

Rethinking Gasoline Pricing Policy

Gasoline consumption affects all walks of life in Cambodia.

The government's fuel pricing policy has far reaching implications for the country's economy.

The EIC research team examines the policy issues and their implications.

Cambodia imports 100 percent of the gasoline it consumes, while the fate of oil exploration in the Cambodian sea territory remains, at best, uncertain. Gasoline is mainly used for cars and motorbikes. For heavy engines, however, diesel is more efficient and therefore generally preferred.

The fuel supply industry in Cambodia is fairly concentrated. A handful of oil import companies control the entire market. Foreign-owned companies include Caltex, Shell, and Total; the local-owned are Sokimex, Tela, and a few smaller ones. It is generally believed that oil companies in Cambodia collude to fix the prices, and compete only on occasional promotion. The local companies, however, manage to generally offer a discount of 100 riels per litre cheaper than that charged by the foreign distributors. Overall, the industry operates more like a monopoly, which works against the benefit of consumers.

Fuel prices, especially gasolines, have far reaching implications as they affect all walks of life in the country. Everyone, including the poor, has to pay for the gasoline when travelling, or buying, or selling goods and services that need gasoline directly or indirectly as production input.

Since gasoline pricing is widely considered as a "too sensitive" issue, there has been no study to date undertaken to reveal publicly details and the extent of gasoline tax, and its impact on the government revenue as well as the economy.

This article reports on the official taxes on gasoline and their impact over time. It attempts to estimate the actual consumption of gasoline, and the potential government revenue if all the consumed gasoline is taxed. It also highlights the negative effects of the high tax rates on other sectors of the economy. Finally, it argues that the current policy on gasoline price is unrealistic, and defeats the purpose of increasing revenue collection. It suggests a large tax cut as an alternative to realign the gasoline

price to that in the neighbouring countries. This will not only benefit consumers and enhance competitiveness in many production sectors, but will also substantially raise the government revenue, which is a critical challenge for Cambodia in the coming years.

The Significance of Tax on Gasoline

The Cambodian retail price of gasoline is about 75 percent higher than that in neighbouring countries. A litre of gasoline is currently sold at pump for 2,300 riels, compared to an equivalent price of about 1,300 riels in Thailand and Vietnam. The huge differential of 1,000 riels per litre is mainly due to an imposition of a higher tax by the Royal Government of Cambodia (RGC).

In Cambodia, gasoline is heavily taxed. In 2002, the applicable tax rate was US\$ 0.23, or 910 riels per litre, about 41 percent of the retail price. Compared to import price (cif) of US\$ 0.21, the applicable tax rate is a composite tax consisting of import duties of about US\$ 0.12 per litre, VAT about US\$ 0.04, and excise tax about US\$ 0.07. These three taxes are respectively set at the rate of 50 percent, 10 percent, and 20 percent of the reference price, which is set at US\$ 320 per ton. The use of reference price is to

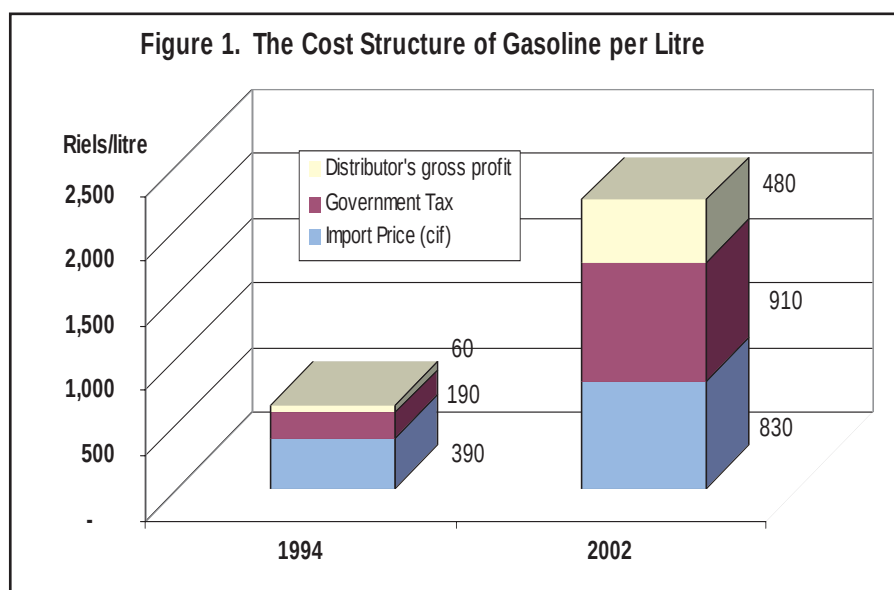
simplify paperwork. It has been normally higher than the actual price; for instance, in 2003 the actual price has been fluctuating between US\$ 280 and US\$ 300 per ton.

