hoeffler (1998).

[7] This also, where applicable, relates to natural gas/LPG. Kerosene, by contrast, tends to be proportionately consumed most by lower-income households, although substantial leakages exist to higher income groups. See e.g. Alderman (2002); Clements et al. (2003); Coady et al. (2006); Hope and Singh (1995).

[8] The IMF reports that in about half of MENA countries, total pre-tax energy subsidies were higher than capital spending in 2011. In all oil exporters, total pre-tax energy subsidies exceeded spending on education and on health, while in Egypt, Jordan, and Lebanon spending on total pre-tax energy subsidies was higher than spending on capital, health, or education. In 2008 Egypt spent 11.93% of gross annual expenditure on education, 5.94% on health, and an estimated 17.85% on fuel subsidies. Fattouh and El-Katiri (2012b).

government expenditure – more than one and a half times its expenditure on education and health combined (Breisinger et al., 2011).

The widespread use of energy subsidies also affects the rate of investment in the energy sector in parts of the MENA; the quality of coverage of different energy services, including fuel supply and electricity, consequently affects social groups differently. Caps on government subsidies to be paid to producers, or flat payment subsidies, may often not fully compensate domestic oil/gas producers, refineries, importers and distributors, and electricity producers for their incurred losses, and may undermine the rate of return on their investment. By diverting funds away from state-owned enterprises and oil marketing companies and distributors, these companies will not be able to upgrade their internal capabilities, invest in new infrastructure, or shift to modern, cleaner, and more efficient technologies. The result is often the provision of low quality services to end users, most visibly in the region's electricity sectors.

Irregular services with recurring power outages have characterized electricity provision throughout wide parts of the MENA, typically in response to decade-long underinvestment in electricity generation and in transmission and distribution networks. In many parts of the Levant and the Gulf countries, this situation is further exacerbated by a culture of non-payment of utility bills by some parts of the population. Recurring blackouts, seen in recent years across many parts of the Levant, Iraq, Egypt, and perhaps most paradoxically several Gulf Cooperation Council (GCC) members (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates – UAE), are just one of the most visible consequences of lagging new investment and insufficient capacity across many parts of the MENA. These blackouts proportionally affect middle-income households and small businesses significantly more than any other energy user group. Long waiting times for new electricity connections for private households and businesses are often the consequence, resulting in annual losses in foregone business activity and backup costs for the economies concerned (World Bank, 2008).

For some of the poorest parts of the MENA, however, the consequences of underinvestment and lack of electricity grid access are staggering. Lack of electrification in remote areas is known primarily in Yemen and in some rural parts of Morocco. In Yemen, little more than half the population has access to electricity, as the chronically underfunded state utility has insufficient funds to invest in expanding the country's electricity grid and generation capacity (Breisinger et al., 2011; El-Katiri and Fattouh, 2011). Of those households with electricity access, which are entirely concentrated in the wealthier former North of the country, nearly 70 per cent are on lifeline rates, supposedly enabling electricity access for low-income households. Yemen's case painfully illustrates the highly regressive nature energy subsidies can assume.

Continued sharp price differences between fuels in neighbouring countries in the MENA, owing to different subsidy regimes, have also incentivized large-scale fuel smuggling across borders. Fuel smuggling has been of particular concern among neighbouring countries in the Levant, such as Syria, Jordan, and Lebanon; between Egypt and the Palestinian territories; across the closed borders between Algeria and Morocco and between Tunisia and Libya (resulting from the 2011 uprisings) (Algerie DZ, 2008; France 24, 2011); into and from Iraq and neighbouring countries; and from and to Yemen (Wahab, 2006; Ibrahim, 2011). Iran with (up to end-2010) some of the world's lowest prices for fuel, has suffered from endemic cross-border fuel smuggling to all its neighbours, a problem increasingly incurred by the wealthy Gulf states (Arab Times, 2011). Fuel smuggling not only contributes to illegal contraband trade at the expense of the domestic economy, but in many cases substantially exacerbates existing fuel shortages in subsidizing countries, as seen most recently in Yemen (MEES, 2014h; Ghobari and El Gamal, 2014).

