

# INDONESIA'S FUEL SUBSIDY A SAD HISTORY OF MASSIVE POLICY FAILURE

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## ABSTRACT

In her path-breaking economic history of Indonesia, 'A History of Missed Opportunities', Anne Booth aptly summarizes the sad history of fuel policy in Indonesia since 1980. The escalation of fuel subsidies whenever there is an upward trend in international prices and the failure to terminate them when prices fall should alert economists to some very discomfoting messages. First, governments are not receptive to policy measures that involve short-term political pain and have very little awareness or interest in opportunity cost. Second, while governments pay lip service to the environment and express concern about global warming, they are not yet willing to make it a policy priority. Third, populism is the very essence of politics and has become more so in the democratic era. The lesson of history is that governments cannot be trusted to set energy prices. Nor is there any good reason to do so. What governments should do is to monitor the prices being set by Pertamina as a state-owned monopoly and provide temporary welfare support if and when it can be justified by any sudden escalation in domestic prices.

**Keywords:** Fuel subsidy, Oil price, Pertamina.

## INTRODUCTION

Since the mid-1970s, Professor Anne Booth has made a sustained contribution to understanding of the Indonesian economy, not least in relation to the impact of the New Order oil boom on development, poverty and equity. By way of tribute it seems appropriate to reflect on and update some work of my own which links these topics. Back in 1980, when the oil price subsidy had reached what I then described as an 'incredible' 10 per cent of the national budget, I contributed to the *Bulletin of Indonesian Studies* an article entitled 'The

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Oil Price Subsidy, Deforestation and Equity', which deconstructed prevailing ideas about the impact of the kerosene subsidy (Dick 1980). In the course of the research I had the good fortune to first meet the late Dr Hadi Soesastro of CSIS who had recently begun to analyse the impact of the oil price subsidy on household budgets. We agreed that the subsidy was a highly inefficient means of compensating the poor while giving rise to very harmful and accumulating distortions in the demand and supply of fuels. In 2013, when Indonesia had ceased to be a net oil exporter for nine years (since 2004) and the oil products (*bahan bakar minyak*) subsidy has blown out to an astounding 20 per cent of the budget, there is good reason to try to understand what has gone so badly wrong and why.

Peter Timmer once observed that 'getting prices right is not the end of development, but getting them wrong very often is'. He might have added that some prices are much more important than others. For example, the price of rice feeds into wages and salaries and thereby affects most other domestic prices and costs. Likewise energy (especially petrol and electricity) is an input into almost every form of value-adding production, whether directly as fuel or power or through transport costs; energy is also an input into consumption through the use of appliances, motorized transport, lighting and air-conditioning. In short, there is very little human activity that does not embody some element of energy use. Because of this economy-wide impact, energy prices may be described as 'macro prices'. This makes them an obvious target for government manipulation, but it also means that 'getting prices wrong' may do a lot of harm. Subsidizing energy at well below international prices stimulates consumption, discourages production, and worsens damage to the environment in multiple ways. It also turns out to be about the most wasteful means of assisting the poor that could possibly be imagined.

This article begins by reviewing Indonesia's heritage of price controls, then recounts the erratic pathway of domestic energy price adjustments to international prices, concentrating on the fifteen years since the collapse of Soeharto's New Order in 1998. It then considers the economic distortions resulting from rising fuel price subsidies and their harmful long-run impacts, especially on the environment.

## REGULATORY HERITAGE

It is now all but forgotten that economic controls were first imposed not by the newly independent Indonesian government, or even during the Japanese occupation, but by the colonial Dutch government in its final years. Although the guiding principles of colonial rule had been *rust en orde* (peace and order) and *laissez-faire*, during the prolonged depression of the 1930s and under commercial pressures from Japan, there was a marked shift from the open import-export economy to a more protected one, first in manufacturing, later also in food crop agriculture (Dick *et al.* 2002). Price controls were imposed in 1939 followed by foreign exchange controls in 1940. After the Netherlands surrendered to Germany in May 1940, its colonial territory effectively became autonomous, albeit only until March 1942 when the Dutch administration surrendered to the Japanese. The new colonial power supplemented price controls with strict rationing of foodstuffs, textiles and fuels.

