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The Social Impacts of Energy Subsidy Reform in the Arab Region

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Introduction

Arab countries have long been famed for their high energy subsidies. In particular, they have been known to provide their citizens with cheap petroleum products, though natural gas and electricity have also featured on lists of subsidised energy goods.[1] It has often been argued that energy subsidies are wasteful and regressive, and that they ought be scrapped. As of late, many countries in the Arab region have embarked upon reform towards that end. Raising the price of energy may, however, generate adverse social impacts. This paper seeks to illuminate and discuss such impacts, and how Arab policy-makers have endeavoured to avoid or mitigate them. It sets out with a discussion about the nature of subsidies, the debate about them, and why negative effects of reform could come about. The paper then in two sections looks at how policy-makers have gone about, before proceeding to discuss the context in which reforms have been carried out and the impacts they may have had. Lastly, some concluding thoughts are offered.

I. ENERGY SUBSIDIES IN THE ARAB REGION AND THE SOCIAL IMPACTS OF REFORM

Though energy subsidies are the focus of much debate, it is rarely discussed what exactly they *are.* This has implied some confusion – not least since the Arab region contains major exporters of energy, such as Saudi Arabia and Qatar, as well as countries, like Jordan and Lebanon, that import large amounts.[2] One could label it *direct* subsidisation when a state, through some mechanism which may be more or less explicit, effectively imports energy and sells it cheaper at home, making a loss. This may be contrasted to *indirect* subsidisation, denoting when a state sells domestically produced energy at the home market for less than it would have been paid at the global one, or even provides it freely. In the former case, the subsidy then consists of the import parity price (meaning the world-market price plus additional costs for transportation and the like) minus the price for which the energy is sold domestically, whereas in the latter case the subsidy corresponds to the "opportunity cost", i.e. the world-market price minus the lower domestic one.

Alternatively, a subsidy can, pertaining to energy-producing countries, imply the difference between, on the one hand, what consumers are charged, and, on the other hand, the (higher) cost of production and distribution. That calculation ignores any revenue foregone from not selling at the world market.[3] The "post-tax" conceptualisation of energy subsidies, which takes into account the implicit cost of non-taxation, can also be mentioned.[4] Other definitions include factors such as "restrictions on market access" and "[t]rade instruments...which make domestic fuel production more lucrative".[5] Measures like these would be subsidisation in the sense that they may enable energy production – and, perhaps, consumption – which otherwise would not take place. The common understanding, though, to the extent that one exists, appears to be that energy is subsidised when it is sold artificially cheap – that is, at below world-market or production price in the case of producers, or below import-parity price in the case of importers – with the state (directly or indirectly) paying the difference.

Energy subsidies, in the Arab region and elsewhere alike, are often defended on the basis that they alleviate poverty and raise ordinary people's standard of living. This occurs both directly, since the cost of energy is lower than would it have been absent the subsidies, and indirectly, since the cost of energy-contingent products and services – including transport and food – are lower, too. Relatedly, subsidies are said to enhance energy-access and -security, especially in the event of prices rising at the world market. Another

[1] Coady and others, 2015, p. 22.
[2] Fattouh and El-Katiri, 2012, p. 17.
[3] For a discussion, see for example El-Katiri and Fattouh, 2015, pp. 2-3.
[4] Coady and others, 2015, pp. 4-5.
[5] Whitley and van der Burg, 2015, p. 7.

arguable advantage of general subsidies is that they, unlike many other forms of social assistance (discussed later), require little administrative effort. Furthermore, the provision of cheap energy is sometimes purported to bolster industrial development and competitiveness, with positive results in terms of job-creation and export-revenues.[6]

Critics of energy subsidies frequently point to their fiscal cost. According to the IEA, energy-subsidy expenses in 2010 amounted to 9.3 percent of GDP in Egypt, 9.8 percent in Saudi Arabia, and 13.8 percent in Iraq.[7] Clearly, though, the extent of the fiscal cost will vary with different definitions of "energy subsidy". Most notably, whether the opportunity-cost approach (favoured by the IEA) or the production-cost approach is used often makes an enormous difference in the case of large-scale producer countries.[8] It is regularly contended, in addition, that energy subsidies are highly regressive, since the rich benefit far more from them than do the poor: the latter group consume much less energy and may not even in the first place have access to "networked" utilities such as electricity.[9]

Another charge levied against energy subsidies is that they tend in practice to undermine rather than support energy-access and -security, since low prices cause over-usage and smuggling to nearby countries where prices are higher. This, in turn, can lead to shortages, rationing, and the emergence of a black market with prices exceeding the official one. Investment in energy generation and provision is also claimed to be disincentivised by subsidies, with the result that development and maintenance of energy infrastructure suffers.[10] Sceptics suggest, furthermore, that energy subsidies make for industrial energy-inefficiency rather than enhanced productivity or competitiveness, and that they tend to promote capital-intensive industrialisation at the expense of the labour-intensive variety – meaning that job-creation is not stimulated, but stymied.[11] Excessive use of energy, particularly when its source is fossil fuel, also, of course, has environmental implications, as well as attendant health-related ones.

