

Policy Analysis

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Solving Egypt's Subsidy Problem

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Executive Summary

Subsidies to consumer goods, including fuels and food, account for almost one third of Egypt's public spending, or 13 percent of the country's gross domestic product (GDP). Not only are subsidies highly ineffective in helping the poor, they are also an increasingly unsustainable drain on the country's public finances and its foreign reserves. Yet reform remains a thorny issue in Egypt's unstable political environment—mostly because subsidies are the main instrument of social assistance used by the government.

Subsidies to consumer goods and fuels have existed in the country since the 1920s. Various approaches are available for scaling them down or eliminating them altogether. However, most

of the prior attempts to reform the subsidy system in Egypt have failed. Cash transfers targeted at the poor would be a superior policy relative to the status quo.

Eliminating subsidies and replacing them with cash transfers would produce significant savings and would be politically feasible. A successful reform of subsidies will have to be accompanied by a series of complementary reforms, which would reduce food insecurity in the country and improve supply chains in the areas of food and energy by introducing competition. Finally, prudent macroeconomic policies, including a reduction in inflation rates, will be necessary to contain the potential effects of food and energy price hikes on poorer households.

One-third of Egypt's public spending is directed annually toward subsidies.

Introduction

The aftermath of the military coup of July 3, 2013, illustrates that Egypt's journey toward an open political system and a free economy is going to be a long and oblique one. One hopes that Egypt avoids a descent into full-fledged civil conflict, that the horrific instances of violence seen after the military takeover come to an end, and that the country's leadership responds to popular demands for expanded access to economic opportunity and accountable political institutions. Besides the powerful military, angry religious groups, and divisive politics, Egypt, the most populous Arab nation, is plagued by a more mundane, yet equally pressing, problem—its unsustainable subsidy spending.

One third of Egypt's public spending is directed annually toward subsidies of various consumer goods, ranging from fuels to tea. The fiscal burden of subsidies amounts to more than 13 percent of gross domestic product (GDP), and the imports of commodities subsidized by the government are depleting the country's foreign reserves, which remain at stable levels only because of the inflow of aid and short-term loans from the Gulf countries in the aftermath of the military coup. Unless such inflow continues indefinitely, the country's fiscal position will worsen and the existing subsidy system will prove unsustainable.

Why is the Egyptian subsidy system so wasteful and inefficient? First, the government controls prices of subsidized commodities and keeps them below market-clearing levels, stimulating demand. Second, to avoid the shortages that would normally result from price ceilings, the government intervenes on the supply side to increase the total supply of subsidized commodities. This is done by providing cheap inputs to private suppliers or by supplying some of the commodities directly. For example, to keep subsidized bread available, the Egyptian government provides subsidized wheat flour, which it buys on world markets.¹

As a result, the price subsidies lead to

overconsumption, distort the supply of commodities, deter competitive entry, and lead to poor quality and unreliable service. Because the subsidy system distorts prices, it also invites arbitrage, black markets, and smuggling.²

Arbitrage occurs because there are markets on which the subsidized commodities are traded at unsubsidized prices. One example is liquefied petroleum gas (LPG), which is sold to Egyptian households bottled, at a price of \$1.14 per 12.5-kg bottle. However, LPG bottles often end up being resold on the black market at almost tenfold the price.³

Moreover, for the most part, the subsidies are not targeted. If the purpose of the subsidies is to alleviate poverty, they achieve that goal only imperfectly by simultaneously subsidizing the consumption of people who are not necessarily needy. Because the wealthy consume more, subsidy spending benefits those segments of the population much more than the poorer ones.

Subsidies are embedded in Egypt's political landscape, and in the Arab world more generally, as they are widely used as a tool of social assistance. Attempts to change the subsidy system in the past were usually met with popular resistance—the most famous being the violent riots in Egyptian cities following President Anwar Sadat's decision to cut food subsidies in 1977.

Subsidized goods in Egypt include petroleum products and foodstuffs with high caloric and low nutritional value, such as bread, wheat, rice, sugar, and cooking oil. Artificially low prices for consumers boost demand. Excessive consumption of many subsidized commodities produces negative externalities, ranging from environmental to public health issues.⁴ Furthermore, it is unclear that price subsidies help mitigate potential market failures in the supply of subsidized commodities. On the contrary, price subsidies have adverse effects on the supply, particularly downstream,⁵ where they discourage new entry and render markets less competitive—not to mention the predictable shortages created by keeping prices below

market-clearing levels.⁶ Owing to decades of subsidies, the Egyptian economy is also extremely vulnerable to movements in world commodity prices, and economic access to food is still a concern, with caloric deprivation tightly correlated with poverty levels.⁷

Why do subsidies exist? Some scholars argue that the combination of bad institutions that encourage patronage and a lack of administrative capacity makes subsidies an attractive form of transferring wealth, especially in the absence of an alternative system of income distribution.⁸ That seems to apply not only to Egypt but also to other low- and mid-income countries, which also use commodity subsidies—in spite of their blatant inefficiency. However, Egypt’s case distinguishes itself by the magnitude of the subsidy spending, which is larger than the government’s spending on health care and education combined.

At a technical level, reforming subsidies seems a straightforward task. Instead of subsidizing prices of commodities, the government could direct welfare assistance in the form of cash to households in need. However, such targeted change may not be feasible in the short term, largely because of the political instability in the country and because of a lack of administrative capacity needed to identify poor households and target the transfers to them. Still, there is space for immediate reform that would create a transfer program based on merit over a longer time horizon while, in the meantime, replacing subsidies with untargeted transfers.

Even under very conservative assumptions, eliminating all food and energy subsidies would create large savings that could be used to compensate the population. If cash transfers to the population are unconditional, and if 50 percent of the savings from the subsidy reform are used to compensate the population, then the average Egyptian household would receive \$373 annually. This is not a trivial amount in a country with average per capita income of \$6,700⁹ and 25.2 percent of the population living below the poverty line of \$440 annually.¹⁰ Perhaps an

even larger proportion of the savings could be used to compensate the population, generating scope for larger per-household payments. These would amount to \$522 per household annually if 70 percent of the fiscal savings are used for compensation. Obviously, should larger fiscal savings be sought, the available compensation would become smaller (\$224 per household annually if only 30 percent of the saved resources are redirected toward compensating the population).

With a simple system of discriminating between households based on their wealth or income, significant savings are possible while maintaining fairly generous cash transfers directed at the poorer segments of the population. Assuming that only the three poorest quintiles of Egyptian households receive the cash transfers and 50 percent of the savings are used for transfers, then the average per-household compensation would be \$622.

