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Phasing Out Subsidies

Recent Experiences with Fuel in Developing Countries

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Many developing countries subsidize petroleum products. The doubling of world oil prices since January 2004 has had very high fiscal costs for these countries, increasing public debt and squeezing other government spending. The subsidies have also had unintended consequences: fuel adulteration, smuggling, and benefits that go mostly to the better-off. But phasing out subsidies is politically challenging. This Note reviews some successful strategies for removing or reducing subsidies while protecting the poorest consumers.

The large and sustained increase in international oil prices since late 2003 has led many developing countries to adopt pricing policies to protect users from the full impact. In a worldwide sample of 38 developing countries during the period January 2004–May 2006, 14 countries suspended market-based pricing that linked domestic to international prices (for one or more fuels).[1] They joined 12 others that had already controlled prices, keeping them at levels that, by 2005, were below the international equivalent. In addition, 23 countries reduced taxes on petroleum products to help offset the higher costs (ESMAP 2006).

Many of the subsidy schemes were prompted in part by incorrect assumptions about how large the price increase would be and how long it would last. So while the fiscal effects of the policies have varied, for some governments they have been unexpectedly large and protracted. The government of Thailand introduced price ceilings on petroleum products in January 2004. Expecting that the price increase would be short-lived, the government initially estimated that the price control would last no more than two months and that the fiscal cost would be at most US$128 million. By the time it removed the subsidies—in October 2004 for gasoline and in July 2005 for diesel—the bill had reached US$2.2 billion. In the Arab Republic of Egypt the estimated cost of the subsidy on petroleum products during the fiscal year ending June 2006 was revised upward to US$7.1 billion in February. And in Indonesia the government's cost in 2005 was close to US$10 billion.

By mid-2006, with world oil prices having more than doubled since the beginning of 2004, net oil importers had all concluded that large fuel subsidies were unsustainable. So had some major oil exporters that were having to

import refined products because years of subsidies had led to undercapitalization of their refining sector.

Unintended consequences

Subsidizing fuels has high costs. Moreover, universal price subsidies almost always benefit high-income households more than the poor, because richer households consume more energy. Other adverse consequences include rampant abuses in fuel markets (Kojima and Bacon 2001) and an inefficient downstream petroleum sector languishing for need of reform.

To provide a subsidy, a government must increase its borrowing, raise additional revenue elsewhere, or reduce spending on other public goods. If the subsidy is used to stabilize or lower final prices, it frees consumers from having to adjust their purchasing behavior to the costs of supply, instead giving them financial incentives to overconsume the subsidized commodity. The result is the well-known deadweight loss.

Using a reduction in taxes to lower final prices, because it leads to a loss of revenue, similarly requires a government to raise additional revenue or reduce other public spending. If tax rates were set near the optimal level overall before the price rise, this policy also results in a loss of welfare.

The relative sizes of subsidies for different petroleum products also matter. Many governments provide larger subsidies for diesel and, even more so, for kerosene than for gasoline. The rationale is that diesel is used economywide—in goods, public transport, agriculture, fishing, and in some cases electricity generation—while kerosene is used for lighting and cooking by poor households. By contrast, gasoline tends to be consumed by better-off households.

This approach helps target the subsidies in theory and can reduce the overall costs. But diesel is primarily a transport fuel and consumed more (directly and indirectly) by middle- and high-income households than by the poor in many developing countries. The result is a leakage of the diesel subsidy to higher-income groups. In addition, where the subsidy for kerosene is substantially larger than that for diesel—as it is in many developing countries—there is an incentive to adulterate diesel by mixing it with kerosene. This leads to a substantial leakage of the kerosene subsidy.

A study of household surveys conducted in 1993/94 and 1999/2000 in India suggests that as much as half of subsidized kerosene was diverted to the automotive diesel and other sectors. This leakage cost the government close to US$1 billion in fiscal 2000 (ESMAP 2003). These lucrative but illegal activities enable criminal elements to flourish. Some become extremely powerful, as recent events in Iraq illustrate.