When the Dutch tried to reoccupy Indonesia after the Japanese surrender, the situation in both the Netherlands and the Indies was parlous. In consequence price controls, partial rationing and foreign exchange controls were all perpetuated. This administrative apparatus was inherited by the Republic of Indonesia at the formal transfer of sovereignty over the archipelago in December 1949. The incoming government was ideologically inclined to maintain administrative controls, the more so because they gave leverage over the modern sector of the economy which was, for the most part, still under Dutch control.

Price controls became more and more politicized as inflation began to accelerate during the 1950s. Governments wanted to be seen to be helping the people (*rakyat*) and holding down the prices of staple goods and services was seen to be a good way of doing so. The consequences, however, were mostly perverse, albeit entirely predictable in terms of basic Economics. Price controls over goods produced in the public sector such as transport fares, water and electricity led to the relevant state enterprises being pushed into deficit, thereby increasing the public sector deficit instead of contributing profits as in the colonial period. Private sector firms tried to cut costs (including new investment), to minimize what was supplied at official prices, and to sell as much as possible on the black market. Thus supply was constricted, quality fell, and black markets proliferated.

President Sukarno's suspension of the democratically elected parliament on 5 July 1959 boosted these perverse trends. Although the restored 1945 constitution and Guided Democracy and Guided Economy made him supreme over the now appointed parliament, his continuing legitimacy relied upon popular supporting line with the expectations of *socialisme à la Indonesia*. As budget deficits widened, more and more money was printed, and inflation accelerated into the mid-1960s. Price controls, which on their own would have been ineffective, were now supplemented by rationing and in-kind distribution of *sandang pangan* (clothing and food) items through official outlets (Mackie 1967). These became standardized as the nine essential commodities or *sembilan bahan pokok, sembako* (rice, flour, sugar, dry salted fish (*ikan asin*), salt, cooking oil, soap, kerosene, and two kinds of coarse textiles).<sup>1</sup> Civil servants were privileged, which led to a scramble to be granted a position, not to do any real work but to qualify for an official distribution.

Kerosene came under the control of the state oil company Pertamina (later Pertamina), which from mid-1965 had the monopoly of the domestic distribution of all oil products (Hunter 1966). When there were still few cars, trucks and buses on the road, and also few commercial aircraft, domestic needs could readily be met from the output of local refineries. Nevertheless, in the mid-1960s when domestic consumption was only half of refinery output and less than 20 per cent of crude production, it was observed that 'the almost zero price of refined products (under production sharing agreements with foreign oil companies) has led to a sharp increase in domestic demand (about 50% in 5 years)' (Hunter 1965: 26). This situation predated the New Order boom. Moreover, because of refinery configuration, there was already a shortfall of kerosene, even though, despite some cross-subsidization of kerosene prices, it did not show up as a budget subsidy until 1973/74. Hitherto the more significant issue was availability. After the imposition of military rule in early 1966, the technocrats in the New Order cabinet brought the budget back into balance and tightened the money supply to bring inflation under control. Because the index of nine essential commodities was a simple measure of inflation and a popular marker of economic stability, price controls were kept in place and the government still held direct responsibility for distribution through the Logistics Agency BULOG (rice, sugar, flour) and Pertamina (kerosene).

<sup>1</sup> The nine essential commodities are still enumerated but the definition has since changed.

## FUEL PRICE POLITICS

In the mid-1970s two trends coincided to throw domestic oil pricing even more out of kilter. The first was the very rapid growth in the number of motor vehicles as the economy recovered and people at last had disposable income to spend on non-essentials. There was also rapid growth in the number of aircraft flights. By the mid-1970s domestic demand for fuel had outstripped the very modest capacity of domestic refining, much of it from antiquated plants, such as at Pangkalan Brandan, Cepu and Wonokromo. The balance of requirements, by 1980/81 about 20 per cent, had to be imported, which heightened vulnerability to the other trend.

