

"Mirage of oil wealth or long-term vision: What is Masdar City the symbol of?"

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What can energy subsidies reforms do for the UAE?

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Introduction

Energy subsidies represent a pervasive feature the social policies in the Middle East and Northern Africa. While all Gulf Cooperation Council (GCC) countries are currently facing falling revenues as a result of low oil prices, the fiscal pressure is high to reduce these subsidies. The United Arab Emirates (UAE) is a particularly interesting case because it has shown the most determination to reduce energy subsidies and restructure its economy. Although the country has not received much attention, it provides an insightful experience for other GCC countries. The extent of energy subsidies in the GCC is such that pricing reforms have a significant potential for influencing the wider economic and political life. Not only would the government save billions, to create fiscal space in the current deficit situation and re-invest in other areas of other public goods (health, education...), pricing energy would also push forward energy efficiency, productivity, adoption of renewables, lowering dependence on gas imports and increase exports. It would also progressively transform the underwritten rentier social contract where citizens receive compensations from resource extractions, for a more sustainable one.

While energy reforms are certainly not the only variable at play in the diversification strategy of the UAE, their dividends could be significant. They are a crucial part of the political and economic picture of the country. This essay argues that the UAE diversification strategy will not be feasible without radical energy reforms, which will have important spill over into all areas of UAE's political economy. Such reforms have however barely started and do face challenges. First, this essay provides a detailed picture of UAE's energy subsidies. Second, it shows how the UAE can benefit from energy reforms for its diversification strategy. Third, the paper discusses the challenges of further energy reforms.

The political economy of energy in the UAE

Focusing on the UAE's efforts to reform energy subsidies allows a deeper analysis of partial ongoing reforms, taking into account important particularities of the federation such as political arrangements. The UAE also showed the highest gas consumption growth (88%) between 2000 and 2009 and significant oil consumption growth (60%) over the same period. It displays some of the highest energy intensity (unit of energy to produce a unit of GDP) in the world after Qatar.

Gasoline imports have risen, doubling between 2003 and 2013 (IRENA 2016:32) while coolers represent 60% of electricity consumption in Abu Dhabi. With plenty of new housing and commercial projects across the country over the past two decades, it is not surprising that the country's electricity consumption has grown faster than anywhere else in the world.

The UAE is a federation divided into 7 emirates, including Dubai and Abu Dhabi, where 90% of national oil is produced. Dubai's remaining oil revenues now represent less than 5 percent of its revenue. The UAE maintains a rentier relation with their citizenry, meaning that revenues from resource extraction (rents) are shared with the population under the form of compensation to satisfy a "cradle-to-grave prosperity", in exchange for political inactivity (Luciani 1987). While the UAE does not represent the most striking example of rentierism, its dependence on oil is still significant (40-50 percent of total revenues) - increasing when oil prices spike. In 2014 subsidies were amounted to USD29 billions by the IMF (2015c)¹. Dubai's early diversification from oil revenues explains UAE's comparatively low dependence on oil in the GCC group.

The original purpose of energy subsidies is to provide a safety net for the lowest income households and encourage the growth of the industrial sector. Although there is no commonly agreed definition of what constitutes a subsidy, and measurement is still an issue, this essay will adopt de Moor and Clamai's (1997) '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'. These can be in-kind, cash or credit, or relating to tax or procurement.

After the Arab spring, energy subsidies were widely perceived as a fundamental economic and social benefit and played a crucial role to temper potential social unrest, even in the rich UAE. Their increase however led governments into unsustainable spending patterns and revenue pressure despite the high oil prices. In 2016, with a barrel three to four times cheaper to 2008 prices, governments are under significant pressure to cut expense and engage into more sustainable revenue spending. In this context, while the UAE benefits from comfortable surpluses, it nonetheless displays a political will for revenue rationalisation and longer sighted policies.