In reality, the debate about energy subsidies is not polarised between those who are in favour and those who are against, but characterised by a sizeable measure of agreement. It is widely accepted, in particular, that providing cheap energy is by no means a perfect way of aiding the poorest. However, most participants in the discussion also recognise that reducing or abolishing energy subsidies may entail highly undesirable impacts. The issue, then, is not so much whether energy subsidies are fundamentally good or bad, but rather what the consequences of them being reduced or abolished would be, and whether such consequences can be countered in an adequate manner. This state of affairs – an emerging consensus on the problematic aspects of energy subsidies, but also on the importance of not undertaking reform without due consideration of, and preparation for, all its effects – is reflected in target 12.C of the SDGs:

Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into

[6] See, for example, Fattouh and El-Katiri, 2012, pp. 13-16.
[7] Fattouh and El-Katiri, 2012, pp. 33-34.
[8] It can further be noted that even if the opportunity-cost approach is adopted, estimating the real value of subsidies is far from a straightforward exercise. This is so since some countries have spare capacities, and since their level of energy-exports is normally regulated by quotas (though these have, at the time of writing, effectively been suspended). All energy that is being provided at low cost domestically would, in other words, not otherwise be sold at the global market – a point made in Diwan and Akin, 2015, p. 21.
[9] Assertions of this sort are commonly delivered with statistics demonstrating how much of energy subsidies in a given country accrue to different income quintiles or deciles. See, for instance, Sdralevich and others, 2014a, pp. 15-16, showing that that 38-86 percent of petrol subsidies, 42-71 percent of diesel subsidies, and 26-53 percent of electricity subsidies in a number of Arab countries go to the richest fifth of the populations.
[10] El-Katiri and Fattouh, 2015, pp. 4-5.
[11] Daragahi, 2015; El-Katiri and Fattouh, 2015, p. 7.

account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities

So, what are the social impacts that might ensue from energy subsidy reform? Or, in terms of SDG target 12.C, what kind of protection is it that "the poor and the affected communities" might need when "those harmful subsidies" are being phased out? The answer is largely an inversion of the rationale for having energy subsidies to start with. Thus, to the extent that energy subsidies do alleviate poverty and raise living standards, enhance energy-access and -security, and/or stimulate job creation, abolishing or reducing them could potentially aggravate poverty and debase living-standards, reduce energy-access and -security, and curtail employment.

The direct social impacts of higher energy costs are comparatively easy to predict. If, for instance, the price of petrol goes up, consumers of petrol will be more vulnerable to economic poverty (since they have to pay more). Rich people, as noted above, benefit more from energy subsidies, as they consume more energy, but the non-rich may still devote a higher proportion of their income to energy expenses. The fact that vulnerable households typically live on marginal budgets imply that even a small increase may suffice to push them below, or further below, the poverty line. Whilst the affluent are often able to drastically reduce their level of consumption in response to prices rising, the poor normally are not – if they could consume less, they would be doing so already. The *elasticity of demand*, in other words, is lower within the latter group.

Whereas direct impacts depend on how much of an energy source is consumed by different groups, and on the elasticity of demand, indirect impacts are contingent upon how and by whom other things – goods and services – are produced and transported, as well as upon the degree to which they are consumed, and can be shed, by different groups.[12] Most importantly, a very large part of the indirect impact should be expected to consist of food prices rising as a result of transport and of food-production inputs becoming more costly.[13] The poor typically spend a very large proportion of their income on food, and their demand-elasticity tends, again, to be low - meaning that price inflation has the potential to wreck havoc.

The experience of Yemen seemingly corroborates both the arguments against subsidising energy and the one cautioning that reform may detrimentally affect the most vulnerable. During the 1990s and 2000s, repeated attempts were made to cut the country's costly and regressive fuel subsidies, but currency depreciation and inflation ensured that any desired effect was rapidly negated in real-terms. The efforts, thus, did little to ease Yemen's macroeconomic burden.[14] By 2014, the situation had become untenable – the government could no longer afford selling fuel at a loss. This led to shortages, which became self-sustaining as the expectation of further supply deficiencies incentivised hoarding at the pumps.[15] Ordinary people were increasingly left to buy diesel from the black market, reportedly at prices higher even than the international one[16] – unaffordable to many.[17] In Yemen, as in most other largely rural countries, diesel plays an extremely important role in the economic activities sustaining people's livelihoods: farmers' tractors run

[12] See, for example, Arze del Granado and others, 2012, p. 2235; World Bank, 2014, pp. 6-8. It ought to be noted, however, that the "other goods" whose production is based on a certain energy source can themselves be energy products. Natural gas, for instance, is used to generate much of the Arab region's electricity, meaning that a subsidy on natural gas can amount to an indirect subsidy on electricity, and that a reduction in the natural-gas subsidy can imply an indirect social impact in the form of electricity increasing in price or becoming unavailable.

[13] Arze del Granado and others, 2012, p. 2246, estimating the impact of fuel price increases in a number of developing countries, suggest that around 40 percent of the indirect impact hitting households would be made up of food costing more.

[14] Sdralevich and others, 2014a, pp. 87-88.

[15] Oxfam, 2014, p. 2.

[16] IMF, 2014a.

[17] Oxfam, 2014, p. 2.

on it, as do the generators used for pumping water to drink and to irrigate the fields with.[18] As diesel became inaccessible, agricultural activity stagnated. This, in combination with soaring transport costs, led to rampant food price inflation, and the crisis was a fact.[19]

Considering these circumstances, it may not seem unreasonable that Yemen's government, strongly encouraged by the IMF, in July 2014 resolved to drastically cut fuel subsidies.[20] After all, maintaining the low official price appeared to make ordinary Yemenis more harm than good: in the short term it resulted in shortfalls, inflation, and famine, and in the longer term the fiscal cost of the subsidies would likely hamper economic development and prosperity. The immediate aftermath of official prices hiking, however, was everything but benign. Food price inflation rose further,[21] and human suffering grew even more critical. Violent protests erupted in Sana'a, where in September the government headquarters were captured by rebels from the Houthi movement – one of whose main demands was that the fuel subsidy cuts be reversed.[22]

Yemen's recent history aptly, and tragically, illustrates the quandary facing many policy-makers in contexts with high energy subsidies. On the one hand, preserving the low prices is costly, and invariably benefits the rich more than the poor. It may, furthermore, actually undermine energy-, economic-, and food-security. On the other hand, reducing or abolishing the subsidies risks inflicting even more severe hardship on those who are least able to bear it, and might even trigger social and political turmoil. Are consequences of that sort an unavoidable outcome of efforts to reform subsidies – meaning that the choice facing policy-makers is a binary one between, on the one hand, continued inequitable wastefulness and, on the other hand, social calamity? Or is it possible to carry out reforms in a way which avoids, or at any rate limits, the negative impacts? The following sections will illuminate attempts in the Arab region to do exactly that.