Energy subsidies and domestic energy consumption

While high revenues and foreign assets currently shield many of the MENA region's larger oil and gas exporters in the short term, energy exporters face a longer-term challenge related to the way in which their current pricing policies affect their domestic energy consumption. The pivotal role played by national hydrocarbon resources in the modern-day development of many large MENA oil and gas producers has deeply affected the way energy features as a critical component in the citizen–state relationship (Luciani, 1987; El-Katiri, L., 2013a). The perceived abundance of energy resources, guaranteed by the state, has been enshrined into some of the world's lowest prices for fuel, natural gas, and electricity. These in-kind citizen benefits, which have also fuelled many oil producers' industrial expansion towards energy-intensive industries during the 1960s and 70s, are supplemented by often generous welfare systems that have become an effective element in these states' political stability over several decades.

Low domestic energy prices have also led to a surge in regional energy consumption – beyond such factors as economic and population growth. With regional energy consumption having more than quadrupled in less than 30 years (authors' calculations based on World Bank, 2014), the MENA region now counts as one of the world's fastest growing energy markets, and is forecast to become the second most important driving force of global energy demand after Asia in the period to 2040 (IEA, 2011; EIA, 2011). Saudi Arabia is already the world's twelfth largest energy consumer, and its sixth largest consumer of oil and natural gas, with oil consumption alone more than doubling over the past ten years (based on BP and EIA statistics). Other large regional oil and gas producers in the Gulf follow this pattern, albeit with smaller populations, and are leading the world's league tables in terms of per capita living standards.

The fiscal problems arising from current consumption patterns that remain tied to current pricing policies in the MENA's oil and gas producers in the long term relate to the way in which most of these states finance their spending. Many of these countries do not tax their domestic citizens, but finance themselves to an overwhelming extent on the basis of export revenues for their valuable oil and natural gas resources – the level of dependence ranges from around 60 per cent of total government revenues in Qatar to over 90 per cent in countries such as Libya, Iraq, Kuwait, and Saudi Arabia (Fattouh and El-Katiri, 2012a, p.13). This has also allowed the oil and gas-rich Gulf monarchies to avoid Arab Spring-style political upheaval through a further increase in the already generous welfare handouts (for background, see El-Katiri, L., 2013a; El-Katiri, M., 2013; Gause III, 2013). This modus operandi works as long as sufficient volumes of hydrocarbon exports are available. However, some studies have shown that under the business-as-usual scenario (where domestic demand keeps increasing at a robust pace and the GCC governments fail to diversify their economies) export capability could be eroded, leading to a collapse of the revenue base of these countries, with detrimental political consequences.[9] The recent fall in the oil price, if persists, will increase the urgency to adjust spending and reform energy subsidies.

The MENA region's low energy prices have also had many unintended consequences, including the very high and (countering trends virtually everywhere else in the world) rising energy intensity of MENA economies, meaning that more energy per unit of economic output is needed in these economies than

[9] Simulations of Saudi Arabia's domestic oil demand, such as those conducted by Chatham House and Citibank, show the potential for Saudi Arabia under a business-as-usual scenario to exhaust its own domestic reserve base in just 15–20 years, turning itself ultimately into a net importer of oil, unless alternative policy options are pursued. (Lahn and Stevens, 2011; Daya and El Baltaji, 2012). See also El-Katiri, L. (2013b).

anywhere else in the world.[10] This is partly because the concentration of economic activity around energy-intensive industries in oil producers in the MENA has diverted much investment from alternative economic sectors. However, the MENA economies' high energy intensity is also due to inefficiencies in energy use across the region.[11] A recent ABB study comparing energy efficiency rates in power generation across a range of countries globally shows that MENA energy producers, such as the UAE, Libya, and Saudi Arabia, are among the world's least energy-efficient countries in terms of domestic power generation (ABB, 2014). However, MENA's net-importers of energy, including Jordan, Lebanon, and Morocco, fare little better, comparing unfavourably to other developing economies, including those in Latin America. Similar conclusions apply to the region's rapidly growing transport sector, where average fuel consumption per vehicle across the Middle East is more than double the average prevailing in countries without fuel subsidies.[12]

Low energy prices for regionally produced oil and natural gas have also affected the composition of the MENA economies' domestic energy mix. While these economies have historically not faced the same incentives as consumer countries in Europe and North America to diversify their domestic energy mix away from fossil fuels (for domestic energy security reasons) they may well have overlooked the economic potential of energy alternatives, such as renewable energy sources and nuclear power, in the presence of some of the world's lowest domestic prices for fossil fuels (El-Katiri, 2014; El-Katiri and Husain, 2014). As a result, the MENA economies remain dependent on oil and natural gas for a staggering 95 per cent of their domestic energy needs, more than any other region in the world (El-Katiri (2014), based on World Bank (2014) data). Lacking diversity in domestic energy sources has left many MENA energy importers exceptionally exposed to commodity price cycles and to surging world market prices for oil and natural gas (discussed further below).