Because petroleum products are easy to store and transport, another problem arises where a neighboring country charges higher prices. Fuel price subsidies then create a strong incentive to smuggle out the subsidized fuel for resale at these higher prices, as governments of Argentina, the Islamic Republic of Iran, Iraq, Kazakhstan, Malaysia, Nigeria, República Bolivariana de Venezuela, and Vietnam can attest. This results in higher apparent demand and the transfer of benefits to inhabitants of the neighboring states.

Another adverse consequence is suffered by the downstream oil sector. An essential part of improving sector efficiency is the introduction of relentless but fair competition. Subsidies deter firms from entering the market—as in Nigeria and Sri Lanka, for example. Without new entrants and the infusion of capital, the sector becomes increasingly inefficient, undercapitalized, and, in some cases, corrupt. In the long run governments and consumers pay a high price.

Policies to remove or reduce subsidies

Historically, in countries where fuel prices are controlled and subsidized by the government, price increases have often met with broad opposition from civil society and trade unions. Consider the violent demonstrations against fuel price hikes in Indonesia, Nigeria, and Venezuela. Since the end of 2003 several governments have attempted to reduce subsidies. A few have been able to do so without much opposition. Some have felt that their political position was too weak to risk opposition and have kept fuel prices frozen or increased them very little.

This experience points to the need for governments to find a way of defusing potential opposition to removing or reducing subsidies.

Two policy measures have been used to do so:

- Providing targeted subsidies or compensation.
- Using an effective publicity campaign.

Providing a larger subsidy or lower tax rate for kerosene than for other fuels is the most common way to target subsidies to lower-income households. The international market prices (net of taxes and transport costs) for diesel, kerosene, and gasoline are very similar. In the sample of developing countries, however, many governments, through taxation (and subsidy) policy, ensure that kerosene is sold at a discount relative to diesel and at a sizable discount relative to gasoline (table 1). Maintaining markedly different price levels for similar fuels results in significant adulteration.

Another way to target subsidies is to issue vouchers or smart cards that permit users to buy a limited amount of certain fuels at a reduced price. The smart card can be limited to certain classes of users, for differing amounts of fuel. Malaysia recently began using smart card systems for public transport vehicles and fishing boats.

A different approach to protecting lower-income households involves removing subsidies while providing targeted compensation, through a cash transfer or benefit in kind, to protect these households from the impact. If targeting is reasonably accurate and administrative costs relatively low, this approach is likely to be the most efficient in nearly all circumstances. But that requires two things. First, there must be a reasonably accurate list of low-income households to ensure that only the needy, and most of the needy, are compensated. Second, there must be a low-cost mechanism for transferring the cash or benefits to these households, or administrative costs could outweigh the benefits of targeting compensation.

Several countries have used some variation of this approach. In 2005 Chile made a one-time payment of US$28 to low-income households to compensate for higher fuel prices and provided extra cash compensation to 1.4 million households consuming less than 150 kilowatt-hours of electricity a month. In 2006 it announced another round of cash transfers, US$35 to 1.25 million families living on less than US$350 a month. For a short period in early 2006 some provinces in China gave poor residents

Table 1 Average retail price ratios for fuels

Fuels	Price ratio
Diesel/kerosene	1.3
Gasoline/diesel	1.3
Gasoline/kerosene	1.6

Note: The table reflects the most recent price information for 27 developing countries for which data were available.
Source: ESMAP 2006.

US$1.24–2.48 a month to offset the rising costs of liquefied petroleum gas. And in October 2005 the government of Indonesia launched an ambitious cash transfer scheme to compensate for raising product prices by an average of 114 percent, though the final level was still below international market prices (box 1).

Indonesia shows how an effective public relations campaign, coupled with general trust in the government, can help achieve public acceptance of large price increases. In January 2003 the previous administration had attempted to increase prices amid widespread public dissatisfaction with the government and with the corruption and inefficiency perceived to be permeating the political life and bureaucracy. A public outcry led the government to roll back much of the diesel price increase. By contrast, in 2005 the current administration more than doubled gasoline and diesel prices and nearly tripled the kerosene price with no substantial

Box 1 Launching a cash transfer scheme in Indonesia

Before raising fuel prices in October 2005, the government of Indonesia put into place a cash transfer scheme targeting 15.5 million poor and near-poor households (some 28 percent of the population). The transfers, quarterly payments of about US$30 per household, are to be continued for one year. The scheme was widely publicized—through newspapers, village notice boards, television talk shows, and pamphlets with answers to frequently asked questions.

