

Proposal for additional excise duty on diesel cars to reduce public revenue losses and public health costs

Centre for Science and Environment, New Delhi

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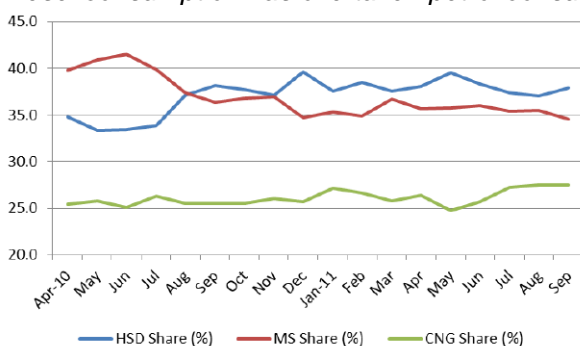
1. Fiscal policies can prevent misuse of cheap diesel for consumption in cars

The forthcoming budget will have to address the need for fiscal check on rapid dieselisation of car segment to lower revenue losses as well as public health costs. This has emerged as one of the strongest concerns this year. The growing gap between the highly taxed and freely priced petrol and the subsidised diesel has exploded diesel car sales. From 4 per cent in 2000 the share of diesel cars in new car sales has increased to nearly 40 per cent of the new car sales. In the more popular compact car models the share is reported to be as high as 70-75 per cent. Diesel consumption in automobiles has begun to outpace petrol increasing exposure to toxic air pollutants and threatening public health in cities.

As a result, the petrol consumption has slowed down while that of diesel has accelerated. The industry sales review by the Petroleum Planning and Analysis Cell of the Union Ministry of Petroleum and Natural Gas has stated that over the last 15 years petrol has nearly always recorded higher growth rate than diesel. But this year the growth in petrol consumption has moderated at 4.5 per cent in August and is heading towards a “historic low”. But diesel has registered 6.4 per cent growth. This national trend is starkly mirrored in Delhi where since August 2010 diesel consumption has outpaced petrol. (See Graph 1: Percentage share of three competing transport fuels in Delhi (April 2010 to Sep 2011). The effect of the increased consumption of subsidised diesel in cars is so dramatic that the excise earnings from both diesel and petrol has nearly equalled despite the fact that petrol pays seven times more excise than diesel.

Graph 1: Percentage share of three competing transport fuels in Delhi (April 2010 to Sep 2011)

Diesel consumption has overtaken petrol consumption for the past several months



Source: Anon 2011, Industry Sales Review Report October 2011, PPAC, MOPNG, India

2. Diesel taxed as lower rates and priced cheap is a subsidy to car owners

The central government earns much less excise on a litre of diesel used by cars, as opposed to petrol. The total excise duty on petrol is Rs 14.78 a litre¹ seven times higher than diesel, which is at Rs 2.06 per litre². With each litre of petrol replaced by diesel to run a car the excise earnings of the government drops 7 times. Revenue losses will compound with increased share of diesel cars and SUVs. It is not just the excise but at every stage of price build up – pre-tax adjustments, dealer commission, state taxes etc. the gap keeps widening. This also means that the amount of excise a two-wheeler owner spends on a litre of petrol is significantly higher than what SUV owner pays on a litre of diesel fuel. How can the government justify these concessions to the car and SUV owners?

The retail price difference is the cascading affect of the central and state taxes and this also varies across states. A quick review of the fuel prices in the market indicates significant price difference between petrol and diesel. Delhi market shows close to 40 percent difference in petrol and diesel retail prices.

The Petroleum Planning and Analysis Cell (PPAC) of the Ministry of Petroleum and Natural Gas has reported on price build up of both the fuels. The pre-tax price adjustment, difference in excise, dealer commission and VAT contribute significantly to the retail price differences. In Delhi the ultimate difference in retail prices is close to Rs 25/litre (Table 1: Price composition of retail price of petrol and diesel in Delhi).