Recent evidence from Kuwait shows that a realignment of prices at, or closer to, the market price level confers a benefit on current and future generations of Kuwaitis (in terms of fiscal savings) that outweighs the impact of raising electricity and water consumer prices to market price levels (Fattouh and Mahadeva, 2014). Such studies also underline the tremendous potential for economic savings to be made, including through the reduction in deadweight loss.[13]

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[10] Total primary energy consumption per dollar of GDP (an indicator of energy intensity) over the past three decades has declined in all parts of the world, with the exception of the MENA. Energy intensity growth rates in several MENA economies, including the UAE, Saudi Arabia, and Oman, have risen particularly fast, and more than tripled in the UAE and Saudi Arabia since 1980. This growth is not a Gulf phenomenon alone, however; energy intensity in several other economies, such as Jordan, Egypt, and Syria, also increased by more than a third over the same period of time. Several Mashreq economies such as Egypt and Jordan, whose industries are generally less energy intensive, still require over 40% more energy per unit of economic output than some of the world's less energy-intensive economies such as Denmark or Spain. Fattouh and El-Katiri (2013).

[11] In a recent article, Prince Abdulaziz Bin Salman Al-Saud argues that 'Although this growth in demand is partially attributed to the industrial growth and growing economic prosperity in the Kingdom, a rather significant portion of it results from the inefficient use of energy; deeming this accelerated growth unsustainable. Whereas the vast majority of countries have managed to lower the energy intensity of their economies, the Kingdom's energy intensity increased significantly over the last two decades. Hence, it is a strategic imperative for the Kingdom that energy efficiency becomes a major topic for all decisions related to an increase in demand for fuel and feedstock'. Al-Saud, Prince Abdulaziz Bin Salman (2014).

[12] Notably, the Middle East region in this context includes Iran, which until 2010 was widely cited as the single largest subsidizer of domestic fuels in the world. (Bressand et al., 2007).

[13] See Fattouh and Mahadeva (2014). The authors show that in the market price scenario with consumer prices at about ten times current levels, there is a total fiscal cost of about a third of the value of fuel input used in the power sector (or about 1.5% of GDP), entirely due to the cash transfer. This, however, is just less than a fifth of the fiscal cost of the current low-price regime, and in principle represents a massive saving. The net benefit of moving to market prices is 6.3% of GDP.

3. Reforming energy subsidies in the MENA

Although energy subsidies are an inefficient and regressive distribution method, their reduction or elimination is a delicate economic and political task that requires considerable skill and political will. This is because, without appropriate compensatory programmes, energy price increases following reform will impact real incomes and lead to a decline in households' welfare. The effect on households of removing energy subsidies can be felt both directly, through higher prices of consumed energy (electricity and household fuels), and indirectly, through higher prices for other consumer goods that use energy as an intermediate input (transportation, food, and other consumer goods). (Del Granado et al., 2010). This is not only problematic for low income groups (unmitigated price rises often imply increased poverty), but also for the MENA region's aspiring middle class. Energy pricing reform can also affect the competitiveness of domestic industries and firms – a particular concern for the region's large oil and gas producers, whose domestic industries, mainly petrochemicals, have historically been built around the competitive advantage of low-cost energy.

The economic lock-in effect of energy subsidies in MENA countries is further reinforced by strong coalition-building by groups who benefit from current pricing systems – particularly industrial groups, but also members of current socio-political elites, who tend to have little interest in supporting public spending reforms which are sufficiently comprehensive to make domestic energy subsidy reforms. The Arab Spring affected the region's political climate, deterring meaningful reform of domestic energy pricing policies across the MENA region (due to widespread government concern that the fear of rising living costs, associated with subsidy reform, could stir up further popular discontent). Nevertheless, reform efforts have become much more common in the MENA than expected, providing a wealth of experience around the 'how and when' of regional subsidy reform (Sdralevich et al., 2014, pp.44–55).