In October 1973 the outbreak of the Yom Kippur War between the Arab states and Israel was followed by the non-Western Organization of Petroleum Exporting Countries (OPEC) imposing an embargo upon the United States for its support of Israel, which led to a fourfold and sustained increase in world oil prices. The outcome was a huge bonanza for Indonesia, being an oil-exporting country. Indonesia suddenly had so much foreign exchange and budget revenue that part of the receipts had to be sterilized as foreign exchange reserves in order to avoid domestic inflation (Rosendale 1978: 169-170). Even so, high international oil prices also meant high prices for oil products imported (mainly from Singapore) for domestic consumption. Because domestic prices continued to be set roughly according to domestic refining costs, this gave rise to an actual subsidy, which from 1977/8 was counted in the national budget. In the first year this subsidy was a mere Rp. 18 billion, but with rapid growth in domestic demand and, in 1980, a second escalation in OPEC prices, the budgeted subsidy blew out to Rp. 910 billion by 1980/1, at which point it represented 10 per cent of the entire budget (Dick 1980).

The meaning of the fuel price subsidy was not well understood at that time and it is still not understood today. As reported in the central government budget, the fuel subsidy is the actual reimbursement to Pertamina for the difference between the cost of imported fuels (petrol, diesel and kerosene), that is the international price at the Singapore refinery, and the lower domestic price. This 'out-of-pocket' subsidy does not include the differential for fuel products refined and sold in Indonesia. Around 1980 only about one-fifth of domestic consumption was imported, the other four-fifths being refined from local crude at well below the international price: the full *economic* subsidy was therefore five times that budgeted. This is no semantic distinction. The

marginal (opportunity) cost of every additional unit of domestic consumption is the international fuel price, not some weighted average. Similar logic applies to power subsidies to the State Electricity Corporation PLN (*Perusahaan Listrik Negara*). However, the magnitude of the price increase needed just to eliminate the budgeted subsidy is perceived as threatening political stability, a nasty dilemma that is hardly conducive to clear thinking.

In 2013 energy price subsidies have an even greater lock on the state budget. At a time of rising oil prices, energy subsidies in the 2012 budget blew out to 151 per cent of the revised budget to represent 30 per cent of all central government expenditure and 20.6 per cent of all expenditure including transfers to the regions, thus twice the already ‘incredible’ level of 1980. Even after fuel price increases approved in June 2013 under the revised budget, fuel subsidies will still constitute 17 per cent of budget and 3.4 per cent of GDP compared with 3.7 per cent the previous year. Fuel subsidies are the largest component of the central budget apart from transfers to the regions, about 25 per cent more than salaries.

**Table 1**  
**Budgeted Energy Subsidies, 2012-2013 (Rp. trillion)**

Component	2012 budget			2013 budget	
	Revised	Actual	%	Approved	Revised
Fuel	137.4	211.6	154	193.8	199.8
Electricity	65.0	94.6	146	80.9	100.0
<b>Total energy</b>	<b>202.4</b>	<b>306.5</b>	<b>151</b>	<b>274.7</b>	<b>299.8</b>
<i>% of budget</i>	14.9	20.6	-	16.3	17.4
<i>% of GDP</i>	2.5	3.7	-	3.2	3.4

**Source:** Nehru 2013.

These massive subsidies make very little sense as a welfare measure. Recent calculations by the Institute of Economic and Social Research, Faculty of Economics, University of Indonesia, (LPEM-FEUI), based on the 2011 National Socio-Economic Survey (SUSENAS) show just how perverse is the distributional impact of fuel subsidies. If households are divided into three categories – the bottom 30%, middle 40% and top 30% – it turns out that the

rate of consumption expenditure on fuels and energy is almost the same across the three categories, being around 8% (Table 2). By type of energy, the rate of consumption is almost the same for electricity, gas and kerosene, though better-off households spend more on petrol and poor (rural) households more on wood and kerosene.

**Table 2**  
**Rate of Expenditure by Energy Type and Household Category, 2012**

Fuel Type	Bottom 30%	Middle 40%	Top 30%	Total
Electricity	2.1	2.4	2.5	2.4
Petrol	1.8	3.0	3.5	3.2
Gas	1.0	1.1	0.8	0.9
Kerosene	0.4	0.5	0.4	0.4
Other	2.7	1.6	0.7	1.2
All energy	8.0	8.6	7.9	8.2

**Source:** Wikarya 2012, based on SUSENAS of September 2012.

Nevertheless, the *amount* of expenditure in each category varies greatly because energy consumption rises with household income for every category except firewood (an inferior good). Overall the poorest 30 per cent of households account for just 11 per cent of all expenditure on energy compared with 35 per cent for the middle category and more than half (54 per cent) for the top category (Table 2). The disproportions are most extreme for direct spending on petrol with the poor accounting for just 6.5 per cent compared with 63 per cent for the rich, though it should be noted that public transport, used mainly by the poor (indirect consumption of petrol), is not included. According to these figures, subsidies on fuel usage will skew the benefits heavily towards the middle class and the rich. The only possible exception would be firewood, which of course is not subsidized and would be illogical on grounds of deforestation.

