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# How to Best Phase Out Non-optimal Subsidies: The Case of Indonesia's Fuel Subsidy

**There is currently a generous subsidy given to certain types of vehicle fuel in Indonesia. However, it has led to an inequitable distribution of subsidies, has created a massive economic burden for the government, and is diverting money from other more socially beneficial policies and initiatives. The government has attempted to reduce the subsidy but has been hamstrung by indecisiveness and political expediency.**

**To try and help policymakers resolve the challenge presented by the country's 'irrational' fuel subsidy system, an EEPSEA study has assessed the most acceptable 'exit strategy' to dismantle the policy and use the money that is being spent on it for other purposes.**

**The study, which is the work of researchers from Universitas Gadjah Mada (UGM) in Indonesia, found that most people would favor the gradual elimination of the fuel subsidy and would want the money this would free to be earmarked for socially beneficial schemes such as vaccination programs for children and public transport schemes. The researchers therefore recommend that this approach should be taken.**



A summary of EEPSEA Research Report No. 2015-RR1: 'Eliminating the Fuel Subsidy in Indonesia: A Behavioral Approach' by Rimawan Pradiptyo and Gumilang Aryo Sahadewo, Faculty of Economics and Business, Universitas Gadjah Mada, Yogyakarta, Indonesia. Tel: +62-274-548513, Fax: +62-274-548513, Email: [rimawan@feb.ugm.ac.id](mailto:rimawan@feb.ugm.ac.id), [rimawan@gadjahmada.edu](mailto:rimawan@gadjahmada.edu), [gumilangaryo@gmail.com](mailto:gumilangaryo@gmail.com)

## Subsidized fuel in Indonesia

Premium with RON 88 and Solar Automotive Diesel Oil are among the fuels that are subsidized in Indonesia. These fuels are some of the cheapest in the world, costing approximately 30% of the world market price. Not surprisingly, Premium and Solar account for about two-thirds of the total daily fuel sales in the country.

Because subsidized fuels are freely available at retail gasoline outlets, those who own cars and motorcycles (i.e., mid- and high-income households) have been receiving more subsidies than those who do not (i.e., poor and low-income households). Indeed, the World Bank reported in 2011 that the top 10% of households (when ranked by wealth) enjoyed 40% of the total subsidy. The bottom 10% of households, on the other hand, benefitted from less than 1% of the total subsidy. Indeed, it is likely that two-thirds of poor households do not consume fuel at all – and therefore do not benefit from the subsidy in any way.

### The subsidy's impact on the economy, people and the environment

Expenditure on fuel subsidies has dominated the government's total outlay on subsidies for many years. Fuel subsidies accounted for IDR 58.9 trillion (USD 6.93 billion) of the Indonesian government's 2010 budget plan. This was roughly fifteen times the budget for natural resource conservation, four times the spending for health-related programs, and nearly twice the budget for elementary education. In 2011, this spending accounted for at least 54% of the total subsidy budget and was significantly higher than the subsidies given to food, fertilizer, plant seed, and credit assistance.



A 2008 protest in Yogyakarta, Indonesia against planned fuel price hikes. The Indonesian government heavily subsidizes fuel prices and is proposing the price hikes, which have caused unrest in the past. (Photo credit: by Sumaryanto Bronto under creative commons at flickr.com)

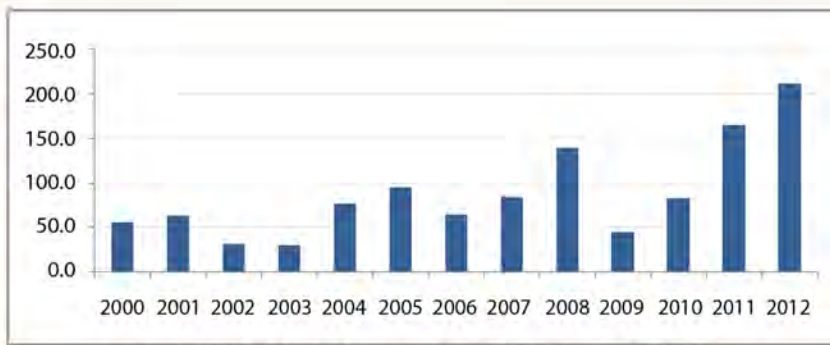
The magnitude of the fuel subsidy hinders the government's ability to finance other programs, for instance poverty alleviation programs, credits for small and micro enterprises, and infrastructure projects. It also limits the government's ability to expand established social programs such as the Program Nasional Pemberdayaan Mandiri (National Program for Community Empowerment) and reduces the amount of money that can be allocated to non-energy subsidies such as those for food, vaccines, fertilizer and regional infrastructure projects.