Gradual reform efforts in the Levant and North Africa

Fear of incitement of a popular backlash has also kept MENA countries that were largely unaffected by Arab Spring-style unrest cautious of energy pricing reform. In 2011 Morocco and Jordan (both IMF debtors who, in the late 2000s, initiated tentative reforms to reduce domestic energy subsidies) decisively rolled back further reforms following the ousting of the Tunisian and Egyptian presidency and the outbreak of political protest across many other parts of the region. In an unexpected gesture of cross-regional solidarity between Arab monarchies, the wealthy GCC states extended an invitation to the kingdoms of Morocco and Jordan to join the club of Gulf monarchs, who subsequently increased the level of cash sent to both countries in the form of advantageous loans and unconditioned development aid. This helped both countries initially withstand calls from international lending organizations for further fiscal reforms (MEES, 2011; MEES, 2012a; MEES, 2013**;** MEES, 2014e)**.**

A year on from the Arab Spring, however, domestic energy subsidy reform returned to the agenda of several North African and Levantine energy importers. Jordan had made several attempts to reform domestic prices for food and energy – in 2008 its government announced a programme of domestic energy price liberalization. However, the reform stalled and was reversed in January 2011, when the government decided to cut food and fuel prices in response to political protests seen in neighbouring countries. Jordan's rapidly rising fuel imports – partly in response to declining gas imports from Egypt, which has struggled to supply its domestic market – subsequently contributed to a sky-rocketing energy subsidy bill, which reached 40 per cent of total government spending. Eventually, facing limited space for manoeuvre, the Jordanian government was forced to curb public spending significantly – including fuel subsidies – as part of a USD2.05 billion standby arrangement by the IMF; one aim of this arrangement was to help the kingdom recover from the economic strains associated with the mass inflow of Syrian refugees which resulted from the political crisis in neighbouring Syria (MEES, 2012c).

Jordan's November 2012 decision to gradually lift all petroleum product subsidies – later followed by the lifting of LPG and electricity subsidies – was painful, and faced considerable opposition both in parliament and on Amman's streets. Street chants denouncing the Jordanian King led to a series of confrontations between protesters and the police. Withstanding this initial opposition, Jordan has since progressed with its reforms, following a gradual drying-up of popular opposition to reforms. Part of the government's response was a series of television and newspaper interviews underlining the government's need to reduce the burden of subsidies or otherwise 'face catastrophe and insolvency'.[14] In an effort to mitigate the effects of fuel price increases on Jordanian families, the government announced that within a week of the reform, poor Jordanian households below an annual household income of JOD10,000 (USD14,100) would receive a direct cash handout of JOD70 (USD99).

Morocco's decision to freeze energy prices in 2011, in response to popular protests elsewhere as well as (in small numbers and for a short period of time) its own streets, faced the country with a ballooning energy subsidy bill out of all proportion to any other form of expenditure by mid-2012. Agreeing with the IMF to reduce the fiscal burden of subsidies in return for a USD6.2 billion IMF Precautionary and Liquidity Line in August 2012, Morocco announced far-reaching domestic pricing reform for petroleum products between late-2013 and early 2014. Morocco's case is interesting as it is one of the few MENA countries that not only raised prices for domestic fuel products, but actually linked them on a permanent basis to international prices. A small, pre-determined subsidy remains in place for oil products, above and below which market prices determine the price for final customers. Price adjustments are made twice monthly by the Ministry of General Affairs and Governance, outside the reach of the Ministries of Energy and of Electricity. For the law governing this arrangement see: Royaume du Maroc (2013).

In order to avoid any political backlash from the reform effort (having faced mass popular protests during the 1980s when it attempted to raise prices for basic foodstuffs), Morocco implemented a comprehensive and well-orchestrated communication strategy to accompany the reform. This included public TV and radio discussions, newspaper articles, advertisements, and debates explaining in remarkable and easily understood detail the economic reasons for the reform of prices, the different reform steps, the reason for linking prices to a regularly reviewed international price index, and the multiple benefits of reform on society as a whole[15] (including the availability of more money for investment elsewhere[16]). The government also assured the population of remaining benefits: electricity prices, already amongst the region's highest, initially remained unchanged and non-flexible, but were increased in July 2014 (nearly a year after the indexation system started) as part of the government's restructuring of the *Office National de l'Electricité* (ONE); while LPG, used primarily as a cooking and heating fuel in Moroccan households, remains heavily subsidized.