**Table 3**  
**Proportion of Energy Expenditure by Household Category, 2012**

Fuel Type	Bottom 30%	Middle 40%	Top 30%	Total
Electricity	9.6	32.4	58.0	100
Petrol	6.5	30.9	62.6	100
Gas (LPG)	12.8	38.8	48.4	100
Kerosene	11.4	42.1	46.6	100
Firewood	34.5	50.4	15.1	100
All energy	11.2	32.7	56.1	100

Source: Wikarya 2012, based on SUSENAS of September 2012.

So we have an extraordinary policy situation whereby around 20 per cent of budget can be directed to a massive subsidy, nominally on welfare grounds, but of which just 10 per cent benefits the poorest third of the population. In other words, 90 per cent of the subsidy, equivalent to around 3 per cent of GDP, is simply wasted to no good economic or social purpose. The opportunity cost of fuel subsidies is enormous in terms of education, health, infrastructure, and poverty alleviation, all of which should be urgent policy priorities. It would be the greatest scandal in Indonesia, except for the fact that everyone gets some share of the hand-out. Herein lies at least part of the explanation for the remarkable durability, and indeed escalation, of fuel subsidies over more than three decades. Another part is that the poor, although receiving only a very minor part of the benefit, are badly affected by any fuel price increase and are therefore easily induced to demonstrate and riot in the streets, a situation that may easily be exploited by political forces hostile to the government.

Nevertheless, over the three decades since 1980, oil subsidies have not always been unsustainably high. Oil prices have fluctuated a great deal, as have exchange rates, while from time to time governments have made serious efforts to bring the problem under control. A brief review of some of this history shows that there have been multiple opportunities to deal with the problem but very little learning from past mistakes.

The greatest debacle of domestic oil pricing occurred in 1998 in the wake of the Asian Financial Crisis. Collapse of the Thai baht in mid-1997 led to



a panicked currency flight out of the rupiah. Even though President Soeharto reluctantly called upon the IMF in October 1997, the rupiah continued its free fall from Rp. 2350/dollar in mid-1997 to a nadir of Rp. 16,000 in January 1998, thus almost a fourfold increase in the rupiah equivalent of international prices, the same order of magnitude as the OPEC oil price increase of 1973. Among other conditions and as part of a program to restore fiscal equilibrium, the IMF demanded the gradual elimination of subsidies, including fuel subsidies, from 1 April 1998 (Soesastro & Basri 1998). On 4 May 1998 the government bravely announced a dramatic 71 per cent increase in prices for premium petrol and diesel and 25 per cent for kerosene (Johnson 1998: 26). Almost immediately this triggered riots in Medan, which on 13 May erupted violently in Jakarta. Two days later the government scaled back the increases for petrol and diesel and cancelled the increase for kerosene. This reversal did not save the government, or the regime. Within a week, President Soeharto resigned. The massive increase in fuel prices did not exactly *cause* the downfall of the regime because it was already besieged and, in the absence of that trigger, there would soon have been something else. Nevertheless, the experience scarred everyone in the ruling elite, heightening the perception that a large increase in fuel prices was tantamount to political suicide, however sound the economic reasoning.