II. ABOLISH, REDUCE, OR REFORM ENERGY SUBSIDIES?

One basic question facing policy-makers pondering energy price reform is whether subsidies should be swiftly dispensed with (so that domestic prices instantaneously reflect import parity, or at least – in the case of producers – the cost of production and distribution) or rather phased out over time. Clearly, the former strategy has the advantage of immediately rendering available a larger amount of resources. Furthermore, as Yemen's experience shows, cutting subsidies but maintaining a fixed price carries the risk of inflation and currency depreciation eroding any savings made. The "shock-doctrine" approach of abrupt subsidy-abolition can, however, be extremely risky, especially in contexts where the impacts of price-rises are difficult to predict and the capacity to meet them limited. It may then be more prudent to opt for gradual change, so that people and authorities alike can slowly adjust.

Several Arab countries have chosen the stepwise-strategy. The Syrian Arab Republic in 2008 cut fuel subsidies by about half, intending to incrementally eliminate the remaining ones so that market prices should apply by 2015.[23] Sudan raised fuel prices in June 2012, and then again in September 2013, but still keeps them controlled.[24] Tunisia instigated a "gradual but predetermined series of price hikes" by raising fuel prices by 6-7 percent in July 2014.[25] The Government intended to implement two additional price-

[18] Oxfam, 2014, p. 3.
[19] Oxfam, 2014, pp. 2-3.
[20] IRIN, 2014.
[21] According to official data, year-on-year food price inflation reached 7.2 percent in August, up from 5.5 percent the month before – see Reuters, 2014b. Reportedly, the price of transport and bread increased by at least 20 percent in a matter of weeks following the energy price-hike – see IRIN, 2014.
[22] Middle East Eye, 2014.
[23] Sdralevich and others, 2014a, p. 87.
[24] James, 2014, p. 4; IMF, 2012b, p. 9. A falling currency and high inflation have in Sudan, as in Yemen, implied at least partial de-facto reversals of these and earlier subsidy reductions.
[25] Sdralevich and others, 2014b, table 1; Economist, 2015.

hikes of 3 percent during 2015, but falling prices on the global market (discussed later in this paper) implied that the remaining subsidies had by then effectively vanished.[26] Also in July 2014, Egypt began cutting energy subsidies, aiming to have abolished almost all of them within a five-year time-span.[27] Similar developments have later been seen in GCC-countries: Saudi Arabia raised prices in late 2015,[28] and Bahrain, Oman, as well as Qatar did the same soon afterwards.[29]

Jordan, on the other hand, in 2012 (for the second time in its recent history) dismantled most fuel subsidies in one stroke.[30] A committee, convening monthly, now sets prices to reflect those on the world market.[31] Since August 2015, the same applies in the United Arab Emirates.[32] Other GCC countries have declared that they too, having initially cut but not abolished subsidies, intend to let prices float in this manner,[33] as has Tunisia.[34] Morocco also has in place as system to "pass through" market prices of fuels, gradually implemented between 2012 and 2015. The price of diesel in that country was during 2014 protected by a "smoothing mechanism" to prevent its rising too much at once, but has now been completely de-subsidised.[35] Mauritania, similarly, has pegged the domestic price of diesel to the international one, but intends not to let the former rise by more than three percent at a time, even if the latter does.[36]

Governments often seek to limit the social impact of subsidy reform by targeting energy-products which are most disproportionately consumed by the rich rather than by the poor, and which have less vital indirect uses. Morocco and Maurtiania, as noted, have taken particular care to avoid diesel price-shocks – probably since increasing the cost of diesel, used in e.g. tractors and trucks, can generate very substantive indirect impacts, as became evident in Yemen. Similarly, when Sudan reduced subsidies in 2012, the price of petrol rose by 47 percent, and that of diesel by a mere 23 percent.[37] The following year, however, petrol and diesel rose by 68 and 75 percent, respectively.[38] That comparatively high diesel price increase may have been deemed necessary in order to make fiscal savings of substance, bearing in mind that diesel accounts for well over half of fuel consumption in Sudan.[39] Even after the 2013 subsidy-cuts, the per-gallon subsidy for diesel remained considerably higher than that for petrol.[40] Something similar can be said about Saudi Arabia. There, diesel subsidies were cut by 71 percent, as compared to 50-67 percent for petrol subsidies.

[26] Kojima, 2016, p. 86.
[27] James, 2015, p. 1.
[28] Kerr, 2015.
[29] Krane and Hung, 2016, pp. 5-6; Walker and Kovessy, 2016.
[30] Sdralevich, 2014a, pp. 97-98.
[31] The Jordanian government, moreover, is reportedly "ready to modify the monthly pricing mechanism to be more flexible and thus allow private companies to import and sell oil products", which would imply complete market liberalisation. See Jordan Times, 2015.
[32] El Dahan, 2015.
[33] Oman apparently "plans to review prices monthly, similar to the neighbouring UAE" - see Krane and Hung, 2016, p. 6. Qatar have similar intentions, though its pricing formula will reportedly be based not solely on the international price, but also on the *regional* one - see Reuters, 2016.
[34]The Tunisian "automatic adjustment formula for petroleum products (gasoline, diesel fuel)…will be implemented in stages starting from July 2016 on a quarterly basis, then increasing onwards to a monthly basis from January 2017, to be gradually extended to other petroleum products (natural gas, kerosene)" – see IMF, 2016, p. 70. In Tunisia, as noted, remaining subsidies were diminished by a retreating international price, meaning that the immediate impact of moving to a pass-through mechanism should be relatively small.
[35] Sdralevich, 2014a, p. 105; Sdralevich, 2014b, table 1.
[36] IMF 2013a, p. 33. For general overview of smoothing mechanisms, see IMF, 2012a.
[37] IMF, 2012b, p. 4.
[38] James, 2014, p. 4.
[39] IMF, 2012b, p. 6.
[40] James, 2014, p. 4.