The reform clearly targeted those people who, supposedly, could afford higher prices: industrial consumers, factories, and car drivers. Finally, the government emphasized that price indexation offered a fair deal on both sides: prices could increase, but would also fall when international prices decreased. The Moroccan reform effort was not met with public outcry, and subsequently went largely unnoticed by international media. Key to enabling this notable success has been two consecutive governments

[14] Prime Minister 'Abd Allah al-Nusur said 'if the move was delayed we would have faced a catastrophe and insolvency.' MEES (2012c).

[15] For an example of how the French-speaking urban middle classes were targeted, see Agueniou (2013).

[16] A study of some past Moroccan publications aimed at younger audiences illustrates the government's line of argument. In *Jeune Afrique*, Ahmed Lahlimi, head of Morocco's High Planning Commission, named the volume of petroleum product subsidies across several North and sub-Saharan African countries, concluding 'C'est effectivement problématique car cela représente autant d'investissements en moins pour le pays.' (['These sums of expenditure on fuel subsidies] are highly problematic since they represent foregone investment' in French) Ballong (2010).

which, despite varying party interest, were willing and able to build necessary coalitions to enact the price increases, despite opposing views within their own ranks. The country's moderate Islamic party *Parti de la justice et du développement* (PJD) has notably been instrumental in rallying support for the reform, both within government and among the population. Morocco's total subsidies – including food – that had peaked in 2012 at 6.6 per cent of GDP, fell to around 3.9 per cent of GDP in 2013 (Verme et al., 2014).

Yemen's failed reform efforts

Yemen illustrates the reverse case, of largely failed domestic pricing reform efforts over several years. By the end-2000s, subsidies for liquid fuels, LPG, and electricity had usurped around a third of state spending, more than the country's combined spending on health and education (Fattouh and El-Katiri, 2012). Yemen's subsidies overwhelmingly benefited the country's urban upper and middle classes; these have access to transport, energy, and infrastructure links. Around half the country (primarily the former South and the geographically remote provinces across Yemen's northern borders) lacks infrastructure, formal price-controlled markets, and the ability to access the country's electricity grid.[17] Yemen's severely deteriorating domestic security situation since the early 2010s, prior to and following the onset of the Arab Spring, has led to a further deterioration of its finances. An increasing number of attacks on its oil and gas infrastructure has reduced the country's hydrocarbon exports, adding to pre-existing domestic fuel shortages (MEES, 2014i; Saeed, 2014; MEES, 2014g).

Having had to import rising volumes of fuel products to cover shortfalls in domestic production, fiscal pressure on Yemen reached unprecedented levels; in a hasty and ill-prepared reform effort in July 2014, the country was forced (under intense pressures from international lenders) to raise domestic energy prices. Amidst political turmoil, daily demonstrations in the streets of Sanaa, and continued violent conflict between tribal groups and the central government in several provinces (many of which remain isolated from any electricity or fuel supply) the government's decision to raise domestic energy prices was seen as a further failure by the state to provide for its citizens (Abdullah, 2014). Yemen's weak central state has subsequently been unable to withstand pressure from non-state groups – notably the Houthis – for a swift reversal of initial reform efforts (Security Council, 2014). This underlines the difficulty, if not impossibility, of reforming energy pricing once states have failed fiscally and politically, and credibility has collapsed.

Egypt's 2014 five-to-midnight reform

Egypt's fiscal deficit related to its rising spending on energy subsidies in line with burgeoning domestic demand had been a problem under the Mubarek government since the mid-2000s[18]. Plans in 2010 to reform the country's domestic energy prices, in order to curb demand and rebalance its fiscal budget, quickly vanished as political protest forced the old president out of office in February 2011; subsequent transitional governments shied away from what were seen as highly contentious reforms, likely to contribute to further political unrest. The subsequent collapse of Egypt's natural gas exports (resulting from the country's growing domestic needs and lagging new production) corresponded to more than a decade of low prices offered to domestic consumers; the associated low returns for investors in Egypt's oil and gas sector further contributed to a rising budgetary gap that had, by mid-2014, become entirely unsustainable.

[17] El-Katiri and Fattouh (2011, pp.30–40) give an overview of access to different fuels and electricity across Yemen's provinces and income groups.

[18] For a background to Egypt's unfolding energy problem during the 2000s, see Darbouche and Mabro (2011).