Table 1: Price composition of retail price of petrol and diesel in Delhi

	Diesel¹ (Rs/Ltr)	Petrol² (Rs/Ltr)	Difference (Rs/Ltr)
Cost of fuel to oil marketing companies (Total desired price)	44.99	38.41	
Price excluding excise, VAT and dealer commission (Price after under recovery)	33.47	38.42	4.95
(+) Excise	2.06	14.78	12.72
(+) Dealer commission	0.91	1.5	0.59
(+) VAT	4.46	10.94	6.48
Retail price	40.91	65.64	24.73

Source:

1) Price Build-up of Diesel at Delhi, effective 16 December 2011

<http://ppac.org.in/writereaddata/Price%20Build%20up%20Sensitive%20Products.pdf>

2) Price build up of petrol (IOCL), effective 01 December 2011

https://iocl.com/Products/PriceBuildup/Price_Buildup_Petrol_12_dec_2011.pdf

¹ Petrol fuel excise: Basic Cenvat Duty is Rs.6.35/ltr (+) Special Additional Excise Duty Rs.6/ltr (+)Additional Excise Duty (Rs.2.00/ltr.) = Rs 14.35/ ltr; in addition to this Education Cess @2% on aggregate duties is charged w.e.f. 9.7.2004 and additional 1% will be charged w.e.f. 1.3.2007 therefore total central excise estimated with education cess is Rs 14.78/ltr

²High speed diesel fuel excise: Basic Cenvat Duty is NIL (+) Special Additional Excise Duty is NIL (+) Additional Excise Duty (Rs.2.00/ltr.) = Rs 2.00/ ltr; in addition to this Education Cess @2% on aggregate duties is charged w.e.f. 9.7.2004 and additional 1% will be charged w.e.f. 1.3.2007 therefore total central excise estimated with education cess is Rs 2.06/ltr

3. Government and oil companies bear the burden of under-recovery

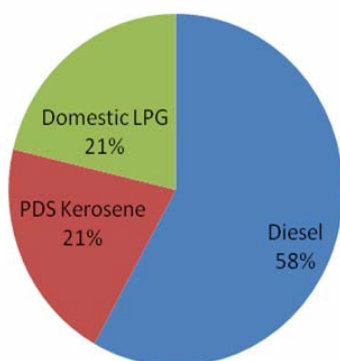
It is just not the tax differences, but also the under recovery of the actual price of the fuel which adds to the burden as well as to the hidden subsidy to the car owner. The capped diesel prices lead to huge under recovery. This varies widely during the year according to the international crude oil prices.

According to official information on the product-wise under-recovery of public sector oil marketing companies, the under recovery rate in May 2011 was Rs 19 per litre, Rs 8 in November and Rs 11.50 in December per litre of diesel sold. Diesel price accounts for around 58 per cent of the under-recovery of the oil marketing. (See Graph 2: Diesel's share in total under-recovery to oil marketing companies).

Diesel is thus responsible for the highest share of under recovery. This also means that the oil marketing companies and government are shouldering a part of the under-recovery burden for the car owners.

Graph 2: Diesel's share in total under-recovery to oil marketing companies

OMCs have reported Rs 64,900 Crore as under recovery from diesel, kerosene and LPG during the 1st half of the year (April-Sept 2011). Diesel accounts for the highest losses.



Source: MOPNG

4. The revenue loss depends on quantum of diesel cars burn

The size of the revenue losses will depend on the amount of diesel used by the car fleet. This fact has already become very contentious and the automobile industry is trying hard to prove that the cars are very small users of diesel. The Kirit Parikh Committee report of 2010 -- *Report of The Expert Group on A Viable and Sustainable System of Pricing of Petroleum Products*, done under the aegis of the Ministry of Petroleum and Natural Gas, had estimated that the cars use up 15 per cent of the total diesel consumed in the country in contrast to 12 percent by buses and agriculture each, 10 percent by industry, and 6 percent by railways. This makes cars the second largest user of diesel.