UAE stands out among its GCC peers. While gasoline and diesel prices are set at the federal level, electricity and water prices are applied independently by the four UAE electricity and water authorities. In the UAE water is directly linked to energy price because most of it is provided by desalination of seawater running on electricity or gas (Boersma & Griffiths 2016). Of the emirates, Dubai implemented initial electricity and water reforms in 2008 and made further pricing reforms in 2011, while Abu Dhabi followed suit in 2015 increasing electricity prices for expats (40 percent) and large consumers (100 percent) (Boersma & Griffiths 2016:2). Nationals are progressively integrated under the new prices but changes are slow. In January 2016 for instance, Abu Dhabi established a rise in the electricity tariff to USD0.09/kWh for expats only living in villas and using more than 200 kWh/day (RSB 2016)

While UAE's pressure to reduce energy subsidies was felt even during high oil prices, lower oil prices reduce the differential between market and subsidised prices and allows cutting subsidies without facing much opposition since prices still decreased (figure 1)

¹ For a graphical example of pre-tax and post-tax subsidies see appendix figure 1 and 2

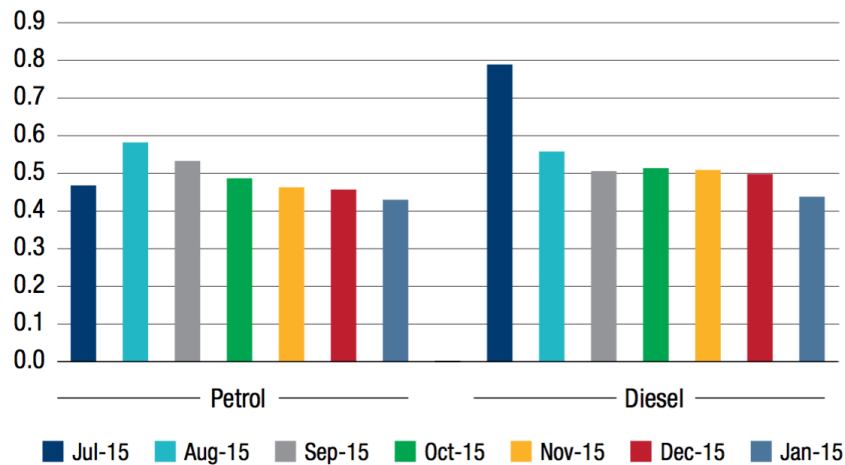


Figure 1: Gasoline and diesel prices in the UAE from August to December 2015

Source: UAE Ministry of Energy (adapted by Boersma and Griffiths (2016))

Before the UAE started reforms in August 2015, implementing fuel prices on gasoline and setting a monthly price indexed on global prices, the country was the eighth-most generous country in the world in terms of fuel subsidies (Wilkinson 2015). Short-term gain for fiscal revenues are not maximal but long term gains lie in the deeper incentive structure towards diversification and will appear when oil prices increase.

Energy reforms as critical component of diversification

To diversify, the UAE, as GCC countries, should start doing so in a sector that suffers the most from oil dependence, which is naturally the energy sector. Reforming how the population uses energy and how the country sources it (oil and gas) or generates it (electricity) are logical steps which have potential for yielding high dividends.

Energy subsidies distort the market and increases demand to a point where it outgrows supply, forcing the UAE to import most of its gas for electricity generation. It allows individual consumers to engage in highly inefficient patterns of consumption of electricity (generated in gas powered station) and vehicle fuels. Low energy prices also have deeper structural consequences in biasing a possible diversification into energy intensive industry as it was the case of Saudi Arabia. The UAE has escaped such lock-in as it has favoured the development of its financial sector and manufacturing however. In addition, high domestic energy consumption directly reduced oil exports and increases the opportunity cost (the economic rent or revenue wasted by failing to sell oil at higher market prices). It also encouraged expensive LNG imports into the Emirates. Such forgone revenues represent much more than the pre-tax subsidies themselves estimated at 6.6% of the UAE's GDP since it forces states to build and maintain expensive spare production capacity and forego significant export revenue (Luciani 2011) (see appendix). The foregone revenues could have been used to fund education or simply rationalise spending (IMF 2015a). Cutting subsidies is going against the "rentier reflex" of systematically transferring extraction profit onto the citizenry. Yet UAE's reform teaches us that the rentier social contract is not as rigid as the conventional wisdom assumes (Fattouh et al. 2016). On the other hand, the UAE's population size and relative

economic homogeneity can explain why the UAE can afford taking the lead in energy pricing reforms, which would limit the transferability of its experience except perhaps to Qatar.