While Egypt's July 2014 price hikes on most petroleum products have been steep (up to 70 per cent price increases overnight),[19] they will have a marginal effect on narrowing the deficit.[20] The process of phasing the subsidy out is thus likely to be lengthy, although the government has been ambiguous on the timing and nature of future price rises.[21] Nevertheless, the recent reform measures are bold by any standard, especially in light of the political and social instability still engulfing Egypt – revealing the extent of fiscal pressures and the limited choices faced by the Egyptian government. Defying many analysts' predictions, these price hikes, though very steep, have not resulted in mass protests and civil unrest.[22]

Part of the reason relates to timing. The reform measures were announced following a wave of nationalist fervour that saw President El-Sisi assume power, with strong support from his base for the onslaught on the Muslim Brotherhood. The violent crackdown on the Muslim Brotherhood and public protests may also have discouraged people from demonstrating. The government's communication strategy, while considerably less systematic than those seen in other countries' reform efforts, has also been fairly effective; the government has called for shared sacrifice, and has highlighted the inequities associated with energy subsidies and the importance of freeing financial resources for essential services such as health and education. Newly elected President El-Sisi, and Prime Minister Ibrahim Mahlab have been key proponents of the reforms, an important mobilizing factor in a country whose electorate has placed great hopes on the new government's ability to reinstate political and economic order (Al Bawaba, 2014; Mubashir Misr, 2014). There is also wide realization that maintaining the subsidy regime would eventually lead to an economic and energy crisis.

While such factors can partly explain the muted response from the streets, the energy reform's success will depend on the government's ability to introduce measures to mitigate the impact of high energy prices for the most vulnerable groups in society. Indeed, the government introduced some measures – freezing the prices of publicly distributed bread, rice, sugar, tea, flour, and oil – to offset energy price rises. Also, the government has expanded the food subsidy system, discounting the price of additional products such as meat and chicken. The price of LPG (widely used by low-income households) was not raised in the latest wave of reform. Despite these mitigating measures, there is deep frustration among Egypt's low and middle-income households relating to the higher costs of living following the price hikes. There is also scepticism about the government's ability to translate savings from the reforms into real benefits for the population (Rashwan, 2014).

Although the government can be relieved that the initial reform steps did not cause mass protests, the road is long and key challenges remain. Experience in other countries shows there is always the risk of slowdown, or even reversal, of reforms. The government therefore needs to strengthen its currently highly ineffective social protection schemes and safety nets. For instance, in the case of ration cards, the World Bank found that eligibility criteria (such as being a pensioner or a public sector employee) are not pro-poor, leaving poor Egyptians less eligible for a high-subsidy ration card than non-poor

[19] Diesel prices increased by 64%, gasoline 80 by 77%, and gasoline 92 by 41%. However, these prices are still very low by international standards. See MEES (2014b).

[20] In 2014–15, the deficit is expected to fall only to 10% of GDP, with energy subsidies constituting around 16% of government spending.

[21] According to the *Financial Times* the Egyptian government plans to phase the electricity subsidy over five years. The case of products is less clear, but the Minister of Planning has been quoted that 'in five years fuel will be offered at 80% of its real cost to sections of the population which are deemed to need subsidies, the rest will pay market prices'. Saleh (2014).

[22] There were some small protests and strikes (taxi drivers), but these were not widespread and did not threaten to destabilize the existing political system. Fahim (2014).

Egyptians. Also, these regressive eligibility criteria are not well enforced – more than two-thirds of those holding high-subsidy ration cards do not meet the relevant criteria.[23]

In addition, the Egyptian government has to establish credible commitments. One rationale for the current reform is that it will provide the government with the fiscal space needed to increase investment in public infrastructure and improve key services. In the absence of regular price adjustments, however, fluctuations in international energy prices may quickly erode current fiscal gains, further reducing funds available for mitigating measures. If the government fails to deliver on its commitments and if the achievements are not well publicized, then the support behind the reform may lose momentum.