Still, diesel remained extremely cheap, and the price-gap between it and petrol larger than in neighbouring countries.[41]

Egypt's 2014 round of price-changes saw diesel go up by 63 percent, and petrol by 7 to 77 percent depending on type. The relatively palpable increase in the price of diesel should be seen in light of the fact that it, as in Sudan and Saudi Arabia, was already quite cheap as compared to petrol, and accounted for more than twice as large a proportion of total subsidy spending.[42] Furthermore, a pre-existing large difference between 95-octane petrol and lower-octane varieties was largely preserved, meaning that the former type of fuel, which is primarily used for high-end vehicles and thus more likely to be consumed by the affluent, remains far more expensive.[43] The price of liquefied petroleum gas (LPG) was left unchanged, and subsidies on it are not slated to be abolished within the five-year time-frame applying to other fuels.[44] This, from a social perspective, appears sensible, considering that fully 15 percent of the LPG subsidy has been calculated to benefit the bottom income quintile, and only 25 percent the top quintile - making it highly progressive as compared to other subsidies.[45] In Morocco, Jordan, and Oman, too, LPG has, in order to protect vulnerable consumers, been fully or partially excepted in the context of subsidy reform.[46]

Singling out for (partial or full, temporary or permanent) preservation those energy subsidies whose rapid disappearance would most detrimentally impinge upon the poor may well cushion the adverse social impact of reform. The method, however, is not without its problems. Even though certain sources of energy, notably petrol, are in most contexts overwhelmingly used by the wealthy, at least some of the non-wealthy (who, as discussed, live on tighter budgets) will in all probability be using them too, and thus be negatively affected by prices rising. Also, as the case of Sudan illustrates, when the commodity which from a social perspective seems most worthy of being kept available at a low price makes up the lion part of total subsidy-spending, the risk of pro-poor selectivity is that the reform-effort as a whole gets rather diluted. Furthermore, as is often pointed out in the literature, reducing the price of one form of energy goods relative to another may induce consumers to switch from the more expensive to the cheaper one.[47] When Egypt, for example, in 2012 first introduced the wide price-gap between different calibres of petrol, a large number of consumers who had previously bought 95-octane changed to 92.[48]

For these reasons, governments have taken additional measures aiming to make subsidies more progressive. One such measure has been to let the price of a commodity rise exponentially with the level of consumption, so that it remains (more) subsidised below a certain threshold. The idea is to ensure that basic usage is not beyond reach for anyone, whilst raising the charge of consumption above that level – for which the rich are presumed to disproportionately account.[49] When the Syrian Arab Republic in 2008 drastically cut diesel subsidies, the government issued coupons allowing each household to purchase 1000 litres at a price almost

[41] Fattouh and others, 2016, p. 12.
[42] In 2012, diesel stood for 35 percent of energy subsidy spending, as compared to 13 percent for petrol. Rohac, 2013, p. 5.
[43] Clarke, 2014, p. 4-5; James, 2015, p. 6. The same has more recently been seen in GCC countries: Bahrain, for example, raised the price of high-octane petrol by 59 percent, and that of low-octane petrol by a comparatively modest 38 percent. Qatar, on the other hand, narrowed (but did not eliminate or inverse) the price-difference between high- and low-octane by raising their prices by 30 and 35 percent, respectively. See Fattouh and others, 2016, p. 12.
[44] James, 2015, pp. 1, 9.
[45] The remaining 60 percent were estimated to be more or less evenly shared between the second, third, and fourth income quintiles. Of petrol subsidies, for comparison, only one percent was estimated to go to the bottom quintile, and 86 percent to the top quintile (though it should be noted that the statistics pre-date the reforms which first introduced the price-divergence between different sorts of petrol, meaning that the petrol subsidy as a whole is likely now to be somewhat less regressive) – see Sdralevich, 2014a, p. 15.
[46] El-Katiri and Fattouh, 2015, p. 9; Sdralevich, 2014a, p. 97; Prabhu, 2016.
[47] See, for example, World Bank, 2014, p. 11.
[48] Adel, 2012.
[49] See, for example, World Bank, 2014, pp. 11-12, for a general discussion.

as low as the old one.[50] Egypt intends to launch a smart-card system limiting the amount of subsidised fuel sold per year and vehicle, and let consumption in excess of that amount be market-priced.[51] Seeking to cut electricity subsidies, Tunisia uses a rather complicated "lifeline tariff" formula to assist households who consume only a small amount of electricity.[52] Recent electricity price rises in Saudi Arabia (largely an effect of cuts to subsidies of fuels used for power generation) have not affected households using below 4,000 kWh per month.[53] Other countries in the region have adopted similar precepts to guide electricity-pricing.[54]