A successful reform of subsidies will be constrained by vested interests, a lack of administrative capacity, and the popular perception of the government as noncredible. Nevertheless, reform is possible, and economic reality will make some form of policy change inevitable. Successful reform will have to be thorough, fast, and simple. Its compensation scheme must be directed at the population at large, and complementary reforms are needed to improve the functioning of markets in currently subsidized commodities.

Background

The current subsidy system in Egypt dates back to the hardship of the years following World War I, when the government started importing large quantities of wheat and selling them at subsidized prices in government-owned shops.¹¹ World War II saw the introduction of rationing as a temporary wartime measure intended to cope with the scarcity of basic commodities including wheat and sugar. After the British withdrawal in 1956, subsidies to food, transport, housing, energy, water and health care—and also to soap

Instead of subsidizing prices of commodities, the government could direct welfare assistance in the form of cash to households in need.

Actual spending on subsidies in 2012–2013 has been increasing.

and cigarettes—were seen as a key part of the social contract in the country.

The agrarian reform of 1952 was a catalyst in that process, since it led to the direct involvement of the government in practically all aspects of food production and distribution.¹² Rationing was initially used, then removed, and finally reintroduced in 1966. It is worth stressing that the government-operated food industry did not always lose money. Because it functioned as a monopoly, it was able to be profitable in the early years of the 1970s, prior to the hikes in prices of inputs in 1973 and 1974.¹³

As a result, expenditures on subsidies grew steadily to unsustainable levels until the 1980s, when the government introduced a series of reforms that brought down the absolute and relative spending on subsidies, at least temporarily, and also limited the number of commodities that were subject to subsidization.

What Is Subsidized, and by How Much?

The largest segment of Egypt’s subsidy spending is directed toward energy and food. The International Energy Agency (IEA) estimates the subsidy rate on domestic fuels in Egypt to be very high—over 50 percent—although by regional standards, Egypt is not an outlier in the amount of subsidies it disburses.¹⁴ In 2010, subsidization rates in Algeria, Iraq, and Iran were higher than in Egypt. Unsurprisingly, this imposes a large burden on the public finances of those countries.

In the fiscal year 2011–2012, subsidies to food and fuels alone amounted to roughly \$18 billion. Table 1 provides information about the absolute amount of subsidy spending, which accounts for the largest part of government expenditure in the Egyptian economy, starting with the fiscal year 2007–2008. Subsidies to petroleum products represent almost three quarters of the total spending on subsidies. The remainder is directed toward spending on food subsidies, most notably bread. Apart from that, electricity consumption is subsidized as well, by a relatively modest amount of \$720 million in the fiscal year 2012–2013.¹⁵ The numbers for 2012–2013 reflect only the budget appropriations, not the actual spending. In the light of ongoing developments in the country, the reduction in spending on fuel subsidies foreseen in the budget is unlikely to be achieved. If anything, estimates show that actual spending on subsidies in 2012–2013 has been increasing relative to previous fiscal years.¹⁶

Figures 1 and 2 provide a breakdown of subsidy spending based on the 2012–2013 budget. The largest proportion of fuel subsidies is channeled toward diesel oil, which is used in commercial transport. According to the approved budget for 2012–2013, its share of total subsidy spending is falling markedly relative to previous budgets, in which it represented up to one half of fuel subsidy spending. This fall is due to the planned introduction of rationing. The second most important item on the fuel subsidy bill is

Table 1
Spending on Selected Subsidies (Millions of US\$, Current Prices)

	2007–2008	2008–2009	2009–2010	2010–2011	2011–2012	2012–2013
Food (GASC) ¹	2,356	3,019	2,410	4,691	4,338	3,811*
Petroleum	8,632	8,983	9,531	9,696	13,687	10,029*

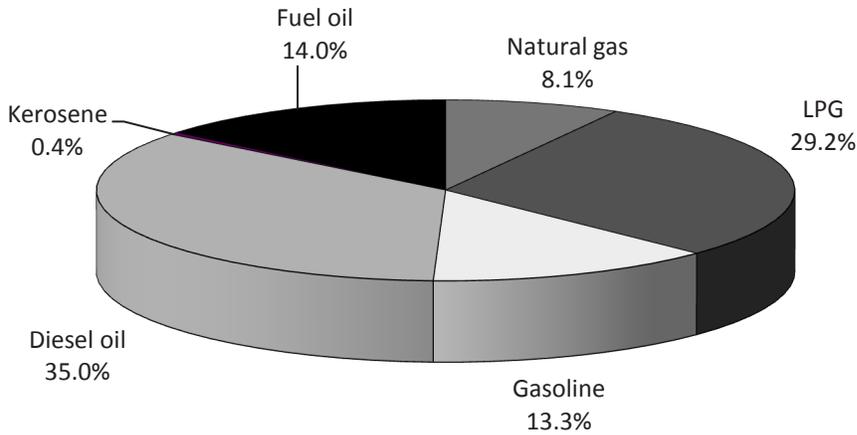
Source: Ministry of Finance.

Note: The exchange rate is US\$ 1=LE 6.98 (May 16, 2013).

¹ General Administration for Supply of Commodities, in charge of food subsidies.

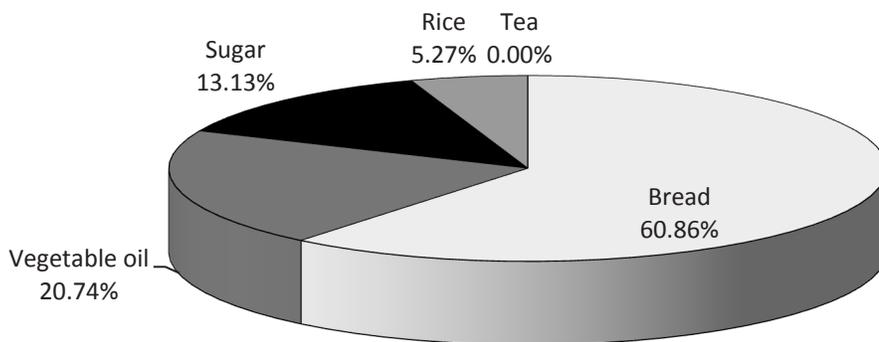
*Budget appropriations only (actual spending is likely to be higher).

Figure 1
Structure of Petroleum Subsidies in 2012–2013 Budget (out of a total of \$10 billion)



Source: Ministry of Finance (2012).