5. Dieselisation is pushing market towards bigger cars that guzzle more fuel and enhance revenue losses

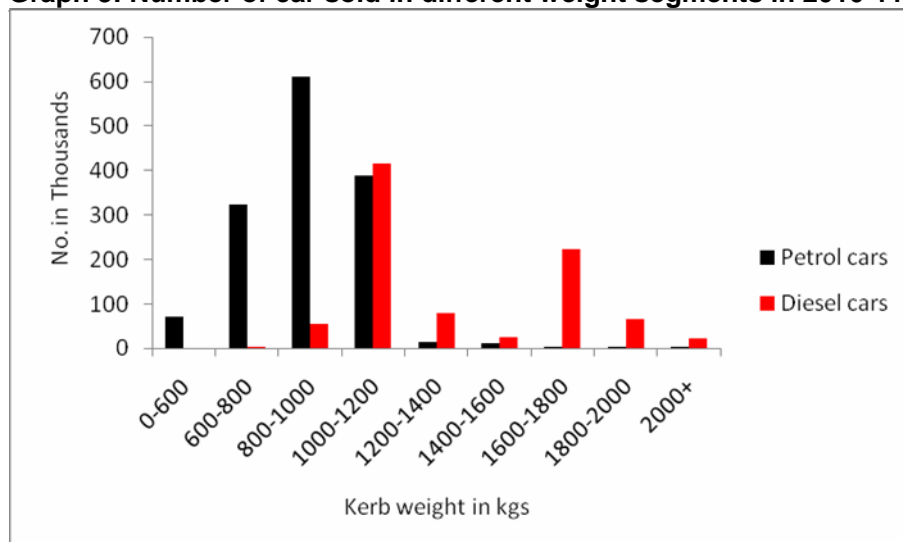
With dieselisation the Government will lose more revenue from the car sector in the future. There is no official database on the actual diesel car sales by size. The source of information is the reported estimates from the car industry. That as variously reported

shows that overall diesel car sales have crossed 36 percent and is closed to 40 percent. The recent reports have also shown that diesel share in the popular compact models is as high as 70-75 percent.

CSE had the opportunity to look at the car sales data from the well-known Segment Y for the years 2009-10 and 2010-11. Analysis of this data shows that cheap diesel fuel is also pushing the market towards bigger diesel cars that use more fuel and threaten energy security (Graph 3: Number of car sold in different weight segments in 2010-11). While 87 per cent of the petrol cars sold in India have less than 1200 cc engines, 8 per cent of diesel cars are below 1200 cc. About 52 percent of the diesel cars are between 1200--1500 cc and 40 percent are above 1500 cc. There are 24 diesel car models in the engine size class range of less than 1400 cc; 42 models in the range 1401-2000 cc; and 61 models in the class above 2000 cc engines. This just shows how more models are proliferating in big car and SUV segments and their share of sales are also increasing. Cheap fuel will push the market more towards bigger cars as this will help to cushion the running costs. The lure of lucre supported by the official policy will continue to push the car industry to expand its diesel car production facilities.

Cheap diesel is escalating sales in both entry level as well as big SUV level. The cheap diesel is now leading to high growth at the entry-level segment, which is less than 1400 cc. This class has registered 45 percent growth rate between 2009-10 and 2010-11. But the low running costs is also aiding in rapid shift towards bigger and high mileage diesel cars and SUVs. It is stunning that the class range above 2000 cc that includes all SUVs has registered 41 percent growth rate during the same year. The SUV class is already 34 percent of the new diesel car sales. This clearly brings out that the price sensitive entry-level owners as well as the SUV and big car buyers are protected and cushioned by the cheap diesel prices. This trend will compound revenue losses and add to public health crisis.

Graph 3: Number of car sold in different weight segments in 2010-11



Source: Based on market data

6. New diesel car fleet will lead to enormous revenue losses

CSE has estimated the revenue losses from the lifetime diesel fuel use in new diesel cars that are being added annually on account of lower taxes and under recovery. The government of India needs to take this into account to decide the tax measure to recover the fuel subsidy for the car usage.

According to the market data in 2009-10 about 6.6 lakh diesel cars were sold in India. Within a year it has registered a massive growth rate. In 2010-11 the new diesel car sales increased by 34 percent. If diesel cars continue to grow at this rate until 2015 with the current fuel price incentive, the excise earning from their lifetime fuel use will be Rs 14,000 crore at the present rate of excise at Rs 2.06/litre.

If this new diesel car fleet were to pay the same excise of Rs 14.78/litre as that of the petrol cars, the potential excise revenue would be Rs 100,000 Crore. In other words, the government is potentially losing as much as Rs 86,000 Crore from the lifetime fuel use of the new car fleet sold between 2009 and 2015, if the fuel excise differences between petrol and diesel cars are not equalised through an additional tax measure for diesel cars.