The fuel subsidy also imposes problems on households and the environment. Middle- and high-income households tend to make excessive use of their personal vehicles as the subsidy makes their operating costs relatively low. This causes an unnecessary burden on the environment due to the pollution, noise and other impacts it causes. Low-income and poor households are also affected as they miss out on the numerous welfare programs that could have been funded if money had not been channelled to the fuel subsidy.

### Government inaction and research gaps

The Government of Indonesia (GoI) has made several attempts to phase out the fuel subsidy and to implement fuel rationing. The GoI implemented two price adjustments in 2005, which brought fuel prices almost at level with international norms. Nevertheless, during 2008-2009, the GoI decided to reduce the price of subsidized fuel three times. Hence, the price of subsidized fuel went back to the price it had been prior to 2005. This policy shift was driven primarily by the need to gain support for the ruling party prior to a general election. In recent years, the government has faced extra budgetary pressure linked to the subsidy scheme due to a sharp increase in oil prices. Despite this, the GoI is still reluctant to reduce the fuel subsidy.

There have been many arguments for and against the plan to increase the price of subsidized fuel and to eventually eliminate the subsidy. Arguments for the subsidy phase out are based on the negative impacts that the scheme is having (as detailed above). Arguments against the phase out are based on the potential adverse impact



**Fuel subsidy in Indonesia (in IDR trillion), 2000-12**

Note: Calculated from data from the Ministry of Energy and Mineral Resources and the Ministry of Finance

this might have on low-income households that do use the subsidized fuel and on the fact that nobody who has benefitted from the subsidy is likely to support its removal. Unfortunately, little attempt has been made to ask low-income and other households about their actual opinions on these matters.

### Helping the government move forward

Given the challenges facing the Gol, the study aimed to determine the most acceptable exit strategy for eliminating Indonesia's fuel subsidy scheme. To do this, the researchers asked members of the public to choose between pairs of policy options for phasing out the fuel subsidy.

For example, one of the choices presented to the participants in the study was between the two following policy options: "Gradual reduction of fuel subsidy and the subsidy saved is reallocated to finance the development of mass rapid transportation and other government programs" and "immediate elimination of the subsidy and the subsidy saved is reallocated to repay foreign debt and to finance other government programs."

The hypothetical policy options offered to the study's survey participants were formulated based on the results of interviews that were carried out with relevant stakeholders. As is clear from the examples above, the policy options

were of two main types – those that involved either its immediate or its gradual elimination. The policy proposals also set out details of what would be done with the money that would be freed up once the fuel subsidy was abolished.

### Reallocating subsidy resources

Two main approaches were proposed for the reallocation of the resources saved from eliminating the fuel subsidy – reallocation to either various unspecified government programs or to specific programs. These specific programs included child vaccinations, investment in mass rapid transportation (MRT), and the repayment of foreign debt.

The vaccination program would help families with children regardless of their socio-economic standing. Currently there is only a limited program for childhood vaccination provided by the Gol. The World Health Organization recommends ten vaccines for children; of these, only five are provided by Indonesia's National Immunization Program.

The MRT project would benefit residents of Jakarta and other big cities, such as Surabaya, Bandung and Medan. The Gol and the local government of Jakarta proposed the development of an MRT project before the millennium. The plan went to execution phase in 2003 but failed to continue due to problems in land acquisition.