The most obvious disadvantage of bringing about consumption-level-targeting systems of this sort lies in the administrative costs and encumbrances it may entail – especially, perhaps, with regard to non-networked forms of energy. The delay in implementation of Egypt's smart-card system seemingly testifies to this.[55] Furthermore, the pro-poor credentials of below-threshold subsidies are not, at closer inspection, necessarily as impeccable as at first they might appear. Though it is true that *per capita* energy consumption is typically higher amongst the rich, this is not always (equally) true with regard to *per household* consumption, for the simple reason that poor households – especially in rural areas – tend to be larger.[56] Limiting the amount of a subsidised (or more subsidised) commodity available per household is therefore not unproblematic. It is probably safe to presume, furthermore, that poor households often own fewer vehicles than do richer ones, meaning that a per-vehicle quota could be similarly flawed. With specific regard to networked utilities, the fact that the poorest in many cases do not have access to such in the first place implies that they may gain little from lifeline tariffs.[57]

Since the policy-tools so far outlined – avoiding to raise the price of energy sources the poor use, and leaving in place basic-level consumption subsidies – are rather blunt, policy-makers have also sought to reform energy subsidies by more directly targeting particular groups. For instance, Jordan has reduced electricity subsidies first and mostly for selected consumers, including banks, whilst sparing others, such as the agricultural sector.[58] Egypt has also targeted different users differently. For example, though the cost of heavy fuel oil went up by 40 percent for bakeries and food producers following the 2014 subsidy-cut, they still obtain it 30-40 percent cheaper than do other customers.[59] Egyptian fertiliser producers, similarly, pay far less than other industrial users for natural gas.[60] Directly targeting individuals or households, as opposed to sectors of production, would almost certainly be more complicated, though Egypt apparently hopes to do so in the future.[61] The idea has reportedly also been entertained in Saudi Arabia.[62]

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[50] IMF, 2010, p. 10.
[51] Mounir, 2015.
[52] Cuesta and others, 2015, pp. 8-9; IMF, 2014b, pp. 23, 52.
[53] Fattouh and others, 2016, p. 10.
[54] For Jordan, see IMF, 2013c, p. 34; for Egypt see James, 2015, p. 8.
[55] Cairo Post, 2015.
[56] A point made in Arze del Granado and others, 2012, pp. 2239-2240.
[57] Another point made in Arze del Granado and others, 2012, pp. 2239-2240. This may not be too much of a problem in the four Arab countries referred to above where lifeline electricity tariffs have been implemented (Tunisia, Saudi Arabia, Egypt, and Jordan), since 97.7to 100 percent of their respective populations, according to World Bank, 2016, have "access to electricity". In Sudan and Yemen, for comparison, the respective numbers are 32.6 and 48.4 percent. However, whether access to electricity in all these cases means access to *networked* electricity (i.e. the kind to which lifeline tariffs apply) is unclear.
[58] IMF, 2013c, p. 34; Sdralevich and others, 2014a, p. 98.
[59] James, 2014, p. 5.
[60] James, 2015, p. 8.
[61] The Egyptian minister of planning has been quoted as saying that "[i]n five years fuel will be offered at 80 per cent of its real cost to sections of the population which are deemed to need subsidies, the rest will pay market prices" – see Saleh, 2014.
[62] According to Reuters, 2015b, the deputy chairman of Saudi Arabia's Shura Council economic and energy committee has been quoted to suggest that "the government might...distribute cards allowing some people to purchase fuel at subsidised prices. Such subsidies would be provided to Saudi citizens rather than the large number of foreigners in the country."

III. COMPLEMENTARY SOCIAL ASSISTANCE MEASURES

Whilst reducing energy subsidies incrementally or discriminatingly, as described above, may go a long way towards limiting the negative social impacts of reform, taking additional, complementary measures is necessary in order to compensate those who might be most severely affected. One seemingly effective way of helping people deal with the burden of higher fuel prices is to simply boost their regular incomes. To this end, Syrian public-sector employees were given a generous pay-rise following the fuel-subsidy cut of 2008,[63] as were those in Sudan five years later when fuel prices went up there.[64] In the latter country, the government also announced that the minimum state pension was to be increased.[65] Moves of this sort, however, appear unlikely to be of much value to the poorest, who are seldom on the public-sector payroll or recipients of pensions. It has been estimated, for instance, that the informal sector accounts for 90 percent of employment in rural Sudan,[66] and that only 4.6 percent of elderly persons in the country are effectively covered by an old-age pension scheme.[67]

Governments seeking to support the poor and vulnerable in the context of energy-subsidy reform have therefore also created new social-assistance programmes, and upgraded existing ones. In the Syrian Arab Republic, the diesel-coupons dispensed upon the occasion of subsidies being cut were subsequently substituted with cash-transfers, estimated to benefit around 50 percent of all households.[68] The Sudanese government, in addition to raising public-sector wages and state pensions, declared that half a million poor farmers would be given a one-time grant of approximately $26.[69] Furthermore, in October 2013, it apparently "doubled the social spending budget and scaled up the cash transfer programme, delivering 150 SDG per month to 350,000 poor families instead of 100 SDG per month to 100,000 households".[70] Mauritania in 2012 implemented a cash-transfer programme targeting 10.000 poor Nouakchott families.[71] In Tunisia, the reduction of fuel subsidies was accompanied by an expansion of the country's *Programme National d'Aide aux Familles Nécessiteuses* assisting the vulnerable.[72] Saudi Arabia as well as Bahrain plan to let cash transfers replace the subsidies which are being cut.[73]

Jordan, meanwhile, has introduced a system which makes social assistance directly contingent upon energy expenses: when the price of oil rises above $100 per barrel, households earning less than $14,100 per year are given a cash-transfer.[74] Egypt in 2015 began implementing two new cash-transfer programmes, *Takaful* and *Karama*. The former of them is *conditional,* meaning that beneficiaries are obliged to make "human capital investments" by ensuring, amongst other things, that their children attend school. Morocco has had a conditional cash-transfer programme – *Tayssir* – in place since 2008, and is gradually extending it to a larger number of beneficiaries.[75] Important to remember in this respect is that inflation, which often follows