The Iranian reform experience

Iran's targeted subsidy reform, initiated in 2010, is the most comprehensive reform of energy pricing seen in the MENA region so far, and is all the more significant as it has been conducted by a large oil and gas producing state (Guillaume et al., 2011; Tabatabai, 2011). The reform followed more than a decade of political controversy around Iran's domestic oil prices, which were then among the lowest in the world. Surging domestic demand for energy, following more than a decade of international sanctions that had severely affected Iran's ability to produce from its enormous reserve base, had left the world's largest reserve holder of natural gas reliant on top-up imports to avoid power shut-ins. Iran's domestic subsidy burden, measured on the basis of opportunity cost, was estimated at around USD100 billion by the end of the 2000s, an amount that exceeded the country's annual revenues of USD70–80 billion from oil exports at the time (Guillaume et al., 2011, p.4; Energy Compass, 2011).

Iran's initial energy subsidy reform step in December 2010 was estimated to remove around USD50–60 billion worth of subsidies (around 15 per cent of GDP) – achieved by dramatically raising the prices for such items as gasoline (300 per cent), natural gas (50 per cent), and diesel (900 per cent) – virtually overnight (Energy Compass, 2011; Argus, 2013a). Within five years (coinciding with the Five-Year Plan) Iran's domestic energy prices should have risen to 90 per cent of their international market value. The architects of Iran's subsidy reform have been clear that price increases should be meaningful, in order to reduce demand effectively. Moreover, as outlined by some observers, 'relatively small domestic price increases could be rapidly eroded in real term by domestic inflation, an increase in international prices, or exchange rate depreciation.' (Guillaume et al., 2011, p.12) Finally, a front-loaded reform resulting in fast, large savings was a key requirement for the implementation of the Iranian government's single most important mitigation effort – a compensatory cash transfer system.

An essential part of Iran's strategy from the beginning was the redistribution of reform proceeds via cash grants to different elements within the economy. Initial plans in 2010/11 saw specific allocations of the reform proceeds: 30 per cent to domestic industries in cash, to help them adjust to a gradually higher pricing environment (enabling energy efficiency-enhancing investments); 20 per cent to government institution for similar adjustments; and at least 50 per cent was intended for distribution to citizens as cash grants, to compensate households for generally higher living costs (Guillaume et al. 2011, p.10). An initial plan to target these cash transfers to lower-income households proved unworkable, so the government moved on to a universal cash transfer system that was paid per adult, to the head of each household. The sum, on average USD180 for a four-head household during the first six months of the reform, amounted to around half of the nation's minimum wage, a substantial benefit particularly for low-income households (Tabatabai, 2011, p.15).

[23] Households in the top quintile receive around 20% of subsidies of the rationed products, compared with less than 16% for the lowest quintile. In terms of coverage, a third of the poor do not have ration cards, excluding them from the benefits of ration card subsidies. World Bank (2005).

To further reduce the possibility of widespread protest following Iran's bold price rises, its reform efforts were also accompanied by a meticulously planned and executed public communication strategy. A government-appointed spokesman undertook the public relations campaign accompanying the reform. Iranian news media (television, radio, websites, newspapers), political, business, and social leaders, and academics were all mobilized to speak in favour of the reform and to outline the many benefits of the reform to Iranian society. The campaign placed special emphasis on the background to the reform – the enormous waste of Iranian natural and financial resources and the fact that the rich rather than the poor benefited most – together with the expected gains – a universal cash transfer benefiting many poor households (Guillaume et al., 2011, pp.17–19; Tabatabai. 2011, pp.18–19). The entire communication strategy emphasized the shift of subsidies from products to people, a policy that would improve social equity, industrial competitiveness, and economic diversification. To further counter risks associated with the reform, the government widely advertised its policy to actively use monetary policy to counteract inflationary risks; prior to the reform, it also built up large stockpiles of basic goods to avoid bunkering and panic buying (Guillaume et al., 2011, p.11).

Iran's subsidy reform has not been without complications. International sanctions (tightened significantly and restricting oil exports considerably since mid-2012), and the accompanying steep fall in the country's currency exchange rate, have created a surge in Iranian living costs and significantly complicated the reform efforts; a second phase of the subsidy reform, planned for October 2012, was suspended (MEES, 2012b). The IMF has commented that 'external shocks could significantly undermine the hard-won stability of Iran's currency and the envisaged relative price adjustment' (Argus, 2014).