The price of gasoline in Cambodia in 1994 was considerably lower. A litre was sold at the pump for 650 riels or US\$ 0.25. While the import price and gross margin of the distributors were lower at that time, it was the low tax rate that made the biggest difference (Figure 1). The total tax was 190 riels (US\$ 0.07) per litre, compared to the 2002 rate of 910 riels (US\$ 0.23). The RGC steadily raised the tax from US\$ 0.07 per litre in 1994 to US\$ 0.13 in 1995, then to US\$ 0.20 in 1996, and US\$ 0.23 in 1999, which has remained current up to now.

For diesel fuel, in recognition of its function as an intermediate good, or production input, such as for irrigation pumps and other agricultural machinery, the RGC has employed a policy of keeping the price of diesel relatively low. It has moderately increased the tax rate from US\$ 0.04 per litre in 1994, then to US\$ 0.08 in 1999, and US\$ 0.10 in 2002.

The Impact of High Tax on Consumers

In addition to its contribution to high consumer prices in general, the



Source: EIC, Compiled from government primary data

higher tax on fuels in particular erodes competitiveness in key economic sectors, such as agro-processing, small and medium enterprises, and transportation.

This relatively high price of gasoline is a major concern because it affects all sectors of the economy. Any change in gasoline price policy will affect every Cambodian resident directly or indirectly. The degree of the effect may differ due to whether gasoline is consumed as a "final" or as an "intermediate" product.

Gasoline is generally treated as a final product when a consumer, an end user, uses it for private purposes, for instance, to run their vehicles for travelling. The high price of gasoline effectively takes a large proportion of the consumer expenditure, especially from the poor. For example, an average civil servant is paid about US\$ 0.60 a day. If he/she consumes 0.5 litre of gasoline per day by using their own motorbike, it is almost 50 percent of their income. This may prevent them from going to work everyday. The extra amount the end users have to spend on gasoline can otherwise be used for other important necessities, such as food and health care. An increase in consumption of locally produced fruits and meat, for example, will not only enhance individual quality of life, but also boost the farmers' income and the local economy. As Cambodia still has a higher rate (36 percent) of people living under poverty line than its neighbours, taking away more money from people directly or indirectly through a higher gasoline tax policy is counter-productive in the global and national agenda of poverty reduction.

Gasoline is an intermediate good when it is used as input for production of goods or services, such as for the commercial transportation of motodups, taxis or boats. The impact of high tax on businesses of these kinds is beyond a reduction of business income as the demand is kept at minimum. It makes the cost of production or business operation relatively high, thus forcing generally high prices of goods and services in the market place. As for the businesses that compete with foreign products, the higher cost of fuel erodes regional competitiveness and may stifle businesses from

prospering, if they do not go bankrupt first.

Technically speaking, mobility is very important in a market-oriented economy. The transportation issue is particularly of critical importance in the context of Cambodia where there has been over population in certain locations, and new unpopulated areas have been opened up in the past years. Beyond the subsistence level, all goods and services as well as businessmen need transportation; different places have different comparative advantages due to diversity of the actual agro-climatic systems. Transportation of agricultural goods and services generally needs gasoline or diesel. Cheaper prices of gasoline and diesel will, therefore, encourage more movement of goods and people. On the contrary, the current higher prices have placed economic restrictions on mobility. This, in effect, limits economic activities, which seriously jeopardises the RGC's effort in the past decade to promote them.