It should be noted that people would receive direct benefits from the reallocation of funds to the vaccination and MRT development programs. However, the benefits from the reallocation of funds to pay off the country's debt burden would be indirect.

### Picking policies by computer

The study involved a representative sample of 335 subjects drawn from a wide variety of households who exhibited different social and economic characteristics. The participants were classified as follows: very low-income households who did not possess a vehicle; low-income households who only possessed a motorcycle; medium-income households who possessed low-budget vehicles; and high-income households who possessed more expensive cars.

Subjects were asked to answer a 'pair choice' survey on a computer. This process was designed to be as simple as possible. However, some respondents from the very low-income group were illiterate, had difficulty understanding the instructions, and needed assistance. To help them, 15 students from UGM's Department of Javanese Literature were recruited as helpers. Respondents also took part in an exercise designed to assess their attitudes towards risk.

### Gradual elimination of subsidy most popular

The results of the survey show that the most acceptable exit strategies were those that involved a gradual elimination method and which channeled money to an earmarked reallocation scheme, particularly schemes for children vaccination and MRT development. The least acceptable exit strategies were those that involved the immediate phase out of the subsidy and which allocated money to undetermined government programs.

**Table: Survey participants' ranking of policy choices**

Ranking by session		Policy choices	Vector of priority (%)
1st	2nd		
	1	Gradual reduction of fuel subsidy; subsidy saved is reallocated to finance vaccines for all children and other government programs	17.4
1	2	Gradual reduction of fuel subsidy; subsidy saved is reallocated to finance vaccines for children and development of mass rapid transportation	16.6
	3	Gradual reduction of fuel subsidy, subsidy saved is reallocated to finance the development of mass rapid transportation and other government	12.2
2	4	Immediate elimination of the subsidy; subsidy saved is reallocated to finance vaccines for all children & other government programs	10
	5	Immediate elimination of the subsidy; subsidy saved is reallocated to finance vaccines for all children and mass transportation system	9.1
4	6	Gradual reduction of the subsidy; subsidy saved is reallocated to repay foreign debt and to finance other government programs	8.9
3	7	Gradual reduction of the subsidy; subsidy saved is reallocated to finance government programs	8.4
	8	Immediate elimination of the subsidy; subsidy saved is reallocated to finance development of mass rapid transportation and other government programs	6.9
	9	Immediate elimination of the subsidy; subsidy saved is reallocated to repay foreign debt and to finance other government programs	5.6
5	10	Immediate elimination of the subsidy; subsidy saved is reallocated to finance other government programs	5

Lower income groups prioritized the reallocation of subsidy funds for vaccination and MRT development (both in gradual and immediate elimination scenarios). Not surprisingly, those who owned cars were particularly keen on policy options that called for the gradual elimination of the subsidy – this was understandable as they had most to lose from the elimination of the subsidy (they were also the most educated group and would therefore understand that a gradual reduction in the subsidy would also mitigate the impact of the change on the poorer sectors of society who do

use vehicles). The reallocation of subsidy funds either to repay foreign debt or for wide-ranging government programs were not popular policy choices for the majority of participants from all social groups.

### Subsidy re-formulation is vital

In light of their findings, the researchers made a number of policy recommendations. Most significantly, they recommend that the fuel subsidy scheme in Indonesia should be re-formulated and that it should be gradually

eliminated. They state that the agenda to reform the fuel subsidy should not be considered as a dilemma any longer and that the burdens that the subsidy are placing on the government, on the economy, and on society as a whole make its eventual elimination vital.

They highlight the fact that the representative households who took part in the study suggested that the gradual elimination of the subsidy would be the most acceptable method. They note that this approach would give households the time they need to change their consumption patterns. They also note that this approach would have a smaller impact on inflation than an immediate phase out.

With respect to the reallocation of funds, they recommend that money should be earmarked for projects that would compensate poor households for the increase in fuel prices they would have to bear due to the phase out of the fuel subsidy. They recommend the development of MRT systems in key cities as a possible project for funding, as this would give people an alternative to using their cars and so give them a way to mitigate the impact of more expensive fuel on their budgets.

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