Figure 2
Structure of Food Subsidies in 2012–2013 Budget (out of a total of \$3.8 billion)



Source: Ministry of Finance (2012).

liquefied petroleum gas, which is distributed in bottles to the population and used for cooking. Figure 2 reveals that the bulk of food sub-

sidies are directed toward bread and the main input into its production, wheat flour, followed by cooking oil, sugar, and rice.

Opportunity costs may amount to roughly twice the recorded financial costs of subsidies.

**Table 2
Government Spending on Subsidies (since 2007)**

	2007–2008	2008–2009	2009–2010	2010–2011	2011–2012	2012–2013
Subsidies, grants and social benefits (millions of US\$)	17,801	20,095	20,395	24,107	29,291	20,894*
As a percent of GDP	13.8	13.5	11.8	12.2	13.3	N/A

Source: Ministry of Finance (2012).

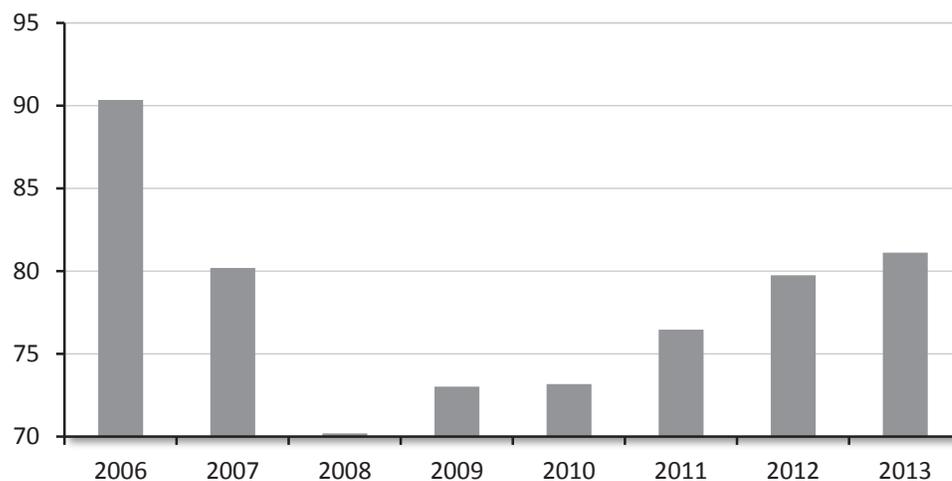
*Budget appropriations only (actual spending is likely to be higher).

It is worth bearing in mind that the direct cost to the public budget, in terms of the outlays by the government toward subsidies, underestimates the real economic costs of subsidies. Economic costs include the alternative uses of scarce resources that are currently channeled into subsidizing commodities. Bassam Fattouh and Laura El Katiri of the Oxford Institute for Energy Studies, for example, argue that such opportunity costs may amount to roughly twice the recorded financial costs of subsidies.¹⁷ And that esti-

mate itself ignores the dynamic effects that subsidies have on the broader economy by encouraging overconsumption of certain sources of energy and food and discouraging the entry of potential market competitors.

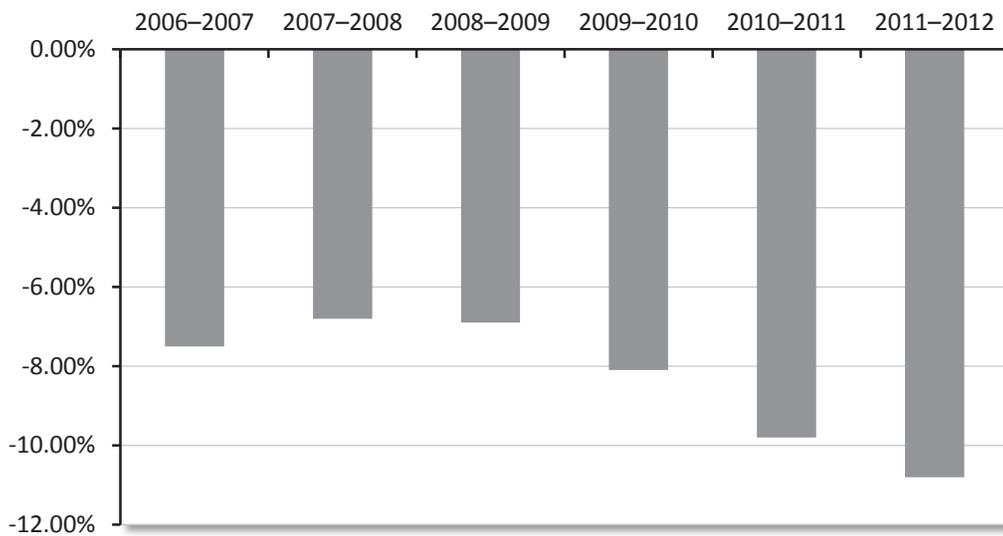
However that may be, subsidies to commodities account for a large fraction of government spending and more than 13 percent of GDP (Table 2). If it were not for the subsidies, the government would run sizeable budget surpluses. As Figures 3 and 4 reveal, the fiscal situation of the country has been

**Figure 3
Public Debt-to-GDP Ratio (2006–2013)**



Source: World Economic Outlook.

Figure 4
Deficit as Percent of GDP (since 2006)



Source: Central Bank of Egypt.

deteriorating since the onset of the global financial crisis in 2008, with budget deficits growing to more than 10 percent of GDP. At the present time, the country’s financing needs are met through assistance from Saudi Arabia, Kuwait, and the United Arab Emirates, which promised Egypt a total of \$12 billion in loans, grants, and fuel shipments after the removal of President Mohamed Morsi from power.¹⁸

Apart from the effect on public debt, which is mostly financed domestically, subsidies are driving the outflow of foreign reserves from the country because many of the subsidized commodities, including diesel oil and wheat, are imported by the government. The situation has been worsening in recent years, particularly with regard to diesel oil,¹⁹ and contributed to the rapid depletion of the country’s foreign reserves that occurred earlier this year.²⁰

The magnitude of the fiscal problem that subsidies generate is driven by the effects that artificially low prices have on demand for subsidized commodities, resulting in over-