[63] Sdralevich and others, 2014a, p. 87.
[64] James, 2014, p. 6.
[65] James, 2014, p. 6.
[66] African Development Bank and others, 2012, p. 14.
[67] ILO, 2014, p. 274.
[68] Sdralevich, 2014a, p. 87; IMF, 2010, p. 10.
[69] James, 2014, p. 6.
[70] Deverux, 2015, p. 41.
[71] Sdralevich, 2014a, p. 103.
[72] IMF, 2014b, pp. 23, 62.
[73] Bouyamourn, 2015; Nereim, 2016.
[74] IMF, 2013b, p. 29.
[75] ESCWA, forthcoming.

upon or is aggravated by subsidy reductions, risks undermining the poverty reducing potential of cash transfers if the value of these is fixed in local currency terms.[76]

A vital instrument in governments' policy panoplies, in addition to cash transfers, are food subsidies. Arriving at an exact definition of food subsidies is even more difficult than it is to definitely delineate energy subsidies, since food subsidies too can be either direct or indirect, and are usually quite inseparable from wider agricultural, trade, and food-security policies. Energy and food subsidies are sometimes conceptualised as two sides of one coin; as two essentially similar aspects of the same "subsidy problem" to be overcome.[77] This, however, is somewhat specious: though food and energy subsidies alike often disproportionately benefit the well-off, the former are usually far less regressive, and have historically claimed a significantly smaller part of government spending.[78] Moreover, reducing or abolishing food subsidies in a context of rising energy prices (and consequent food price inflation) risks subjecting people to double misfortune.

Understandably, therefore, governments have often done the opposite, and, so to say, replaced one kind of subsidy with another. The Mauritanian authorities, for example, increased the number of shops selling subsidised food with over a fifth when it raised fuel prices.[79] In Jordan, after fuel subsidies were cut in 2012, "[t]he government appropriated JD 225 million for food subsidies in Fiscal Year 2013, the largest expenditure on food subsidies in the past 30 years".[80] Egypt's food-subsidy programme long consisted of two pillars: the *baladi* bread, free for anyone to buy at very low cost, and the ration-card, allowing holders to purchase a limited quantity of various subsidised food-staples.[81] In conjunction with the energy subsidy reform, however, the government, aiming to make the food-subsidy system more effective, has merged these two components, so that the cheap *baladi* bread is sold only to ration-card holders. The number of subsidised products has also increased (though so has the price of the traditional ones).[82] Public spending on food subsidies has (in nominal terms) risen by almost 14 percent since the financial year 2013-2014.[83]

Much as it may in theory seem advisable to simply abolish energy subsidies and use the resources thereby saved for the purpose of providing cash-transfers or food-subsidies, it must be remembered that doing so in a way that actually improves the lot of the poor and enhances social equity requires adequate information and policy infrastructure. Channelling effective assistance to, say, the poorest ten percent cannot be done without knowledge of who the poorest ten percent are, an appreciation of their needs, and a functioning mechanism to reach them. In Yemen, notably, when subsidies were cut in 2014, "the government promised to redirect any savings made from subsidy cuts...towards welfare payments to the poorest". These welfare payments, however, largely failed to materialise – leaving the poor utterly exposed to the ravaging inflation which followed the fuel price increase.[84]

Civil society groups operating in a number of other Arab countries have expressed profound concern about the lack of data and population-registries, pointing out that such administrative deficiencies undermine

[76] Devereux, 2015, p. 41, mentions that the problem of cash transfer diminishing in value following subsidy reform featured in Yemen 2014. Likewise, the Sudanese government's decision to raise the monthly value of cash transfers from 100 SDG to 150 SDG should be seen in light of the fact that consumer inflation was at the time very high in the country, as discussed later in this paper.
[77] See, for example, Rohac, 2013.
[78] See, for example, Silva and others, 2013, pp. 112, 135-136; Sdralevich, 2014a, pp. 13-14.
[79] Sdralevich, 2014a, p. 103.
[80] Kawamura, 2015, p. 90.
[81] Trego, 2011, pp. 668-669; and World Food Programme, 2013, pp. 25-26.
[82] Ecker and others, 2014.
[83] Farid, 2015.
[84] IRIN, 2014. Just why the welfare payments were not disbursed as intended is, according to the same source, "a matter of dispute".

efforts to identify and assist the most vulnerable.[85] In Egypt, 19 percent of poor households have been reported not to hold food-subsidy ration-cards.[86] That raises questions about the ability of these to alleviate the situation of those affected by higher energy prices (especially, of course, since the *baladi* bread is no longer universally accessible). The Egyptian authorities are, however, making efforts to improve coverage and targeting of the food subsidy programme, as well as of other social assistance schemes, by establishing a unified national registry.[87] Tunisia's government, along the same line, is implementing a system of unique social identification numbers, which will form the basis of future targeting.[88]

Though social assistance of the sort here described is the most effective way of alleviating detrimental social impacts of subsidy reductions in the short term, it is important to remember that the medium and long terms require more comprehensive and rights-based systems of social protection, as stipulated in the ILO Resolution 202 laying down the concept of Social Protection Floors. Such systems must encompass not merely non-contributory grants to the poorest, but more wide-reaching and inclusive structures of social insurance, as well as adequate and universally accessible social services. There are, however, no blueprints laying down how social protections systems of this sort ought to be devised, since needs and desires vary by context.[89]

IV. DISCUSSING THE SOCIAL IMPACTS OF RECENT REFORMS

Gauging the impact of subsidy reform is no exact science. Whether, or to which extent, any given outcome is imputable to a change in the level of energy prices is always difficult to establish, due to the countless additional variables which too may influence developments. Events in Yemen illustrate this well: Whilst it is quite possible to suggest that the 2014 fuel subsidy cuts exacerbated an already bad situation in that country, ascertaining whether things would have turned out differently, and if so to what effect, had the subsidies been kept in place seems almost impossible. Food price inflation, severe poverty, and political tension were, after all, certainly on the rise prior to the subsidy cuts already. In the case of the Syrian Arab Republic, similarly, one could argue that the 2008 fuel-subsidy cuts aggravated the challenging economic situation many citizens already found themselves in, and that this laid the ground for war[90] - but again, rivalling explanations abound.