As the UAE remains dependent on oil and gas at 95 per cent of its domestic energy needs, reforming energy subsidies diminishes the cost of such dependence and incentivised alternatives to fossil fuel energy resulting in reduced oil dependence. Pricing energy will not only allow gas power plants to recover upfront investment costs, avoiding frequent blackouts, especially in northern emirates, but also allow the deployment of renewable energy. This will further undermine gas import dependency and reduce global volatility exposure, which is particularly relevant since the LNG market is likely to tighten in the long-term.

In February 2016, Sheikh Mohammed bin Rashid al-Maktoum established the ministers of Happiness, Tolerance, the Future, Climate Change, and a Minister of Youth. This was a dramatic structural change inclined to fully accept the set of challenges the federation is facing: over-reliance on oil, unsustainable fiscal policies and demographic pressure, all of which pricing energy can contribute to alleviate. Moreover, energy subsidies are equivalent to regressive tax since most of the benefits from energy subsidies are typically captured by the richer households (Del Granado et al 2010). To illustrate the crowding out effect of subsidies, spending on education represents only a fraction of the pre-tax energy subsidies in the UAE. Transferring at least a part of the forgone revenues to education could help secure diversification in new technologies for example.

There have already been efforts toward such diversification. The UAE has pushed investment in high-productivity industrial clusters, in industrial free zones. Masdar, the first zero carbon and waste city in the world, in Abu Dhabi, is a future urban sustainability project based on renewable energy and energy efficiency (for details see Griffiths 2014). Innovation parks like this, which will host hundreds of sustainable energy-related organisations, have proven especially successful in China for example. Masdar strikes as a paradox: building a zero carbon emitting city in a rentier state; the project already delayed by a few years has lowered its initial expectations but shows off Abu Dhabi's rather credible commitment to energy reforms and post-oil concerns.

The International Renewable Energy Agency (IRENA) moved from Germany to Masdar (Abu Dhabi) in 2009. Not only does it give the UAE a geopolitical weight but also provides a self-commitment device, despite all the oil produced in the Emirate. IRENA's Innovation and Technology Centre (ITC) however remains in Bonn, Germany. The UAE focuses on white collar managers instead of factory workers but serious measures are taken to develop diversification and further sustainable domestic sources of electricity.

Understanding where energy subsidies come from and how they can relate to the wider political economic system allows us to understand how far reaching energy reforms could be. The UAE is setting the example but its economic system, fiscal buffer and demographic characteristic allows it to do so without much compromise. Yet energy reforms do entail some limitations.

The challenges of energy reforms

The UAE's decision to remove subsidies is an important initiative but alters the traditionally understood rentier social contract. Such reforms question the sustainability of the social contract typically present in MENA countries and whether it can be bent indefinitely.

It has definitely proved more flexible than conventionally thought, and contrary to what Fattouh et al. (2016) argue, one might not expect the social contract to collapse. Instead an incremental transformation towards a more sustainable relationship between government revenue and the population seems reasonable to expect if economic diversification succeeds. As Boersma & Griffiths (2016) show, the basic idea that nationals do not accept any price increase is flawed in the case of the UAE, and since the country is particularly rich and the reforms have concerned mainly non-residents, little can be concluded in current state of reforms. It is true however that further progressive measures could be taken to shelter lower income population were energy prices to really increase. The less well off 'could be protected by well-targeted social safety nets, using some of the fiscal savings generated by subsidy reform' (Clements et al. 2003).