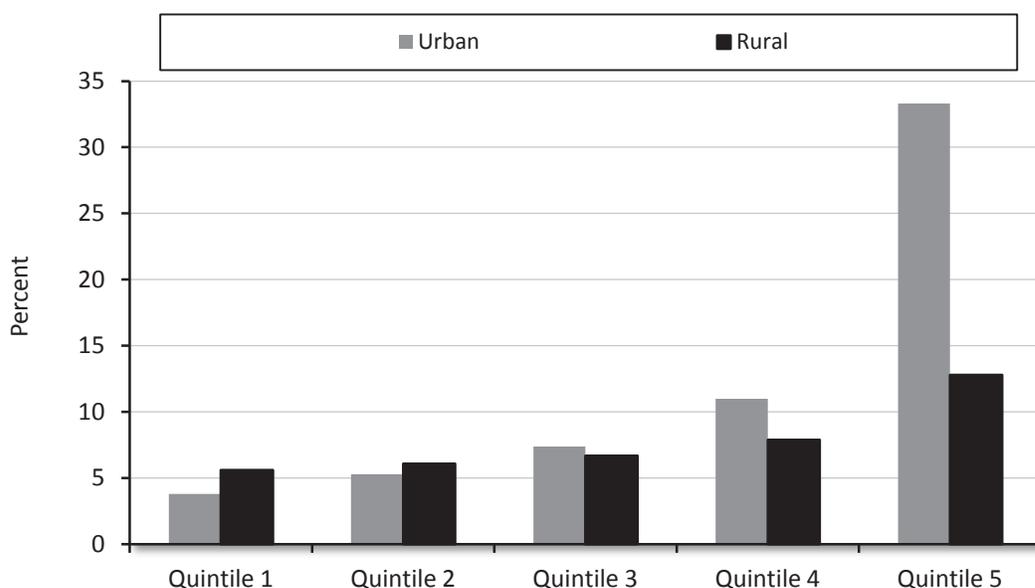
consumption and leakages into black markets. While energy intensity—that is, units of energy per unit of GDP—has decreased in most industrialized countries around the world, it has been increasing in countries that use energy subsidies, including Egypt.²¹

Besides their fiscal costs, subsidies to consumer goods and fuels induce a number of other distortions, all of them acute in the Egyptian context. For example, a decisive proportion of the benefits from subsidies accrue to wealthier segments of the population. That not only inflates the costs of subsidies as a social safety net, but it also undermines their purpose as an instrument for helping those in need.

In particular, Egypt’s energy subsidies are very regressive.²² As Figure 5 illustrates, in both urban and rural areas, the top 20 percent of households (quintile 5 on Figure 5, measured by expenditures) receive, by far, the largest share of the total subsidy spending, and the share of benefits received by other households decreases with their wealth, proxied by household expenditures. This discrepancy

Egypt’s energy subsidies are very regressive.

Figure 5
Distribution of Petroleum Subsidies by Expenditure Quintiles in Urban and Rural Areas of Egypt (in percent of the total petroleum subsidy)



Sources: Soheir Abouleinein, Heba El-Laithy, and Hanaa Kheir-El-Din, *The Impact of Phasing Out Subsidies of Petroleum Energy Products in Egypt*, Working Paper No. 145, Egyptian Center for Economic Studies (2009); Central Agency for Public Mobilization and Statistics (CAPMAS), *Household Income, Expenditure and Consumption Survey, 2004/2005*, CAPMAS (2006).

is stronger in urban areas, where it is likely driven by multiple-car ownership among wealthiest households. In urban areas, the top quintile of the income distribution receives eight times as much in energy subsidies as the bottom quintile. Unsurprisingly, the gasoline subsidy is the most regressive.²³

Figure 6 reveals that the benefits from food subsidies are distributed more evenly than energy subsidies across different segments of the population. Food subsidies, however, tend to have an urban bias, too.²⁴

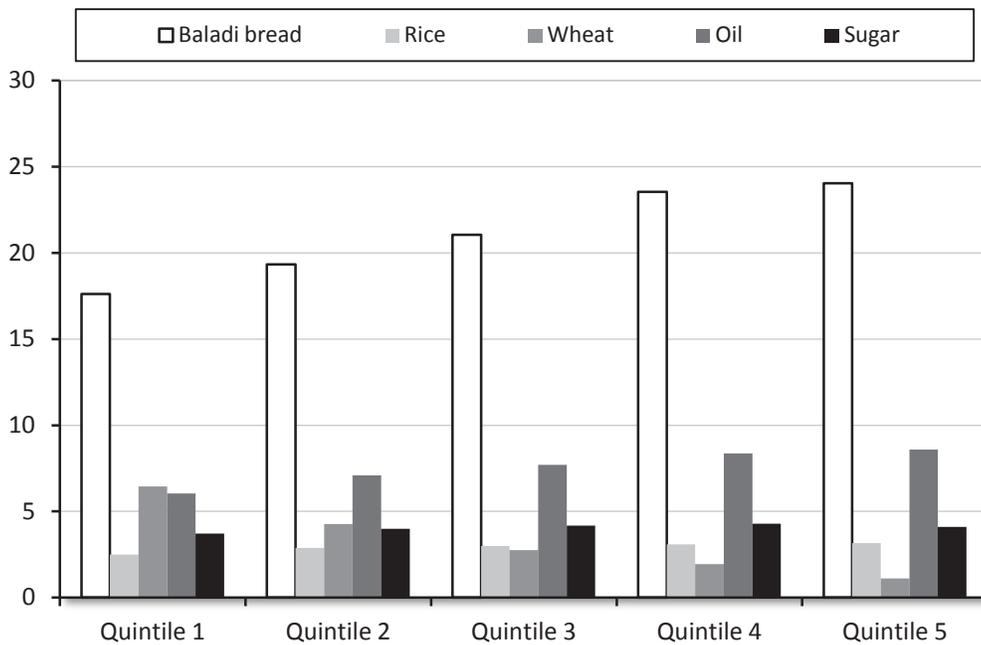
Leakages—or the amount of commodities that are resold on black markets—are also significant. They represented 31 percent of the supply in the case of the basic coarse (*baladi*) bread in 2008–2009 (down from 40.8 percent in 2004–2005), and 20 percent in the case of sugar and cooking oil.²⁵ A policy brief by the Egyptian Center for Economic Studies reports significantly higher estimates.²⁶

A report by the World Bank concludes that “[i]f leakages are eliminated and coverage is narrowed, the government of Egypt (GoE) could save up to 73 percent of the cost of food subsidies.”²⁷

In any event, some of the subsidized foodstuffs are inferior goods, and are substituted with higher quality alternatives by households at higher income levels. In other words, food subsidies can be seen as “self-targeted” in the sense that poorer households will choose to purchase larger quantities of such goods than wealthier households and therefore capture a larger portion of the subsidy spending. This is particularly true following the reforms of the 1980s and 1990s, which eliminated subsidies to food items that were consumed mostly by wealthy Egyptians.²⁸ In principle, the government could replicate such “self-targeting” in the area of energy subsidies as well, by cutting the most regressive of subsidies while keeping