In the run-up to presidential elections in 2013, the clear political value of Iran's cash transfer system also meant that the system – intended only initially to be universal – became a major issue within the political tug-of-war between different political camps. Iranian politicians and oil and gas business leaders criticized the country for continuing to pay near-universal cash transfers that the system was increasingly unable to afford – the popularity of the scheme meant the government kept handing out universal transfers at levels that soon exceeded the net savings it was making, with little left for other intended recipients such as industries.[24]

A new round of price increases, coupled to a reduction in monthly cash transfers to households was initiated in early 2014. The intention was to achieve combined savings of around USD19.1 billion in the Iranian year 2014/15 (MEES, 2014c; MEES, 2014d).

A systematic evaluation of the effect of Iran's price reform on consumption is difficult due to the relatively short time since the onset of the reform (December 2010), as well as the presence of various other factors, such as economic issues, affecting Iranian energy demand (its economy having been affected by severe sanctions and a depreciating currency since mid-2012). Demand for electricity, and for natural gas in particular, is highly supply-driven, implying shortfalls in gas and electricity in some provinces may translate into reduced demand growth even where price effects would not have indicated a steep fall in consumption. Among Iranian observers, some general agreement has emerged that the initial stage of energy price rises in 2010 reduced fuel product and natural gas demand significantly in the months following the price rise, although the effect in subsequent months has been less clear (IOD, 2011; Amuzegar, 2012).

[24] Iran's Oil Minister Bijan Namdar Zanganeh has vociferously criticized Iran's cash transfer system, saying the Iranian oil and gas sector (from which the majority of revenues for the cash transfer system are received) could not afford to pay the handouts that were increasingly threatening domestic upstream and refining companies' development projects. Argus (2013a); Argus (2013b).

4. Conclusions

Reforming energy subsidies in MENA remains an economically and politically delicate task, one from which many of the region's governments still shy away, for several reasons. The Arab Spring has added a further, interesting variable to the region's energy subsidy dilemma, for it has taught many of the region's governments an even greater fear of the Arab street, including countries that have remained largely unaffected by the political turmoil unfolding across the region since late 2010. Initially a complicating factor that has significantly delayed plans for energy pricing reform in the region since the late 2000s, the lessons of the Arab Spring could also provide an important underlying measure by which governments systematically reassess the way they spend national resources within their domestic economies, and how both the poor and the middle class can receive a better deal than has been offered in the past.[25]

In the short term, however, rather than questions of wider social justice, the energy subsidy reform agenda in the MENA will likely be dominated by questions of fiscal sustainability. The spiralling-out-of-control of the fiscal burden of energy subsidies in recent years will render their reform increasingly unavoidable in a growing number of MENA economies, mainly energy importers and small-sized oil and gas producers such as Jordan, Lebanon, Egypt, Syria, and Yemen. This is undoubtedly the most unsatisfactory way to reform, and the long-term success of current policies – most having been implemented on an ad hoc basis under pressure from international lending organizations at times of severely compromised government capacity in a number of conflict-ridden MENA states – stands in marked contrast to the more desirable objective of comprehensively overhauling social security and equity issues throughout the MENA region.

The importance of government credibility and capacity in mitigating the negative effects of energy subsidy reform on domestic customers has been made painfully clear in cases where energy price reforms have led to counterproductive outcomes, for example in Yemen. The Yemeni case, as well as positive examples of reform efforts in countries such as Jordan, Morocco, Egypt, and Iran, suggests that it is better to reform energy subsidies before a political or economic crisis point is reached. The required fiscal discipline for such endeavours may still prevent many MENA governments from initiating such comprehensive fiscal reform efforts proactively, and without the immediate pressure of international lending bodies. In the medium- and long-term, however, rationalizing the way energy and fiscal resources are spent domestically will become an ever more critical element in ensuring the political and economic stability these states seek in the long term.

The Iranian example is an important one, as it has demonstrated that a reform of domestic energy pricing can be economically and politically feasible for large oil and gas producers. Iran's unique features, such as a large, heterogeneous population and geography, relatively large gaps between rich and poor, and additional complicating factors such as the presence of intensifying international sanctions, further strengthen the country's experience as a case in point; for many of the Gulf's other oil and gas producers – wealthy both in absolute and in per capita terms – are equipped with even more powerful fiscal resources to enact the necessary mitigation measures to ensure a more rational use of their valuable oil and gas resources over the long term.

[25] Some recent, country-focused papers have started to explore various avenues (Kandil, 2010; Verme et al. 2014; World Bank, 2011). Verme et al. (2014) specifically model the effect a further subsidy reduction, combined with a universal cash grant, could have on poverty levels in Morocco.

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