The losses can worsen if the under recovery burden of the lifetime diesel used by this new car fleet between 2009 and 2015 is also considered (at an average rate of Rs 10/litre). The additional loss can be as high as Rs 70,000 crore. This clearly proves the point that the losses are huge from the lifetime usage of fuel by diesel cars. It is more important to focus on this to decide the tax equaliser with the petrol cars.

7. Impose additional excise duty on diesel cars to offset the revenue losses from fuels

Clearly, dieselisation will have to be prevented and arrested. It is clear that equalisation of fuel prices will not be possible given the political challenges and repercussions for freight, public transport and agriculture. But the loophole of misuse of under priced and under taxed diesel by cars can be easily plugged with an additional tax on the end use of fuel in cars. Taxation can then be more targeted to prevent misuse of subsidised diesel in cars. The Parikh Committee report has proposed this very important principle that there is a need for a tax equaliser between diesel and petrol cars. Additional tax on diesel cars help to recover the additional tax that petrol cars pay over their lifetime because of higher taxes on petrol fuel. This will have to be adopted to bring parity between both petrol and diesel cars.

We strongly recommend additional specific duty on diesel cars to recover the losses from luxury consumption, prevent dieselisation at the current level of vehicle technology and fuel quality and enable swift transition to clean diesel. The forthcoming budget must be effectively designed to achieve this.

We have also calculated the quantum of excise duty that should be imposed to correct the current price distortion. The Kirit Parikh Committee has proposed Rs 81,000 additional excise duty as an equalizer. Parikh Committee has proposed a method and an amount of additional excise duty on diesel cars. It has proposed Rs 81,000 additional excise duty as an equaliser. Parikh committee said in February 2010: "At the present excise rates, the additional excise duty paid by a petrol vehicle owner who on an average drives 8000KM/year and gets an average mileage of 13.5 KM/litre is around Rs.10000 per year. At 5% discount rate it would be Rs. 81,000."

We support this estimation, but believe that there is a need for an increased duty on diesel cars in the large segment (which are luxury cars as well). These cars with larger engine size also use comparatively more fuel. This will not put disproportionate burden on small cars and will also provide adequate duty to reduce the current fuel-price distortion. In this way, the excise duty on diesel vehicles will be as follows:

Additional specific duty on diesel cars

Car engine size range	Final adjusted additional duty on diesel cars (Rounded off)
< 1400 cc	Rs 81,000 per car
>1400 cc	Rs 1.62 lakh per car

8. Revenue potential of such measures

The strategy of the additional duty will not only help to bring additional revenue from the luxury consumption of cars but also off set the major part of the losses. It will also generate resources to meet the requirements of clean diesel (10 ppm sulphur diesel) to reduce public health impact of diesel emissions. These rates at the level of diesel car sales during 2010-11 have the potential to generate about Rs 10,000 crore a year.

This amount will only increase with the increase in diesel car sales. Our estimates show that based on the projected increase in diesel car sales from 2009-10 to 2014-15 the estimated potential from this additional duty can be close to Rs 100,000 Crore. This can not only meet the cost of refinery upgrades needed to produce 10 ppm sulphur diesel nation-wide, it can also offset a significant part of the unrealized revenue to the central government. In other words, if this additional duty reduces diesel cars sales and replaces them with petrol cars the gains still remain.

9. Charge for under recovery

Getting the diesel cars pay for the under recovery of the diesel fuel prices is also important. This presents a complex challenge given the fact that the under recovery rates vary according to the crude oil prices. This year the rate has varied between Rs 19 in May to Rs 6 in August and Rs 12 in December and so on. It is possible to take an average to recover some of this from the diesel car owners. Petrol cars owners do not enjoy any under recovery cushion.

Even if an average of Rs 10 per litre of under recovery is assumed the rounded flat rate at the current level of usage of diesel cars can be: <1400 cc – Rs 50,000; 1401-2000 cc – Rs 70,000; >2000 cc – Rs1 lakh. A spotlight on this is important for the government to understand and acknowledge that how much it is losing because the diesel car owners are not paying the right prices for the fuel or as much as the petrol car users are already paying.