While the principle of eliminating subsidies was still formally endorsed, not until 2000 was any further action taken on oil pricing. During this period Indonesia experienced a lethal combination of severe recession and high inflation fuelled by the weak exchange rate. The burden of fuel subsidies was eased by strengthening of the exchange rate from its nadir of Rp. 16,000 to around Rp. 8,000. On the other hand, oil prices also began to recover from the shock of the Asian financial crisis. Thus by 2000 fuel subsidies of Rp. 18.3 trillion represented two thirds of all budgeted subsidies, almost 11 per cent of expenditures, and 2 per cent of a shrunken GDP (Fane 2000: 24). This direct payment to Pertamina to make up the difference between the domestic and the imported price did not include another Rp. 1.3 trillion of fuel price compensation to the poor. A 12 per cent fuel price increase was announced for April 2000 but then in the face of public protests, delayed until October. As Ross McLeod observed, a now more powerful DPR 'responds to public pressure in opposition to increases in prices' (McLeod 2000: 12). In consequence and with the rupiah weakening to 9500 by year's end, fuel

subsidies increased to 2.5 per cent of budget for the nine months of the year 2000. The same dynamic was apparent in 2001: after further protests a 20 per cent price increase foreshadowed for April was restricted to industrial users, which quickly led to shortages of cheap household fuel (Pangestu & Goeltom 2001: 162). The government then found its courage and in June applied a larger 30 per cent increase to households with a further increase to follow in October, which in turn was held over until January 2002. There was some urgency because fuel subsidies had risen to almost 16 per cent of the revised budget and 3.7 per cent of GDP, which was meant to be pegged back to 1.9 per cent in 2002 (Siregar 2001: 289-290).

By 2002 there was some prospect that fuel subsidies could at last be brought under control by a more determined Megawati government with economist Boediono as Finance Minister. A 22 per cent increase was applied in January with automatic monthly price adjustments to follow. The price of regular petrol was to be set at 100 per cent of the Singapore price, diesel and industrial kerosene at 75 per cent (Deuster 2002: 23). Nevertheless, the aim of depoliticizing fuel pricing was not to be realized. The Al Qaeda attacks on the United States in September 2001 were followed by the invasion of Afghanistan, then in March 2003 by the invasion of Iraq. One side effect was a steady escalation in global oil prices. Whereas the assumption for the 2002 budget had been an average oil price of \$22/barrel, it rose to \$28. The 2003 budget assumed a fall back to \$20.50 and the government planned to cut subsidies from Rp. 30.5 trillion to Rp. 15.9 trillion, to be achieved in part by quarterly 14.5 per cent adjustments in electricity prices, which the DPR scaled back to 6 per cent (Waslin 2003: 16).

The invasion of Iraq in March 2003 complicated matters for the 2004 budget, for which the assumed oil price had to be revised from \$22 to be \$36, increasing the direct fuel subsidy from Rp. 14.5 trillion to Rp. 63 trillion (Aswicahyono & Hill 2004: 283-285). Insofar as the higher oil price improved budget revenues, there was no overall fiscal crisis. With both a general and a presidential election due in 2004, in January 2003 President Megawati precipitately abandoned the recently introduced automatic nexus with international prices in the vague hope that the surge in oil prices would be only temporary, thus assuming an oil price of only \$24/barrel in framing the 2005 budget and freezing domestic fuel prices.

Over the course of 2004 the situation worsened rapidly as oil prices remained at their highest for more than a decade while the rupiah weakened (Marks 2004: 165-166). The artificially low domestic price encouraged the smuggling of fuel out of Indonesia with kerosene becoming scarce for households at the highly subsidized price of Rp. 700/liter compared with Rp. 1800 for industry. In the first part of 2004, as long foreshadowed, rising domestic consumption exceeded declining production and Indonesia at last became a net importer of crude oil. All this became a poisoned chalice for the incoming Yudhoyono government.

In April 2005 Hadi Soesastro and Raymond Atje excoriated the short sightedness of the energy policy:

‘The decision of successive governments to use the highly inefficient mechanism of distorting fuel prices to redistribute income in favour of the poor have frustrated the implementation of a rational national energy policy’. (Soesastro & Atje 2005: 27).

The new Yudhoyono cabinet agreed in February 2005 to increase oil prices by 29 per cent from the beginning of March, then in the face of strong opposition delayed it until April. Nevertheless, there was one intellectual breakthrough, being the advice from the Institute for Economic and Social Research, Faculty of Economics, University of Indonesia, (LPEM-FEUI) that fuel price increases should be accompanied by a package to compensate the poor (Sen & Steer 2005: 288-91). Thus of the estimated Rp. 25 trillion estimated to be saved from the fuel price increase, Rp. 4.7 trillion were allocated for quarterly cash transfers through the post office to 15.5 million poor households beginning in October 2005: the other four-fifths of the savings could be redirected to other urgent forms of spending. In line with World Bank advice, this would pave the way for phasing out the balance of fuel subsidies from the beginning of 2006 by gradually raising domestic prices to international parity. Sen and Steer (2005: 288) expressed the hope that ‘the saga of the fuel subsidy will finally be over for the SBY government’.