During the years 2000s, Dubai's dependence on oil had already decreased from 60% to 5%. While it has benefited from comfortable surpluses to do so, the economic structure of the UAE, that is federalism, allows for such unilateral diversification attempts, therefore avoiding systemic risks. However, the formation of a federal energy policy faces two difficult aspects of governance for the UAE. The first is the restructuring of state-society relations that will follow at the national level: Abu Dhabi population might not be as compliant to the fuel price as inhabitants of Dubai. The second is the central authority's capacity to implement federal-level policies and distribute wealth and services across the federation in an even way.

Unlike Young (2014) this essay argues that the UAE or GCC countries are not facing a dilemma between decreasing subsidies and increasing electricity generation from renewables. Young's argument is that renewables will maintain and re-inforce oil exports dependence because reserves will last longer. These two options are instead, complementary because the UAE imports most of its gas for electricity and fresh water, and that renewables are relevant for power generation only. Moreover, it seems that the UAE is already well on track to diversification for Young's (2014) dilemma to occur. Abu Dhabi as we have seen, is already betting on renewables to provide sustainable sources of electricity hoping this will also contribute to technological spill over into the region and beyond.

An example of national policy is the UEA's target to meet 10 percent of solar electricity generation by 2020. But expecting renewable capacity addition to match the fast paced demand growth for energy is unrealistic. Energy prices are still too low for that. There are not even enough fossil fuel power plants planned. Nuclear addition could allow meeting demand more rapidly than renewables but involves even higher cost and political complexities. Each Emirates of the UAE has individually determined targets: 5 percent of renewables by 2030 for Dubai and 7 percent by 2020 for Abu Dhabi. In the absence of proper market mechanisms to foster renewables, their deployment -which would be an indirect consequence of electricity subsidies reforms- through state incentives could become a very expensive investment of the UAE (Al Katiri and Husain 2014).

Boersma and Griffiths (2016:18) argue that the reforms underway are very modest, and 'disappointing', as they have little impact on consumption patterns since non-residents are mainly targeted and prices remain very low by world standards (IMF 2015b). Such minor impact is the evidence that behaviour and incentive changes might not be as responsive as first thought and that the UAE is missing an opportunity by leaving gas prices subsidised, which account for 50 percent of all the subsidies. More radical energy pricing reforms should be implemented in the future, especially as the UAE seems to be able to afford them politically. Energy related policies will not solve all issues in the UEA but have significant potential to further reduce rentierism in the country. Reforms to improve the inclusion of SMEs and the financial regulatory framework are particularly needed. Fiscal leverage must also be created through taxes, which are expected to take effect in 2018 (IMF 2015b)

Conclusion

Energy subsidies in the UAE as in many MENA countries have deeply affected the way energy features as a critical component in the citizen–state relationship. This essay argued that energy subsidies reforms can do a lot to reduce fiscal deficit, improve energy efficiency and reduce dependence on fossil fuel by foster alternatives such as renewables in the UAE.

The first part showed the extent of energy subsidies in the UAE. The second section argued for the potential of energy pricing reforms and underlying economic and political mechanisms. Section three delineates the challenges of energy reforms. The UAE has showed exemplary but still modest energy pricing reforms with a direct impact on fiscal revenues, but the impact on consumption behaviour remains at best mediocre. As Cherif et al. (2003) argue, what is important for diversification is to change individuals' incentives. The short-run price elasticity of demand for energy -the percentage reduction in demand for each percent increase in price- tends to be quite steep though. Demand based prices and time are necessary in order to influence demand in a way that allows for structural impacts. Education, and demand side management in this case would play an important role.

Major financial and non-energy related reforms are still crucial to overcome structural inefficiency at the heart of the exclusive growth model of the UAE and to a larger extent in other GCC countries. The UAE's experience can hardly be transferable with regards to its demographic and economic specificities but does provide some insights for future reforms. Energy pricing is only one part of the answer to diversification, but an essential one, which has high hidden dividends to lead to a more sustainable social contract and inclusive economic development.