10. Public health imperative must drive this decision

The government must take note of the fact that the fuel pricing policy is not only leading to financial losses but is also enhancing public health costs in the country. This is not even accounted in the taxation policy.

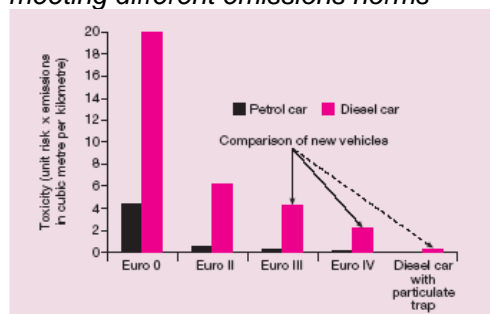
It is important to recognise that even with the introduction of Bharat stage III and IV in April 2010 special concerns over its toxicity continues to rage. But the Government of India has not set any further improvement target for emissions and fuel quality standards for the automobile industry. This means the diesel car production will expand with no target for clean diesel. The current emissions standards legally allow diesel-cars to emit more particulate matter and nitrogen oxides – that are the most serious pollutants of concern in our city's air. Nitrogen oxides also contribute towards formation of ozone, yet another emerging and a very harmful gas. Both Bharat Stage III and IV legally allow diesel cars to emit several times more NOx and particulates compared to petrol cars. At every stage diesel emissions remain more toxic (Graph 4: Toxic profile of diesel and petrol cars meeting Euro norms).

According to the WHO and other international regulatory and scientific agencies including International Agency for Cancer Research, California Air Resources Board, US Environmental Protection Agency diesel particulates are toxic air contaminant and human carcinogens. These are associated with lung cancer and some of the deadliest air toxics, also carcinogens, are related to diesel emissions. These are even blamed for killing unborn fetuses. The cancer causing potential of diesel particulates and emissions is also several times higher than some of the worst known air toxics. For instance, the number of excess cancer cases per million people per microgramme per cubic meter diesel particulate emissions concentration over a 70 year lifetime exposure is 300. Cancer registry in India already shows how cancer is taking an epidemic form that demands immediate action to cut environmental risks.

The toxic concern over diesel emissions has forced the western world to clean up diesel to a level that makes diesel vehicles comparable with other fuels. It is possible to address the toxic threat from diesel only if near zero sulphur fuel (10 ppm) is used along with the advanced emissions control systems to near eliminate the diesel particulates. This is the reason why Europe has moved to 10 ppm sulphur fuel even at the level of Euro IV and incentivised use of advanced emissions control technologies for a quick make over. The US has moved directly from 500 ppm sulphur diesel to 15 ppm sulphur diesel along with the requisite vehicle technologies. But India is dieselising without clean diesel.

Graph 4: Toxic profile of diesel and petrol cars meeting Euro norms

A comparison of cancer causing risk of emissions from diesel and petrol passenger cars meeting different emissions norms



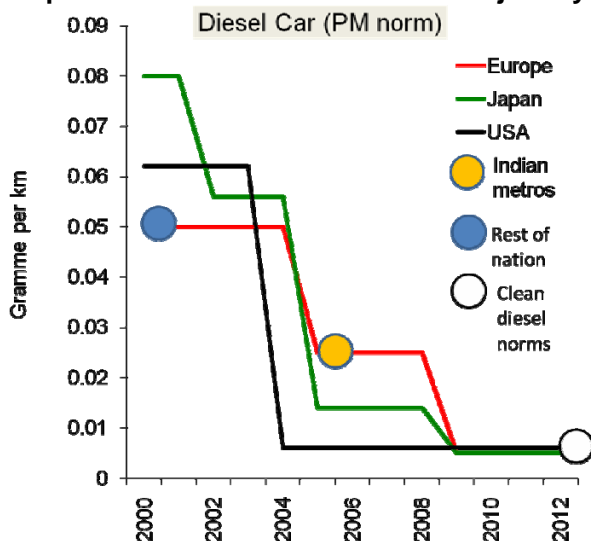
11. India is dieselising with a very wide technology lag