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Figure 6
Per Capita Absolute Annual Benefits from Food Subsidies (in US\$)



Source: Soheir Aboulenein, Heba El-Laithy, Omneia Helmy, Hanaa Kheir-El-Din, and Dina Mandour, *Impact of the Global Food Price Shock on the Poor in Egypt*, Working Paper No. 157, Egyptian Center for Economic Studies (2010).

in place those that are better targeted at the poor—namely the LPG.²⁹

A History of Failed Reforms

Throughout the 20th century, Egyptian governments attempted repeatedly to reform or eliminate wasteful subsidies. In 1977, President Anwar Sadat introduced a famous early reform of food subsidies. This happened as part of negotiations with the International Monetary Fund (IMF)³⁰ and followed almost a decade of growth of increases in subsidy spending, during which subsidies covered a range of new foodstuffs, including corn, rice, frozen fish and meat, and other items.³¹

Although the mass protests were famously dubbed “bread riots,” the reform announced in January 1977 neither involved an increase in the price of coarse *baladi* bread nor a number of other staples such as lentils,

beans, cooking oil, or sugar. Subsidies were to be reduced on the more expensive (*fino*) bread—as well as on the low-extraction flour from which it was made—and rice, LPG, gasoline, cigarettes, and tea.³² Riots erupted mainly in Cairo and Alexandria, leading the government to cancel the reforms. Following the riots, the government further expanded the subsidy system.

However, such expansion soon proved to be unsustainable, and in the early 1980s President Mubarak’s government announced a new wave of reforms. Those included:

- Attempts at subsidy targeting by introducing two categories of ration cards, green and red. Red cards offered a lower subsidy on certain foodstuffs.
- Elimination of subsidies on certain commodities, such as meat and fish;
- Reduction of the number of people

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eligible to receive ration cards, from 99 percent of the population in the early 1980s to some 70 percent in 1998,³³

- Phasing out certain commodities and their replacements with less heavily subsidized alternatives; and
- Reduction in the size of subsidized bread loaves (from 168 grams in 1981 to 130 grams in 1991 for the *baladi* bread).³⁴

As a result, the real burden of food subsidy spending fell between 1980 and 1994. However, it started growing in the following years.³⁵

In the first decade of the 21st century, the government launched an extensive energy subsidy reform, increasing the prices of gasoline and diesel oil and putting in place mechanisms for gradual electricity price increases, which took effect between 2005 and 2008. In 2008, natural gas prices increased, and plans were made for a gradual elimination of energy subsidies by 2014. However, these efforts were abandoned in 2009, as the global economic crisis began to unfold. Subsidy spending then increased to its current unsustainable level.³⁶

After the Arab Spring, most attempts to reform subsidies have been short-lived, and subsidy spending has grown. Almost weekly, the government issues a new announcement about subsidy reform. Sometimes such announcements trigger a wave of discontent—like the storming of the Ministry of Supply and Internal Trade by bakery owners in March 2013.³⁷ More often than not, announcements are simply made but never followed through, subsequently eroding the government's credibility in the area.³⁸

To see the haphazard nature of the reform process, consider that in December 2012 the subsidy on 95-octane gasoline—used by the wealthiest Egyptians—was scrapped. Instead of generating the savings that the government had hoped for, however, it induced consumers to shift to 92-octane gasoline,³⁹ thus creating shortages. In March 2013, the government announced an increase of the

prices of LPG by 60 percent for consumers and by 100 percent for businesses.⁴⁰ Since 2012, Egypt has suffered from a shortage of diesel oil, 70 percent of which needs to be imported. Instead of reducing the subsidy on diesel oil, the government is responding to the existing fiscal pressures by selling less fuel, but that is not a durable solution to the problem.⁴¹ More important, the introduction of rationing for fuels that are sold at subsidized prices was delayed until September 2013. Although that measure is not a lasting solution to the subsidy problem, it could alleviate some of the immediate fiscal pressure of the subsidies.

International Experience with Subsidy Reforms

Egypt's subsidy affliction is far from unique, especially in the Middle East and North Africa. The success of reform efforts and the durability of subsidy reforms around the world vary, although examples of unambiguously successful subsidy reforms are few.⁴² In the region, several countries have tried to reform their sizeable subsidy systems with mixed results.

In Tunisia, for example, energy subsidies account for roughly 5 percent of the GDP. There have not been many systematic efforts to eliminate the subsidies—only ad hoc price rises in 2005 and 2007, as well as a cap on subsidies introduced in January 2009. In September 2012, the government increased the price of gasoline by 7.3 percent and diesel by 7.9 percent.⁴³ In Morocco, in spite of several reform attempts, energy subsidies account for roughly 15 percent of government spending, and their absolute amount is roughly twice as much as in 2010.⁴⁴ In Syria, the subsidy reforms adopted prior to 2011 involved the creation of a National Welfare Fund to administer the provision of cash to vulnerable segments of the population. These were put on hold after the outbreak of the civil war in the country.⁴⁵ The Jordanian government enacted far-reaching reforms to the country's

subsidy system prior to 2010. Yet a dramatic increase of spending on energy subsidies occurred in the aftermath of the Arab Spring, from a little more than 1 percent of GDP in 2010 to more than 6 percent of GDP in 2011.⁴⁶ In 2010, the Iranian government put in place a comprehensive energy subsidy reform, attempting to replace one of the largest energy subsidy programs in the world with targeted transfers.⁴⁷ Although the initial phases of the reform, involving quasi-universal cash transfers, were seen as a success, the creation of a means-tested system of social assistance was later aborted. As a result, the existing transfer scheme remains in place but the government is not planning additional moves toward price liberalization.⁴⁸

To find unambiguous reform successes, one needs to look beyond the Middle East and North Africa. A recent IMF report⁴⁹ lists Turkey, the Philippines, Brazil, Chile, Kenya, and Uganda as countries that have successfully enacted reforms in the area of fuel and electricity subsidies, although the size of their subsidy budgets was much smaller than in the case of Egypt. While electricity subsidies in Egypt are relatively minor, useful lessons can be drawn also from the electricity subsidy reforms around the world.