More recently, energy subsidy reforms have taken place in a context of plummeting energy prices on the world market: between July 2014 and December 2015, crude oil, to the surprise of many, fell by almost 70 percent. That has doubtless affected the reforms' social impacts – though in very different, and sometimes contradictory, ways. Basically, net importers of energy benefit from the value of it declining, whilst net exporters lose out. It follows that some countries in the region have gained from developments on the world market, and that others have not. This distinction is somewhat blurred by the existence of marginal importers/exporters, whose status may vary from one year to another. Furthermore, there is considerable "spill-over" of energy-derived revenue from exporting countries to importing ones in the shape of guest-workers' remittances and government-to-government aid, meaning that lower world-market prices may not be unambiguously beneficial for importing countries. Despite these caveats, though, it remains essentially the case that countries exporting large amounts of energy have, on balance, been negatively affected by the price of it going down, and that the opposite is true with regard to importers.

[85] Zaid and others, 2012, pp. 3-5.
[86] World Food Programme, 2013, p. 28. The same source found that 73 percent of non-poor households *do* hold food-ration-cards.
[87] World Bank, 2015.
[88] IMF, 2014b, pp. 23, 62.
[89] On the issue of social protection systems in the Arab region, see, for example, ESCWA, 2014.
[90] See, for example, Cuyler, 2015, for a discussion.

Countries whose energy consumption is contingent upon importation started reducing subsidies when prices at the world market were high. The subsequent drop-off has made it easier – or, perhaps, possible – to persist with these reforms. In importing countries where prices have been raised but remain controlled, cheap energy implies a direct saving for governments: the remaining subsidy dwindles and becomes less onerous to sustain.[91] If global market prices dip below the fixed domestic ones, governments could even end up making a profit![92] This, of course, will strengthen their capacity to finance social protection measures as well as other initiatives to promote growth and development. It may also entail that residual subsidies will be cut more slowly (since the fiscal burden of keeping them will weigh less heavily) – though governments could also feel temped to introduce market prices sooner (whilst they are low) rather than later.

In those importing countries where automatic price-adjustment mechanisms have been put in place, so that international ups and downs are transmitted to the domestic markets (albeit in some instances with an inbuilt delay to "smooth" the effect), consumers benefit in a more direct sense, as they pay less when filling their cars or – considering indirect effects of e.g. lower transport costs – buying other goods and services. Governments too, though, will in such contexts have found the low global prices helpful, as the need to provide compensation has been lesser than would it have been had international prices stayed high following subsidy-abolition. Jordan, for instance, has not had to disburse the promised oil-price-contingent cash-transfers.[93]

Exporting countries, for their part, are in a slightly different position. When energy prices are high, the indirect (opportunity) cost of having subsidies in place is high as well – but so are the export revenues, and thus the ability to (indirectly) finance the subsidies. When prices are low, export revenues and the indirect cost of subsidies decline in tandem. Higher subsidy-costs, in other words, are in a sense compensated for by higher export-revenues, and lower export-revenues by lower subsidy-costs. This set-up guarantees that the incentive to cut subsidies is always quite weak. Recently, though, exporting countries have nevertheless moved towards subsidy reform. How much of the added income thereby generated will be devoted to social assistance and related measures is hard to say, but a substantive part will in many national contexts – considering present budget deficits and the pursuit of economic diversification – presumably be ear-marked for fiscal consolidation and capital investment.

Importantly, the global price of food has, as is normal, to a degree shadowed that of energy. From March 2014 to August 2015, the UN Food and Agriculture Organization food price index dropped by almost 30 percent.[94] Since Arab countries tend to be net importers of food, this may have reduced the inflationary pressure which typically follows from energy subsidy reform, and might thus have mitigated its potentially detrimental social impact. In Sudan, transport costs increased by more than half following the 2013 subsidy cut, which, as mentioned, mostly affected the price of diesel.[95] This pushed up consumer price inflation (which was very high already). According to one source, "the prices in Khartoum of flour, eggs and sugar were estimated to have risen by 25 per cent, 12 per cent and 8 per cent in a week, respectively; and fruit and vegetable prices rose even more sharply".[96] By September 2015, however, following more than year of

[91] The Government of Egypt has declared that spending on fuel subsidies will fall by almost 43 percent from 2015/16 to 2016/17, mainly due to lower international prices. See Farouk, 2016.
[92] As happened, for instance, in Sudan after the 2008 financial crisis - see IMF, 2012b, p. 8.
[93] IMF, 2015b, pp. 18, 47.
[94] Clinch, 2015.
[95] James, 2014, p. 4.
[96] James, 2014, p. 7.

falling commodity prices on the world market, the rate of inflation, which had reached 47 percent in July 2014, was down to a relatively modest 11 percent.[97]

Annual consumer price inflation in Egypt increased from 8 to 11 percent when subsidies were cut in July 2014. It did not, however, rise much further than that during the months which followed, and in November 2014 it receded to 9 percent.[98] Average inflation that year landed at 10 percent, a level at which it remained during 2015.[99] This was not in excess of the rate experienced in 2013, and lower than might perhaps have been expected considering that annual transport inflation jumped from just above 5 to almost 30 percent following the 2014 energy price hikes (which too, as mentioned, implied a considerable increase in the price of diesel), before stabilising at around 22 percent. [100]