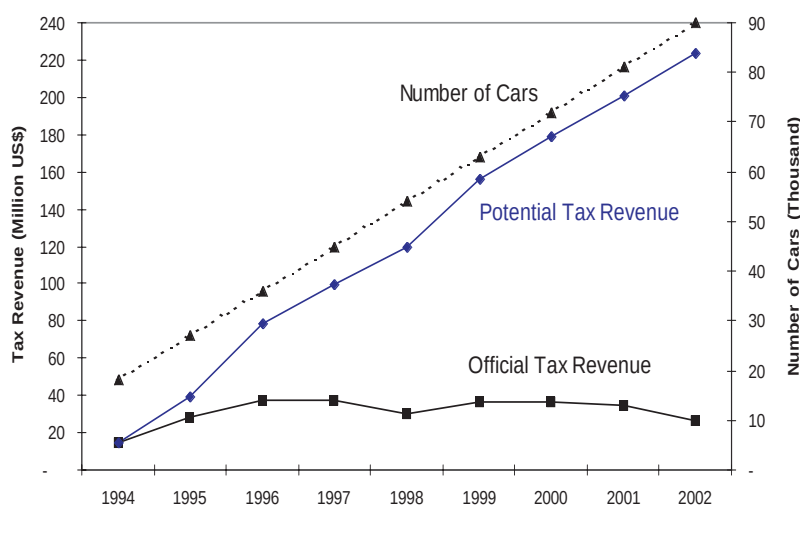
The current policy of high fuel price may explain why agro-processing activities in Cambodia remain severely limited. Cambodia is agriculturally based, and it requires agro-processing activities that need fuel as a major input. It is unlikely that the high fuel cost can attract adequate investments that are much needed, and make the agro-processing sector competitive vis-à-vis the neighbouring countries.

Nevertheless, one may still argue that many other factors, such as substantial informal payment or rampant corruption in Cambodian society, raise the costs of operating businesses far more than the high tax on fuel does. While this argument is plausible, the high fuel tax policy may just be the last straw that breaks the camel's back. While adverse impact of the other factors cannot be overestimated, the high cost of fuel has forced the production costs up further, and thus lowering the country's competitiveness in the region. The severity of this negative impact depends on the proportion of fuel in total production cost, which is usually quite substantial in most modern industries.

It is, however, commendable that the RGC has kept the tax on diesel low to lessen the burden on farmers and businesses that can switch from using gasoline to diesel. Nonetheless, the price of diesel in Cambodia is still about 20 percent higher than that in the neighbouring countries. A litre of diesel is retailed for 1,250 in Pailin, a town bordering Thailand, while it is sold for 1,500 riels in Phnom Penh in September 2003.

Certainly, there has been public discontent over the high price of gasoline. People have held protests. The Opposition party picked up the issue in its campaign for the election of July 27, 2003. Related or not, the Opposition won the votes in Phnom Penh and other urban

Figure 2. Gasoline Tax Revenue and Number of Cars



Source: EIC, Compiled from government primary data

areas, where there is a heavy consumption of gasoline, and its high pump price is a real issue.

The Impact of High Tax on the National Revenue

Fuel tax is one of the easiest items to be collected by the RGC because the country totally relies on imports, and there are only a handful of import companies operating in the country.

Although it has sometimes explained to the public that the high gasoline tax policy is to discourage consumption of cars in favour of a friendly environment for the city, the real intent of the RGC is to raise more revenue. However, as discussed below, the policy has failed on both accounts; the number of cars on the road has not been under control, and the State revenue from gasoline tax has been dropping.

Figure 2 shows, even though raising tax on gasoline may be one of the easiest ways to increase official revenue, the RGC's gasoline pricing policy has simply failed. The officially recorded revenue from gasoline tax has not increased, but in fact gradually fallen, in contrast to the rising number of cars and motorbikes. It is also a big puzzle to note that consumption of gasoline recorded by the Customs and Excise Department has decreased gradually since 1995, while the number of cars officially recorded has steadily increased.