Turkey. Prior to 1990, Turkey's oil sector was run by the government, which set prices administratively, subsidizing prices both for producers and consumers. In 1990, public companies in petroleum exploration and distribution began to be privatized, and price controls were continually relaxed. In 1998, an automatic pricing mechanism was adopted by the government, which set a ceiling on the prices of oil products based on international petroleum prices and the current exchange rate. Though prices were freed, provided that the prices were below the ceilings, significant barriers to entry existed. These favored the public refining company, TRURAS. In 2003, a regulatory agency was set up and government controls of the petroleum market were relaxed. In 2005, fuel prices were fully liberalized. The government did not use cash transfers to compensate the population. Instead,

tax exemptions from both the value-added tax (VAT) and other consumption taxes were introduced for public transport companies, for the LPG used for cooking, and for the use of diesel oil in agriculture.⁵⁰

Similarly, one state-owned company, TEK, dominated the Turkish electricity market, controlling generation, transmission, and distribution. The unbundling of the electricity industry began in 1993, although privatization did not take place until 1999. In 2001, Turkey started further unbundling different state-owned energy companies. In 2008, the government introduced a series of price hikes, as well as a cost-based pricing mechanism that enables further price adjustments at a quarterly basis.⁵¹

Philippines. Until the late 1990s, price setting in the area of energy was politicized. The downstream oil sector was largely controlled by the government, which enacted sizeable subsidies of energy prices. In 1997, the government deregulated fuel prices and liberalized the oil industry. Simultaneously, the government abolished the Oil Price Stabilization Fund, which had been either collecting or paying the difference between actual import costs and the subsidized prices.⁵²

Similarly, in 2001, the government started a major restructuring of the government-run electricity sector, breaking up generation and transmission of electricity and privatizing and liberalizing electricity prices. In 2004 and 2005, significant price increases took place, by roughly 30 percent—although the government has continued to subsidize electricity tariffs for poorer households.⁵³ The government also introduced other compensatory measures, including electricity subsidies for indigent families, university scholarships, distribution of subsidized rice, as well as a conditional cash transfer program.⁵⁴

Brazil. In Brazil, the market in petroleum products was long dominated by the state-owned oil company, Petrobras. The prices for LPG and diesel were consistently below import costs, leading to the government and Petrobras both running sizeable deficits. In the early 1990s, the government proceeded

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with the liberalization of the prices of asphalt and lubricants, followed by gasoline in 1996, LPG in 1998, and diesel in 2001. Since 2002, all fuel prices have been liberalized.⁵⁵ Some compensatory measures were taken—fuel subsidies for thermal power plants in Amazonia were maintained until 2012 and means-tested LPG vouchers were introduced, as well as conditional cash transfers. The latter two were part of the welfare scheme known as the “Bolsa Família.”⁵⁶

Between 1993 and 2003, the Brazilian government proceeded with privatization, changes to electricity pricing, a removal of subsidies, and the establishment of a new electricity regulation agency.⁵⁷ Prior to the reforms, prices did not reflect costs, and the energy sector generated substantial losses, which were traditionally absorbed by the government. Some cross-subsidies remained in place even after the reform, particularly those favoring rural electrification and special rates for poorer households.

Chile. Unlike in other countries, Chilean oil markets had been largely deregulated before the 1990s. In 1991, a fund was established to mitigate the effects of petroleum prices on final consumers. In the early 2000s, the fund ceased to be solvent and required a government bailout of \$62 million.⁵⁸ Over time, the operation of this fund was made more transparent by, for example, explicitly publicizing the pricing formula that was being used. Its scope was also restricted to a smaller range of fuels. A temporary stabilization fund was introduced in 2005 to mitigate the effects of supply distortions following hurricane Katrina, and remained in operation until 2010.

In 2011, the subsidy-based stabilization measures were replaced by a tax mechanism (Consumer’s Protection System for Fuel Excise Taxes, SIPCO) that reduces excise taxes whenever international prices jump above a pre-defined band around a reference price and increases them whenever the price falls below that reference price.⁵⁹ While the replacement of the stabilization funds with a tax-based mechanism was desirable, the lat-

ter still represents an unnecessary distortion relative to the pre-1991 status quo.

Kenya. Until the 2000s, electricity prices in Kenya were fixed by the government, although the private sector was involved in Kenyan electricity markets since the 1990s as the government-run electricity company was increasingly unable to meet the growing demand. In 2005, a revision of the tariff structure occurred, which made prices reflect long-run marginal costs and reflect changes in input prices and exchange rate fluctuations, thus reducing the implicit subsidies previously accorded to electricity prices. Prior to the reform, price increases were usually difficult to implement, as they required a lot of bargaining with large private customers, resulting in implicit or explicit subsidies and transfers to the electricity industry.⁶⁰ This pricing scheme has been in place since 2005 and has been popular, because its application has gone hand in hand with continual investment into quality and access to electricity, especially in the rural areas.⁶¹ Following the impact of droughts in 2008 and 2009, the political pressure to lower electricity prices was translated into a cut to the VAT rate on electricity, from 16 to 12 percent.⁶²

Uganda. Uganda’s electricity market was long dominated by a government-run monopoly, the Uganda Electricity Board, resulting in one of the lowest rates of access to electricity in sub-Saharan Africa. In 1999, the government restructured and privatized the sector. However, private distribution and generation companies faced difficulties, especially after the drought of 2005–2006, which limited the availability of hydropower. Government support to the power sector grew steadily, from 0.6 percent of GDP in 2006 to 1.1 percent in 2011.⁶³ In 2012, the regulator approved a substantial increase in electricity tariffs, by 45 percent on average.⁶⁴ While some protests occurred and the price increases were contested by the Ugandan parliament,⁶⁵ the reform survived. According to the IMF, several features were essential to its success. These included an effective communication strategy, which explained that most

of the subsidies accrued to the wealthy and to industry, and that increased prices would allow the electricity industry to improve access and reliability of supply. Furthermore, the poorest households were shielded from the price hikes.

Lessons

The countries listed above are diverse, and so were the different reform programs undertaken by them. However, several lessons emerge from the reform successes. First, governments with strong popular mandates and governments that are perceived as trustworthy by their own population can get a lot of traction in propelling the unpopular price increases that accompany the elimination of subsidies. Second, in all of the examples above, some mitigation or compensation schemes were used to balance the impact of the reforms on the population—whether they took the form of a cash transfer scheme, changes to the tax code, or the continuation of some form of targeted subsidies that were limited in size and scope. Given the size and pervasive nature of the existing subsidies in Egypt, it seems unlikely that tax breaks applied to Egypt's general sales tax would alone provide a sufficient compensatory mechanism that would prevent popular unrest. Third, fiscal imbalances seem to be a powerful impetus for reform. Fourth, in all of the examples above, subsidy reforms were a part of larger reform packages that aimed to improve the functioning of energy markets. In the area of electricity, subsidy reforms went hand in hand with unbundling and privatization. The efficiency improvements created by these broader changes seem to have cemented the reforms and protected them from later reversals.