Such hopes were once again dashed as world oil prices sustained a steady upward trend. In the 2006 budget it was anticipated that fuel subsidies would be cut back from 3.4 per cent to 1.8 per cent of GDP (Manning & Roesad 2006: 153). However, this was predicated upon an international oil price of \$57/barrel. In mid-2006 that price was over \$70. The budget assumption

for 2007 was \$65, revised down to \$60 (Basri & Patunru, 2006); the draft budget for 2008 persisted with the assumption of \$60 at a time when the spot price was almost \$90, making it highly implausible that fuel subsidies could be reduced below Rp. 105 trillion (Takii & Ramstetter 2007: 306-7). In fact by February 2008 the international price had reached \$100 (Kong & Ramayandi 2008: 12-13). Finally in April the government accepted reality, raised the budgeted oil price to \$95 and announced that in May domestic prices would be raised on average by 28.7 per cent – by which time the international price had risen even further to \$130 (McLeod 2008: 193-196). As in 2005, cash compensation was provided to poor families, this time Rp. 100,000 per month to 19.1 million families. A new twist was that subsidized fuel would be restricted to owners of motor cycles and public transport operators; another was that users of kerosene would be encouraged to switch to gas. Such measures failed to address the underlying distortion that by mid-2008, even after the latest increase, the domestic price of kerosene (Rp. 2500) was not more than a quarter of the international price.

At this point, the global financial crisis brought relief. In July 2008 the spot price for peaked at \$140 per barrel and within a month had fallen back to \$115. A budgeted figure of \$100 now seemed plausible, reducing fuel subsidies from about Rp. 270 trillion (5.7 per cent of budget) in 2008 to Rp. 160 trillion (3.1 per cent of GDP) in the draft 2009 budget (Ashcroft & Cavanaugh 2008: 346-349). With some increase in domestic prices, especially for kerosene, and continuing decline in the international oil price, there would again be an opportunity to rein in fairly painlessly the wasteful expenditure on fuel subsidies. There was every reason to do so because the Ministry of Finance's own figures revealed that the poorest two-fifths of the population received only 18 per cent of these massive subsidies (McLeod 2008: 194). Instead, in the lead-up to the mid-2009 general election and the subsequent presidential election, the government commenced to reduce fuel prices month by month as a populist hand-out.

While the on-going global financial crisis gave the government the best opportunity in many years to align domestic and international oil prices, the second Yudhoyono government now made the further mistake of holding domestic prices steady while global prices recovered. By May 2011 international oil prices had recovered from its low of \$39 to \$112 whereas domestic prices were still pegged at the level of February 2009. Vice President

Boediono and the Minister of Finance sensibly recommended an increase in domestic oil prices but were rebuffed by the newly re-elected President (Olivia & Yamauchi 2012: 154). Because unexpectedly rapid growth in domestic demand compounded the recovery in international oil prices, the budget outcome for energy subsidies, including electricity was an unsustainable 20 per cent of the central government budget. Yet notwithstanding this crisis, parliament rejected the government's plan to increase the price of petrol by 33 per cent in April 2012. In consequence, energy subsidies escalated from a budgeted 13 per cent of central government expenditure to an outcome of almost 21 per cent (or 31 per cent net of transfers to the region). Not until June 2013 was a substantial adjustment to energy prices finally agreed by Parliament subject to compensation being distributed to the poor.

### CONSEQUENT DISTORTIONS

In a market economy, as Indonesia, prices are the primary means by which resources are allocated. This is not a matter of ideology but of the practical role of prices in reconciling the contending forces of supply and demand, thereby avoiding either frustrating shortages or wasteful surpluses. Government intervention can be justified to correct price distortions so that markets work better. However, there is no economic justification for interventions that introduce false market signals and thereby cause markets to lead to distorted and perverse outcomes. When governments take it upon themselves to set prices by administrative fiat, it is very likely that they will do more harm than good, especially if prices are held down for distributional or political reasons, thereby stimulating demand while restraining supply. Ironically the resultant shortages usually lead to more extensive and often sillier forms of government intervention, not wise review of the original administrative distortion.