One possible and the most logical explanation to reconcile the increase in the number of motor vehicles with the drop in fuel consumption and in tax revenue is that those vehicles have been supplied with smuggled fuels, especially gasoline.

Indeed, an undeniable fact is that, "high tax means high incentives for tax evasion." With poor governance, loose border control, and widely acknowledged rampant corruption in the country, fuel smuggling for quick windfalls is simply too irresistible. The fuel price disparity between Cambodia and the two neighbours has inevitably encouraged smuggling at the borders. An estimate suggests that only about 12 percent of the total gasoline consumed in

Cambodia is taxed.

It can be deduced that a huge amount of gasoline is smuggled into Cambodia every year. It is based on the official number of cars and gasoline consumption in the country over a period of time. According to the official statistics, the number of cars in 1994 was some 18,000 and the gasoline import was officially recorded at 140,000 tons. Assuming that the 2002 official number of cars of 90,000 is accurate and the 1994 ratio between the gasoline import and the number of vehicles remains more or less constant in all these years, the official figures for gasoline import in 2002 should have been about 700,000 tons, not 84,000 tons as officially recorded. If the record of 84,000 tons for 2002 were valid and reliable, then the smuggled gasoline could be as much as 616,000 tons in 2002.

For diesel fuel, it is estimated that it has also been smuggled into the country since 1999, even though the windfall for smugglers in this case is well below that of gasoline. Between 1999 and 2002, some US\$33 million per year could have been added to the government revenue if all the diesel fuels used in Cambodia had been taxed.

Another possible explanation of the above contradicting official statistics is that the number of cars with diesel engines has increased at a faster rate than that of the cars using gasoline. Even if

this is the case, it is most likely that the stock of cars with gasoline engine, which makes up about 85 percent of all cars, has still risen. In fact, the official number of cars does not even account for cars smuggled into Cambodia, which has been rather significant. Hence, the consumption of gasoline must have increased. Furthermore, the deduced consumption has yet to include the amount of gasoline used by millions of motorcycles all over the country.

It should be noted that gasoline consumption is not merely a function of the number of cars and motorcycles; it is also positively correlated with income and infrastructure. For the past ten years, the income has increased, roads and bridges have been upgraded and expanded; the improvement has inevitably induced greater mobility among the population. When these are factored in, consumption of gasoline must be proportionally higher in 2002 than in 1993, assuming that other variables remain constant.

Based on a realistic assumption that the actual consumption of gasoline has risen in pace with the official number of cars, the State budget has missed out on a huge revenue from its high gasoline tax policy. Those who managed to evade the tax could have together generated up to US\$ 196 million in 2002, if all the estimated amount of 700,000 tons had been sold for the prevailing market price of

Table 1. Structure of Current and Alternative Fuel Pricing

	Gasoline			Diesel		
	1994	2002	2004	1994	2002	2004
	Actual	Actual	Alternate Policy	Actual	Actual	Alternate Policy
Retail Price in PNP (\$/litre)	0.25	0.56	0.37	0.23	0.38	0.32
Import Price	0.15	0.21	0.21	0.15	0.21	0.21
Taxes	0.07	0.23	0.12	0.05	0.10	0.07
Distributor's gross margin	0.03	0.12	0.04	0.03	0.07	0.04
Retail Price in PNP (riel/litre)	640	2,220	1,470	590	1,430	1,300
Import Price	390	830	830	400	850	850
Taxes	190	910	460	140	310	290
Distributor's gross margin	60	480	180	50	270	160

Source: EIC, Compiled from government primary data

US\$ 0.56 per litre. If no amount of gasoline had evaded tax, then a grand total amount of US\$ 223 million of tax revenue would have been raised in 2002 (Figure 2). Unfortunately, with a tax rate of US\$ 0.23 per litre and the loose governance, only US\$ 27 million was officially collected in 2002. Given the loose governance, the official gasoline tax collection in 2002 still represents a decline from US\$ 28 million in 1995 when the tax rate was only US\$ 0.13 per litre.