A Way Forward

How should a subsidy reform in Egypt proceed? Besides the lessons that can be drawn from international experience with subsidy reforms, Egyptian policymakers ought to be mindful of the government's lack of credibil-

ity and administrative capacity, and the presence of strong vested interests.⁶⁶

Although Egyptian policymakers face a menu of reform options, a successful reform will have to be thorough, fast, and simple. Its compensation scheme must be directed at the population at large, and complementary reforms are needed to improve the functioning of markets in currently subsidized commodities. While this is, broadly speaking, in line with the conclusions of various studies that have synthesized the lessons from subsidy reforms around the world,⁶⁷ unlike most such studies, this list explicitly recognizes that the central problem of economic policymaking in Egypt is related to policy credibility and to the expectation of reform reversal.⁶⁸

If the government is determined to successfully enact a subsidy reform in the present political environment, the reform will have to be quick and irreversible, locking in the new system of energy and food pricing and creating strong incentives against reform reversal. The extent to which the government can prepare a believable long-term strategy for reform is limited. The gradual phasing in of price hikes, recommended by some economists because slow-paced changes in prices may lead to smaller disruptions to the status quo, is unlikely to work if the commitment of the government to lasting reform is in doubt. Finally, it is not clear that desirable institutional reforms, including the creation of regulatory agencies that are not directly subjected to government discretion and automatic pricing mechanisms, can be accomplished successfully in the face of little government credibility.⁶⁹

Given the size of subsidy spending and the political sensitivity of the subject, it seems that the reform will have to be accompanied by a compensation scheme that will reduce the impact that the removal of subsidies would have on poor Egyptians.⁷⁰ However, the current targeted cash-transfer programs, pensions, housing support, and the like are small both in absolute and relative terms, without a systematic coverage of poor households,⁷¹ and the government lacks ad-

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One way of preventing the risk of reform reversal is for the government to tie its own hands.

ministrative capacity to identify the specific effects of the reform beforehand, including its winners and losers, and to target compensatory payments to poorer segments of the population.

Compensatory payments to poorer segments of the population may not be sufficient to overcome popular resistance to reform, which might also come from wealthier parts of Egyptian society who are benefiting disproportionately from energy subsidies. In addition to the poor, the government will thus need to compensate other income groups benefiting from the program to elicit broader support. Finally, the government would need to address the problem of resistance to reform on the part of heavy energy users in Egyptian industries.

Completeness, Speed, and Simplicity

Ideally, economic reforms ought be put in place by governments enjoying popular legitimacy and committed to improving economic outcomes. Unfortunately, the subsidy reform in Egypt cannot wait until such conditions materialize. The government is quickly depleting its foreign exchange reserves by importing a range of subsidized commodities and fuels. To avoid becoming insolvent, the current Egyptian government will have to tackle the problem of subsidies, even if it means acting in less than ideal conditions.

One way of preventing the risk of reform reversal is for the government to tie its own hands. This can be done by eliminating subsidies altogether and withdrawing government involvement from the markets in question. Robust and well-functioning private markets would likely prove popular and create constituencies that would find it in their best interests to defend the new status quo. There may not be many examples of successful wholesale reforms of subsidies, but gradual reforms, as implemented in the Middle East and North Africa, have invariably failed. Although in theory a gradual reform may work for governments that can credibly commit to a reform path over a number of years, it is not an advisable path for Egypt to follow.

A prospective reformer needs to raise the costs of reversal by deliberately limiting the ability of the Egyptian public sector to provide commodity subsidies. That would mean closing down the government offices involved in commodity subsidies, including the General Authority for the Supply of Commodities and the sections of the Ministry of Petroleum in charge of price regulation of oil products. Ideally, such a reform would be part of a broader deregulation of petroleum markets in the country—a reform that could include closing down of the Ministry of Petroleum altogether.

The Egyptian government has limited capacity to formulate and implement complex policies. Reformers should therefore steer away from overly complicated schemes, either in the area of pricing or compensation. Multiple prices for a given commodity are difficult to maintain because they create opportunities for arbitrage. Complex compensation schemes that try to direct cash transfers at vulnerable households or make transfers conditional assume that the government has the ability to identify qualifying households and monitor them. Although different methods for identification of poor households have long been entertained, including geographical targeting, electricity consumption or proxy means-testing—they have never been deployed in the country on a large scale.⁷²

Compensation

All of the successful subsidy reforms cited in the previous section have included some mitigating measures—ranging from cash transfers, to limited subsidies targeted at poorer segments of the population, to changes in the tax code.

It seems reasonable to assume that, in order to be popularly accepted, a subsidy reform will have to be accompanied by a strengthening of the existing safety net⁷³ or by an increase in compensatory payments to vulnerable groups.⁷⁴ Broad compensation can also be critical for the credibility of the reform. As the World Bank's J. Edgardo Campos and

Hadi Esfahani of the University of Illinois note, widespread gain sharing “buys support for new policies and creates a major barrier to any future attempt to reverse the reform.”⁷⁵

Table 3 presents some rudimentary calculations of the compensation options for a subsidy reform in Egypt, based on conservative assumptions. It simply uses the savings that would result from eliminating food and energy subsidies, as stipulated in the 2012–2013 budget (although the actual spending is likely to be significantly larger) to calculate various options for compensating the population. If cash transfers to the population are unconditional, and if 50 percent of the savings are to be used to compensate the population, then an average Egyptian household would receive \$373 annually. To achieve larger savings, per household compensation would have to be smaller—\$224 if only 30 percent of the saved resources are redirected toward compensating the population. In principle, an untargeted system of cash transfers should be relatively easy to implement, given that Egypt has an electronic system of ID cards in place.⁷⁶

The size of such transfers is, broadly speaking, in line with cash transfer schemes existing in other countries. In Brazil—with a per capita income roughly double that of Egypt—the basic monthly benefit provided by the scheme “Bolsa Família” is \$31

(R\$70).⁷⁷ In Jordan, with similar income levels to Egypt, monthly disbursements by the National Aid Fund are between \$56 (JD40) and \$254 (JD180).⁷⁸ Finally, targeted transfers in Yemen, a significantly poorer country, are \$20 (YER 4,000).⁷⁹

If a basic system of discriminating between households based on their wealth is eventually established, significant savings are possible while maintaining cash transfers directed at the poorer segments of the population. Should only the three poorest quintiles of Egyptian households receive the cash transfers and 50 percent of the savings get used for transfers, then the average per household compensation would be on the order of \$622. Three quintiles of the population make for a comfortable majority, which would then be inclined to support a reform. A reasonable course of action for Egyptian reformers would be to start with untargeted cash transfers, which would become increasingly targeted over a horizon of three to five years and eventually replaced by a system of means-tested payments to poor households.