Plausible as it seems that consumer inflation has to some extent been checked by falling global food prices, there are many additional factors probable to have impacted as well. For instance, Egypt, after cutting energy subsidies, unexpectedly raised interest rates in order to subdue inflation.[101] Other countries, such as Saudi Arabia, have long maintained fixed exchange rates against the U.S. Dollar, thereby ensuring consumers' access to relatively cheap imports.[102] Food subsidies and related measures, as discussed in the previous section, can also serve to keep prices down, and imply that rises which do occur may be highly asymmetrical. In Jordan, for instance, consumer price inflation increased by 5.6 percent during 2013 – an outcome attributed to higher energy and transport prices following the 2012 subsidy cut. However, whereas vegetables and fruits (which are not subsidised) shot up in price by 14-17 percent, cereals and cooking-oil (which are) actually went down somewhat.[103] Furthermore, though the pass-through rate of global food prices in Arab countries, despite food subsidies and the like, is quite high overall, consumer prices have traditionally been characterised by a certain "downward stickiness", meaning that they have tended to rise but not to fall with global prices.[104] It could be, thus, that any relative absence of food price inflation following recent fuel subsidy cuts may in fact have been due to global food prices *not having risen* rather than to their having declined.

It should be remembered that even if falling food prices do protect many vulnerable groups from the worst impacts of subsidy cuts, for others the reversed may apply. Specifically, those who directly or indirectly earn their living from food production are at risk of facing a dual setback. In relation to the commodity boom of 2007-2008, farmers in Arab countries "pointed out that higher crop prices did not compensate for higher input prices, resulting in break even or negative returns".[105] This gives an ominous indication of how food producers could be affected by a combination of higher input-prices (consequent to energy subsidy cuts) and *falling* (or merely stagnant) output prices. Again, though, numerous factors – including direct and indirect subsidisation of the agricultural sector, and the fact that many food-producing households are net food-buyers[106] – conspire to complicate the picture.

[97] Reuters, 2015a.
[98] Central Bank of Egypt, 2015.
[99] IMF, 2015a, p. 44.
[100] Pigat, 2015, p. 2.
[101] Reuters, 2014a.
[102] Of course, keeping interest rates and/or the exchange rate high may at the same time imply a range of direct and indirect problems, both in the short term and further ahead.
[103] Jordan Times, 2014.
[104] Ianchovichina and others, 2012, pp. 5, 18, 20-25.
[105] El-Dukheri and others, 2011, pp. 157-158.
[106] See, for example, numerous chapters in International Food Policy Research Institute and International Fund for Agricultural Development, 2007. For an example of more recent developments relating to agricultural subsidisation in Egypt, see Reuters, 2015c.

V. CONCLUDING THOUGHTS

This paper set out by briefly discussing the nature of energy subsidies, their basic (purported) pros and cons, and the social impacts which may ensue from reform. To demonstrate both the pernicious consequences of subsidising energy in the first place and the considerable dangers associated with ceasing to do so, the paper thereafter related how reforms in Yemen may have worsened that country's already parlous situation by effectuating further price-increases. Having thus explained the dilemma in which policy-makers find themselves, the paper asked whether there is a way out.

The subsequent two sections looked at how countries in the Arab region have sought to reduce or abolish energy subsidies whilst minimising inimical social impacts. Firstly, efforts to do so by cutting energy subsidies in certain ways and by adapting them were explored. It was shown that policy-makers are often implementing reforms with considerable thoughtfulness and discretion; assuming the role of surgeons rather than of axmen. Still, whilst this circumspect approach could be expected to greatly reduce unintended or harmful outcomes, it cannot pre-empt them. Secondly, the paper turned to social-assistance measures put in place, or upgraded, with a view to mitigate social impacts. Clearly, endeavours have been made to provide cash-transfers and food subsidies to (amongst others) those who might be negatively affected by energy subsidy reforms. Whether these efforts are sufficient, though, is harder to say. Crucially, their effect will depend not only on their scope and ambition, but also, as discussed, on the availability of data and infrastructure. And, as mentioned, the longer term will require more comprehensive systems of social protection.

In practice, the subject of these two sections – how to cut subsidies and how to temper the impact of doing so – is a matter not only of ensuring that the poor and vulnerable are protected, but also of political-economic imperatives. The exigencies of the former may not always, or even most of the time, align with those of the latter. What benefits the rural poor, for instance, is not necessarily what benefits the more politically powerful urban middle class, and vice versa. This simple reality may explain why reform-efforts are not always carried out in quite as pro-poor a manner as would perhaps seem possible: governments, naturally, must balance the interests of different constituents. What is of essence, though, is that policy-makers' understandable concern for the most visible and vociferous stakeholders' demands does not, as reform-efforts proceed, imply that the welfare of more marginalised groups is neglected.

Moving on to tentatively discuss the impacts of recent reforms, the paper suggested that although definitively establishing what is and what is not an outcome of any particular factor is frequently difficult, it seems likely that falling commodity prices during the latter half of 2014 and 2015 have for many reforming countries been a blessing: market-priced energy has been cheaper for consumers, governments still subsidising energy have had more resources available to cushion the impacts of higher energy prices, and food price inflation may have been moderated. Importantly, though, the story for energy-exporting countries is somewhat different, and even within importing countries some actors – notably food-producers – could be detrimentally affected.

Perhaps even more importantly, global commodity prices might at any moment, and due to whatever unforeseen reason, turn upwards again. Policy-makers, especially in net importing countries, must prepare for such an event: the question, if history is any guide, is *when* rather than whether it will materialise. Governments may otherwise, come the eventual rebound, find themselves with no choice but to raise or reinstate energy subsidies, and thus at a later point have to start all over again with the reforms.

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