Though prepared quickly, the program has performed well. The rapid rollout was followed by many media reports about initial problems, including mistargeting and leakage. The government responded quickly, commissioning an early assessment of the program. The assessment pointed to satisfactory results overall, with transfers on time and beneficiaries expressing satisfaction.

For poor recipients the cash transfers more than compensate for the fuel price increase. Even with moderate mistargeting—with cash benefits randomly distributed to the poorest 40 percent rather than the targeted 28 percent—the program is expected to prevent an increase in poverty due to the price increase.

Thanks to the government's efforts, the sharp rise in fuel prices passed without major public protest.

Source: ESMAP 2006.

opposition, thanks to a cash compensation scheme coupled with the government's greater popularity and its public relations campaign.

Some governments considering removing or reducing subsidies have promised to increase social spending as compensation, particularly where the spending might support lower-income households. Two actions can increase the effectiveness of this strategy. First, demonstrating to civil society that the present subsidies benefit mainly the better-off. And second, improving social spending in a way that is transparent, immediate, effective, and pro-poor. Ghana provides an instructive example: it combined prior analysis of which groups were benefiting most from the subsidies with a campaign publicizing the measures that would be used to compensate for removing the subsidies (box 2).

Box 2 Removing subsidies in Ghana

In 2004, when it became apparent that world oil prices were unlikely to come down much and that Ghana could not maintain for long its policy of subsidizing petroleum products, the government launched a poverty and social impact assessment (PSIA) for fuel. Guided by a steering committee of stakeholders from ministries, academia, and the national oil company, the PSIA was completed in less than a year. By the time the government announced the 50 percent price increases in February 2005, it could use the PSIA findings to make its case for liberalizing fuel prices to the public—including the fact that the price subsidies most benefited the better-off.

The minister of finance launched the public relations campaign with a broadcast explaining the need for the price increases and announcing measures to mitigate their impact. A series of interviews with government officials and trade union representatives followed. The Energy Ministry used newspaper advertisements with charts to show that Ghana's fuel prices were the lowest in West Africa after Nigeria's.

The mitigation measures, transparent and easily monitored by society, included an immediate elimination of fees at government-run primary and junior secondary schools and a program to improve public transport. While the trade unions remained opposed to the price increases, the public generally accepted them, and no large-scale demonstrations occurred.

Source: ESMAP 2006.

Conclusion

Fuel price subsidies help the poor, but at a large cost to society and to governments. Governments should look for opportunities to move away from fuel price subsidies as rapidly as possible and replace them with targeted assistance to the poor. Preparatory work to identify beneficiaries and design efficient ways to deliver assistance should be given high priority, especially since high oil prices are likely to continue in the coming years.

Note

1. The 38 countries are Argentina, Bangladesh, Brazil, Cambodia, Cameroon, Chile, China, the Arab Republic of Egypt, Ethiopia, Ghana, Guatemala, Honduras, India, Indonesia, Kazakhstan, Kenya, the Kyrgyz Republic, the Lao People's Democratic Republic, Madagascar, Malawi, Malaysia, Mexico, Morocco, Mozambique, Nicaragua, Nigeria, Pakistan, the Philippines, Rwanda, Senegal, Sri Lanka, Tanzania, Thailand, Tunisia, Uganda, República Bolivariana de Venezuela, Vietnam, and Zambia.

References

ESMAP (Energy Sector Management Assistance Programme). 2003. "India: Access of the Poor to Clean Household Fuels." Report 263/03. Washington, D.C.

———. 2006. "Coping with Higher Fuel Prices." Report 323/06. Washington, D.C.

Kojima, Masami, and Robert Bacon. 2001. "Abuses in Fuel Markets: How to Protect Consumers and Public Health." Viewpoint series, Note 237. World Bank Group, Private Sector Development Vice Presidency, Washington, D.C.

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