Complementary Reforms

From the perspective of ordinary Egyptians, subsidies for food and energy are seen as desirable because they shield them from undesired price fluctuations. However, subsidies are part of a bundle of policies that

Significant savings are possible while maintaining cash transfers directed at the poorer segments of the population.

Table 3
Fiscal Savings from a Subsidy Reform and Annual per Household Compensation (US\$)

Fiscal Savings (percent)	Untargeted transfers	Targeted transfers		
		3 poorest quintiles	2 poorest quintiles	Bottom quintile
90	75	124	187	373
70	224	373	560	1120
50	373	622	933	1866
30	522	871	1306	2612

Sources: Egypt’s Ministry of Finance (2012), CIA *World Factbook* (2013), Egypt Demographic and Health Survey (2008), author’s calculations.

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in the area of
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make food and energy less affordable and the supply chain less reliable. For example, although food prices in the country are driven by international prices, substantial downward rigidity exists, which means that falls in international prices are not translated into decreases in prices for Egyptian consumers.⁸⁰ Even when international food prices fell in 2008, Egyptian inflation was hardly below 10 percent. That points to two factors that Egyptian policymakers need to address as they proceed with a subsidy reform.

First, inflation. Provided that spending on food and fuels represents a large portion of consumer spending in the country, any changes to subsidies will need to be accompanied by a credible anti-inflation measure on the part of the central bank. Post-communist transitions can provide instructive lessons, because large price liberalizations there created inflationary pressures, which some countries coped with better than others. For instance, in the months following the near-complete price liberalization in Czechoslovakia in 1991, the country managed to contain inflationary pressures by restrained monetary and fiscal policies.⁸¹

Second, market organization and trade. Downward rigidities, such as those displayed by Egyptian food prices, are associated with noncompetitive market environments. In the area of food, there is a heavy government involvement, accompanied by other factors that contribute to food insecurity in the country.⁸² Although Egypt faces severe resource limitations, especially when it comes to land and water, the government is encouraging the production of cereal crops, with per hectare yields that are a fraction of the average of developing countries.⁸³ Such policies are counterproductive, given the country's natural resource constraints, which make Egypt unlikely to become self-sufficient in food production. Because robust private markets and integration into international trade flows are effective cures for food insecurity, the government should allow the agricultural and industrial sectors to expand their exports by simply removing

barriers to competition and trade.⁸⁴

Although some progress has been made in reducing trade barriers in the region, fully integrated markets in food and energy do not yet exist in the Middle East and North Africa. On its own, the Egyptian government can facilitate trade integration by removing the most direct barriers. For instance, because of its complicated border clearance procedures, the country ranks poorly on the World Bank's Logistics Performance Index (92nd in the world), a survey-based assessment of trade logistics around the world. Finally, the government should also expand the Suez Special Economic Zone—a relatively autonomous area southeast of Suez City, with a lower tax burden and considerably simplified regulatory standards—and consider starting new zones.

The energy sector in the country has been marked by heavy-handed government involvement. The combination of subsidized prices and government-controlled refining and distribution of petroleum products deters entry and leads to persistent shortages.

The government-operated Egyptian General Petroleum Corporation controls a large part of oil production and upstream activities, including imports of crude oil and refining. Similarly, the Egyptian Natural Gas Holding Company, run by the government, manages not only the exploration of natural gas, but also other aspects of the natural gas industry, including the use of liquefied natural gas. The government is involved heavily in downstream activities as well. In terms of sales of gasoline, 33.5 percent of the Egyptian market is captured by the government-run Misr Petroleum and another 30 percent is controlled by Petroleum Cooperative Society, Co., an arm of the Egyptian General Petroleum Corporation.⁸⁵

As a result, a subsidy reform in the area of energy ought to be accompanied by a systematic restructuring and privatization of this sector. Different activities conducted by the Egyptian General Petroleum Corporation and other state-owned companies can be unbundled and privatized, and a liberal-

ization of prices needs to take place. In this area, Egyptians can learn from successful subsidy reforms, especially in the electricity sectors of countries like Brazil or Turkey, where the removal of subsidies was accompanied by a thorough restructuring of the sector, increasing competition and improving access, quality, and reliability of supply.

Conclusion

Egyptian policymakers find themselves in a politically difficult situation. However, as Egypt is running out of resources needed to sustain the existing subsidy system, some kind of policy change is inevitable. Instead of kicking the can down the road, Egypt's government should act now.

A real subsidy reform has to be designed as a permanent change, precluding a politically convenient return to the practice of subsidizing consumption goods in the future. In order to avoid reversals, the reform will have to create strong constituencies that will prevent politicians from reintroducing subsidies in the future. One way to do that is to ensure that the wider population understands the economic benefits of the reform and can enjoy them. In addition, politicians should tie their own hands by dismantling the administrative apparatus that is involved in the disbursement of subsidies and price regulation.

To overcome the popular discontent that such reform could trigger, the most politically realistic solution would include a universal compensation scheme that would be easy to administer. True, cash transfers are themselves fraught with potential problems, including fraud and political populism. However, they would represent a clear improvement over the current subsidy system. Finally, the reform should be a part of a broader package that would simultaneously liberalize the markets in food and energy and better integrate the country into international trade.

Egypt's subsidy problem is by no means unique. Yet it is by far the most significant one in the Middle East and North Africa, and

it is exacerbated by Egypt's status as the most populous Arab country. A decisive solution to the subsidy problem would not only yield benefits to the Egyptian population but would also serve as an example for prospective reformers in the region.

Notes

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78. Website of International Labor Organization, http://www.ilo.org/dyn/ilossi/ssimain.viewScheme?p_lang=en&p_geoaid=400&p_scheme_id=1665.
79. Thabet Bagash, Paola Perezniato, and Khalid Dubai, *Transforming Cash Transfers: Beneficiary and Community Perspectives on the Social Welfare Fund in Yemen*, Overseas Development Institute (December 2012), p. 32, <http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8181.pdf>.
80. Castel, p. 7; Ronald Albers and Marga Peeters, *Food and Energy Prices, Government Subsidies and Fiscal Balances in South Mediterranean Countries*, Economic Papers 437, European Commission (2011), http://ec.europa.eu/economy_finance/publications/economic_paper/2011/pdf/ecp437_en.pdf.
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