Energy prices are especially problematic for regulation, both because the political temptation to set low energy prices is so great and because the long-run consequences of price distortions is so severe. Most people are sensitive to fuel prices because it is a regular out-of-pocket expense, whether directly for those who drive their own vehicle or indirectly for those who pay public transport fares. Restraint of fuel prices is therefore an obvious populist ploy. Even the authoritarian Soeharto government was prone to such populism

insofar as it was loath to increase fuel prices and thereby risk provoking protests and riots in the street. Part of the rationalization was that Indonesia is an oil producer and ‘the people’ should therefore enjoy the benefit of it. If that argument ever did make some sense, it made no sense after 2004 when Indonesia became a net oil importer. The nation’s oil production peaked as long ago as 1977 at 1,685 kilo-barrels/day; by 1995 it had fallen to 1,500 and is now around 900 kilo barrels per day and still falling (Prawiraatmadja 1997: 52; Cornwell & Anas 2013: 17).

Meanwhile, artificially low domestic fuel prices were stimulating domestic consumption. In the early years of independence when domestic consumption was a very small fraction of domestic production, the impact was small. Indeed, this could still be said of the early years of the New Order. The author still remembers Yogyakarta in 1972 when bicycles were ubiquitous and there was scarcely a car to be seen the length of Jalan Malioboro, Yogyakarta’s main thoroughfare. With economic growth and rising real incomes, however, the number of motor cycles, cars and trucks quickly began to soar, first in Java and then in the Outer islands. The number of aircraft miles showed similarly rapid growth. Power consumption (then heavily reliant on oil fuels) accelerated with the increasing use of appliances, not least air-conditioners, and quickening industrialization. These trends were more income- than price-sensitive but price did matter on the margin – and growth on the margin was met by increasing product imports. Just between 1990 and 1995, oil product imports more than doubled (Prawiraatmadja 1997: 60). While the Asian financial crisis and regime change brought a temporary slowdown, after 2004, as mentioned above, domestic demand exceeded production: exports of crude oil were offset by more expensive imports of refined product, with consequences for the balance of payments and the exchange rate.

The really serious damage of low oil prices is that they embed inefficiencies for the medium-to-long term in the stock of consumer durables and productive capital. For example, if motorists have no expectation of high or rising fuel prices, they are less likely to buy fuel-efficient vehicles; if there is no expectation of high or rising electricity prices, there is no incentive to buy power-efficient domestic appliances, such as air-conditioners and television screens. The same calculus applies to commercial vehicles and premises. One these investments are made, the fuel-inefficient vehicles, appliances and do matter.

Inefficiency is also embodied in urban form. Artificially low fuel prices translate into artificially low transport costs. As economic geographers have long explained, there is a trade-off between transport costs (in terms of both money and time) and land prices/rents. In the automobile age, the tendency is for cities to grow in concentric rings with the cheapest land on the periphery: the lower are transport costs, especially if there are flat fares, the farther out the city is likely to sprawl. Jakarta shows this very well. Until the 1970s, Kebayoran (Baru) was a satellite town on the edge of a densely settled city: travel between Kebayoran and the next established suburb of Menteng involved passing for several kilometers through tightly packed, single-storey *kampung*s. These *kampung*s are now just a memory, replaced by a high-rise boulevard. The urban poor have been pushed to the outskirts. A similar trend may now be observed in Surabaya.

For all these reasons, the adjustment to higher fuel prices is painful. Once people have committed to a location and are incurring the time and out-of-pocket costs of commuting, whether by their own vehicle or by public transport, any extra costs can push the less well-off below the poverty line. The same applies to electricity costs and appliances: once homes and offices are fitted with appliances of a given technology, the short-run price elasticity is fairly low. Appliances may be run for fewer hours or used at lower settings but only the better off can afford their immediate replacement.