It is unacceptable that while distorted fuel pricing is inciting diesel car production phenomenally in India the Government of India has not set the next stage of emissions standards for the automobile industry and the refinery (Graph 5: Diesel car emission

norm trajectory and India's position). The Bharat Stage III emissions standards currently in force nation-wide is already more than 10 years behind Europe and Bharat Stage IV in 13 cities is 6 years behind Europe. In the meantime Europe will move to Euro VI by 2017. The Ministry of Petroleum and Natural Gas has only stated that Bharat Stage IV fuel will be introduced in 50 cities by 2015. This means in 2015 about 50 cities will be 10 years behind Europe and the rest of the country 15 years behind Europe. This is unforgivable when huge investments and tax sops are being tied with automobile production.

The fuel price differences are incentivising the car industry to expand the diesel car production facilities. This will further harden the industry resistance to improving diesel quality and vehicle technology. It is also in the interest of the car industry to have the clear pricing signal for the cars in advance should come upfront to de-risk investments. The 12th five year plan must set the target of Euro V and Euro VI emissions standards.

Graph 5: Diesel car emission norm trajectory and India's position



Source: Compiled from various sources (European Commission, MORTH, India, Diesel Net)

12. Additional revenue from diesel cars can help refineries to produce 10 ppm sulphur diesel nation-wide

The international benchmark for clean diesel has already been set at the 10ppm sulphur fuel that is used along with advanced emissions control technologies for particulates and NOx. The only next step that is left for the refineries to achieve is to produce 10 ppm sulphur fuel to enable introduction of appropriate emissions control systems in vehicles in India. Refineries can do this by upgrading their configuration, capacity optimization, and yield improvement. The rough estimates from the oil companies indicate an additional requirement of about Rs 40,000 crore to get down to 10 ppm sulphur fuels, which is roughly one city spends on a phase of a metro system and the Government of India is putting in money to promote metro in key cities.

This investment will have to be prioritized to provide clean diesel across the country. But this one time capital investment will give commensurate benefit on a nation-wide scale.

While it is true that the rising crude oil prices and under recoveries has created financial strains it is also evident that the maximum refinery capacity expansion and investments have coincided with the highest oil prices and under recoveries. The total refining capacity at 198.4 million metric tonnes per annum (MMTPA) in 2010 is slated to increase to 261 MMTPA by the end of 2013. If such a massive investment is already underway to expand refinery capacity it is possible to include investments for expanding the hydro treating capacity to remove sulphur from fuels and produce clean diesel.

As part of the public policy the Government can make one time grant for the requisite facilities to the public sector refineries to meet the clean diesel benchmark. This investment can be justified if the government considers the pollution costs of diesel emissions. Other governments consider such costs. The European Commission has very recently calculated the difference in lifetime pollution costs of Euro IV compliant diesel car and petrol car. It shows the total pollution cost of a Euro IV diesel car is Euro 1195 as against Euro 846 for a petrol car. The European Commission says that this nullifies the marginal greenhouse gas reduction benefit of relatively more fuel efficient diesel cars.

13. Globally tax measures are used to discourage diesel cars or to cut toxic risks

While in India several official committees have now asked for special and additional taxes on diesel cars to neutralise the incentive of cheaper diesel fuel, in other countries active policies are in place to disincentivise the diesel cars.

In Brazil diesel cars are actively discouraged because of the policy to keep taxes lower on diesel. In Denmark, diesel cars are taxed higher to offset the lower prices of diesel fuel. In China, taxes do not differentiate between petrol and diesel. Sri Lanka is a unique country in South Asia that has turned the market using taxation very effectively to discourage diesel cars. Even though Sri Lanka does not produce cars and imports most of it, differential taxes have been used very effectively to reduce diesel car sales in the country. While the total tax burden on petrol car is 244% on diesel car it is 436.90%. This has reversed the dieselisation trend and diesel fuel consumption in transport sector has dropped substantially by more than 14 percent in couple of years. At the same time dramatic tax concession to hybrid cars has increased their numbers from 112 hybrid cars in January 2011 to 7,512 hybrid cars in April 2011. This brings out the potential of tax measures in meeting economic as well as environmental objectives.