Based on the estimated amounts of gasoline consumed each year from 1994, the total revenue could have risen steadily as indicated in Figure 3. If the current tax policy had been effective in collecting revenue, the potential government revenue from gasoline would have constantly increased from year to year, totalling about US\$828 million for the period of 8 years from 1995 to 2002. Realistically speaking though, this amount should be only a potential, as smuggling is unlikely to be eliminated under the environment in which financial incentives for tax evasion are very high, border control is loose, and "anything goes with unpunished corruption".

An Alternative Pricing Policy

Anyhow, what has proven true is that the current high tax policy has failed to increase the State revenue. It is very realistic to say that if the prices of gasoline and diesel were set the same as those in neighbouring countries, financial incentive for fuel smuggling would have been removed. All the gasoline and diesel fuels consumed in Cambodia would have been taxed at modest rates. Then, with rising number of automobiles, the revenue to the State would have accordingly increased gradually.

Details of an alternative fuel policy - based on parity pricing with the neighbouring countries - are in Table 1. With the alternate policy, the RGC could collect an additional amount of about \$118 million a year. In a projection for 2004, if the tax rate is kept to the parity level, US\$ 180 million could have been collected for the year, far more than the official revenue of US\$ 62 million for

2002 (Table 2).

Besides extra revenue for the State, the projection also implies consumers and businesses would also benefit substantially from the alternate policy of lower fuel prices. The consumer surplus could then be used for reducing poverty or improving business. More vibrant economic activities could emerge from low gasoline prices. However, the major losers would seem to be the smugglers, and perhaps the distributors (Table 2).

Depending on the price elasticity of gasoline, the likelihood is that a lower price would increase the demand. With a policy to keep the gasoline price as low as that in neighbouring countries, a larger quantity of gasoline will be consumed. Such increase in consumption will raise the government revenue in addition to the additional sum diverted from smugglers' pockets.

Conclusion

Experience has proven that the current high tax policy on gasoline has failed to raise revenue, and to control the use of vehicles for the sake of the environment. As the tax rate rose, the revenue decreased, owing to the overt rise in smuggling.

The alternate policy would reduce the price of gasoline to the level comparable to that in the neighbouring countries. This will produce some multi-

plier effects on the Cambodian economy. First, consumers of gasoline, both as final and intermediate goods, will benefit from the resulting sizeable consumer surplus. It can then be spent on other items that can both improve at least security for basic life necessities and raise demand for local production. Moreover, the subsequent increase in mobility of people, goods and services, will also help fuel the economy. The realignment of gasoline price will therefore directly and effectively contribute to poverty reduction.

Second, a basic concern that reversing the trend of the rising tax rate will reduce the government revenue seems to be too simplistic, and should be revisited. The recent empirical evidence has shown that while the tax rate has been gradually increased, the official revenue has not increased, but instead decreased. This has occurred despite the fact that the number of cars and traffic has increased. Many may agree that when the incentives for smuggling are reduced to nil, smuggling will also disappear. If this logic holds, the government revenue will increase substantially following the realignment of gasoline price to that in the neighbouring countries. It is estimated that this alternative policy will increase the government revenue by more than US\$ 100 million per annum, in addition to substantial gains by consumers and producers in other economic areas.

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Table 2. Comparative Gains and Losses with Fuel Parity Pricing

	1,994	2002			2004	
	Official	Official	Estimated	Smuggling	Alternate Policy	Potential Gain
Oil Consumption (000 tons)	360	508	1,262	754	1,550	1,042
Gasoline	140	83	622	539	750	667
Diesel	160	335	460	125	580	245
Others	60	90	180	90	220	130
Oil Tax Revenue (Mn US\$)	26	62	249	187	180	118
Distributor Income (Mn US\$)	8	39	118	79	67	28

Source: EIC, compiled from government primary data