The most pernicious impact of fuel subsidies is environmental. When these subsidies first came to attention in the late 1970s, the only environmental issue of concern was the impact upon deforestation. At that time it was generally believed that higher kerosene prices would encourage households to switch back to use of wood fuel and charcoal, thereby accelerating deforestation. The economic argument was plausible, but I showed in 1980 that it did not fit the facts (Dick 1980). Ironically, low kerosene prices were discouraging the planting of fast growing trees that could be harvested for the specialist uses for which wood and charcoal were superior fuels.

In 2013 the big environmental issue is global warming and climate change. There is no longer any reasonable scientific doubt that the rapid growth in consumption of fossil fuels, including oil, is accelerating global warming, leading to potentially catastrophic effects. The precise extent to which human causes are accelerating an underlying natural trend is still to be determined but the most recent science suggests that the trend is likely to be understated rather

than overstated. As a G20 nation, Indonesia has committed itself to address climate change. As an archipelago vulnerable to rising sea levels, it has every reason to do so. There is simply no environmental justification to continue subsidizing the consumption of fossil fuels. It is irresponsible to do so, thereby under-pricing energy and slowing the urgent switch to cleaner and non-fossil fuels. Eliminating the 'out-of-pocket' budget subsidies by aligning domestic fossil fuel prices with international prices would be both economically sensible and environmentally wise. However, it is only the first step because, in the absence of internationally agreed carbon pricing, international prices for oil and coal are below optimum long-run prices (taking account of environmental effects). The government should be trying to wean the Indonesian economy off both oil and coal, not subsidizing their domestic consumption and locking the economy even more into dependence on fossil fuels.

## CONCLUSION

Anne Booth gave her path-breaking economic history of Indonesia the powerful sub-title of 'A History of Missed Opportunities' (Booth 1998), which also aptly summarizes the sad history of fuel policy in Indonesia since 1980. The late Hadi Soesastro once likened fuel subsidies to a prison from which the inmates do not wish to escape (Pasha 2011). It was a very perceptive comment to be made in October 1979, when these subsidies had only just become an issue, and it has turned out to be all too true, irrespective of regime or government. The escalation of fuel subsidies whenever there is an upward trend in international prices and the failure to terminate them when prices fall should alert economists to some very discomfiting messages. First, and most obviously, governments, and presidents in particular, are not receptive to policy measures that involve short-term political pain and have very little awareness or interest in opportunity cost. Much the same could be said of most countries. Second, while governments pay lip service to the environment and express concern about global warming, they are not yet willing to make it a policy priority. This also is true of most countries. Third, and perhaps more relevant to Indonesia, populism is the very essence of politics and has become more so in the democratic era. President Soeharto relied on his economic technocrats, many of them economists, to make his government work. Widjojo Nitisastro and Ali Wardhana were both skilful in marshalling the evidence and making the case for economic reforms in terms that the president could accept. In



the democratic era it has become more difficult, not just a matter of persuading the president but also of forging a consensus between political parties in cabinet and in parliament, which in turn requires the public at large to be persuaded. For all these reasons, the lesson of history is that governments cannot be trusted to set energy prices. Nor is there any good reason to do so. Trying to second-guess volatile oil price trends is both a subtle art and a gamble. What governments should do is to monitor the prices being set by Pertamina as a state-owned monopoly and provide temporary welfare support if and when it can be justified by any sudden escalation in domestic prices.

In Indonesia there is much well-founded concern about corruption, but an awkward national silence about fuel subsidies. Few economists, journalists, policymakers or politicians are brave enough to risk public anger by arguing the case for higher energy prices. The sense of entitlement for 'cheap fuel' is almost a national characteristic, notwithstanding that Indonesia is now a net oil *importer*. There is never difficulty in mobilizing popular resistance to higher prices. Yet when more than 20 per cent of the state budget is splurged on 'out-of-pocket' energy subsidies, of which barely 20 per cent benefits the poor, something is very badly wrong. If this 80 per cent leakage were regarded as a corrupt bribe, as indeed it should be, it would be a national scandal. The only difference is the illusion that energy subsidies benefit everyone, not just a few insiders. What economists need to explain much more forcefully is that the opportunity cost of fuel subsidies in terms of education, health and infrastructure and welfare, as also the worsening environmental damage, is an economic, social and environmental catastrophe that is mortgaging the future of Indonesia's 250 million people.

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