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Appendix:

Figure 1. Consumer Energy Subsidies

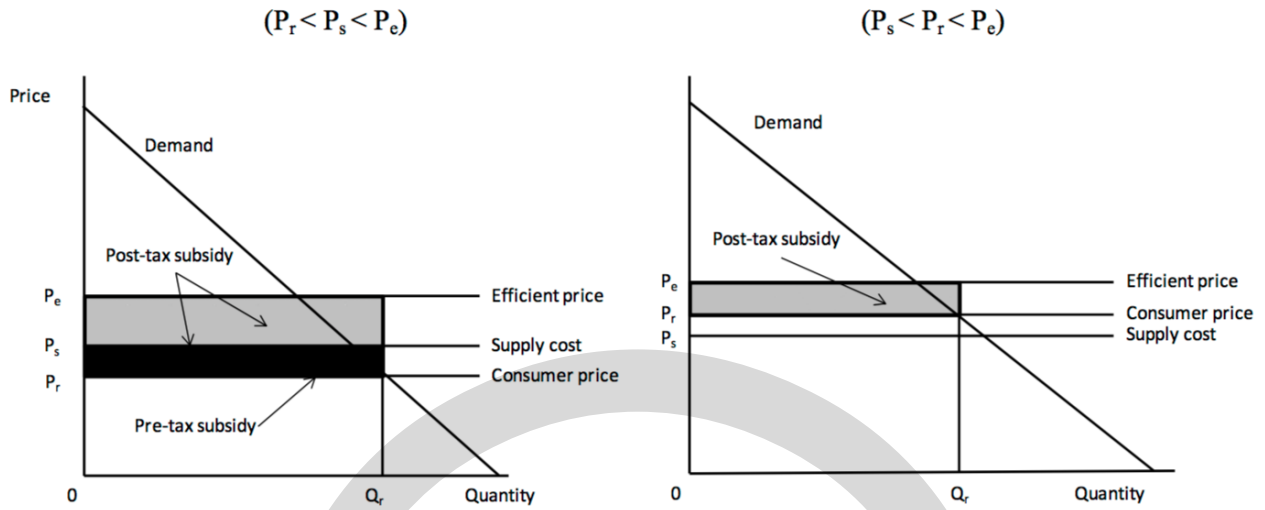
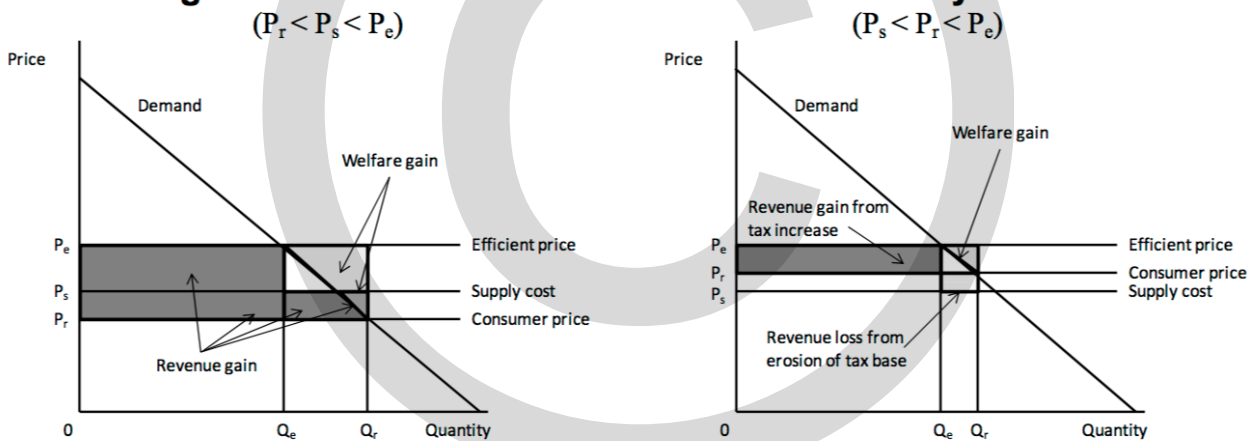


Figure 2. Fiscal and Welfare Gains from Subsidy Reform



Source: IMF (2015c)

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