Cities evolving fiscal measures to curb vehicular pollution

A fact sheet

1. Fiscal measures to control vehicular pollution

Several cities in India including Ahmedabad, Bangalore, Chennai, Hyderabad, Kolkata, have begun to take steps to implement fiscal measures to address the problem of air pollution and congestion. Though still very nascent, this is a unique and a very important step forward to use market based instrument to influence consumer behaviour and stimulate investments in pollution control efforts and clean technologies. All big change cost a lot of money. Fiscal measures can help to cushion the cost of transformation, -- improve fuels and technologies and influence people to choose more sustainable travel options like public transport. These measures can also help to generate revenue to fund pollution control and congestion reduction measures.

Though still very nascent these new policy initiatives have begun to take roots. These fiscal measures can enable rapid introduction of clean fuels and technologies and create fiscal incentives for public transport. The cities that have taken the lead in this regard include Delhi, Tamil Nadu, Bangalore and Hyderabad. These cities have evolved different models of policy framework that show wide variation in their structure and focus.

The key focus of the fiscal measures are clean fuels and technologies including CNG, LPG and zero emissions technologies; disincentives for older vehicles; and creation of dedicated fund from taxes on polluting fuels to pay for pollution control efforts.

However, it is important to note that so far cities have not implemented fiscal policies to promote public transport usage and implementation. Even though the National Urban Transport Policy has provided for such measures actual implementation at the city level is still tardy. This will require urgent intervention.

2. Fiscal measures to promote clean technologies, and fuels and discourage old vehicles

Delhi

i. Air Ambience Fund to generate resources for pollution control

In the wake of strong public concerns over the rising numbers of diesel vehicles and diesel related pollution in Delhi's ambient air, the Delhi government has finalized plans to cut diesel emissions in the national capital region. To achieve this Delhi government has announced a multi-pronged strategy in the month of January 2008. This strategy aims to phase out in-use light duty diesel commercial vehicles, introduce pollution checks for incoming diesel traffic from outside the city, and proposes to introduce Euro IV standards in advance in the entire national capital region. An important component of this plan is environment cess on diesel fuel.

The decision to impose 'environment cess' on diesel fuel is the first ever step to apply polluter pay principle and generate fund for pollution control. Air Ambience fee of 25 paise per litre on sale of diesel fuel has been already implemented on March 28, 2008. The Delhi Pollution Control Committee (DPCC) administers and collects this cess. The revenue collected through this cess is being used to create Air Ambience fund to meet the cost of Delhi's clean air action plan.

Air Ambience Fund has been created by the Finance department vide their office memorandum number dated March 27, 2008. Air Ambience Fund account has been opened in the DPCC and about Rs. 10 crore has been collected. DPCC administers and collects this cess.

Normally, cess is imposed by the Central government under the Finance Act to raise funds for special purpose. To be able to implement this cess Delhi government has taken the lead to exercise the power that has been conferred on the state boards – Delhi Pollution Control Committee – under section 31 (A) section 17 (1) of the Air (Prevention and Control of Pollution), Act 1981. It states that "Notwithstanding anything contained in any other law subject to the provision of this Act, and to any direction that the Central government may give in this behalf a board may in the exercise of its power and performance of its functions under this Act issue any directions in writing to any person, officer or authority, and such person, officer or authority shall be bound to comply with such direction."

This is an overarching provision that can be effectively utilized by the state governments to take steps for pollution control.

ii. Subsidy on battery operated vehicles to be funded by the Air Ambience Fund: The first scheme that is to be funded from the Air Ambience Fund is the programme to give subsidy to battery operated vehicles. This will help to promote zero emissions vehicles in the city. The Delhi government has decided to extend relief to the tune of 30 per cent of costs to those opting for battery operated vehicles. Prospective buyers of these vehicles will get 15 per cent subsidy and 12.5 per cent VAT reimbursement. In addition, the registration charge and one-time road tax levied at the time of registration will also get reimbursed. This scheme started in 2008 will be funded entirely under the Air Ambience Fund. This is expected to encourage expansion of the zero emissions vehicles in the city.

iii. VAT subsidy to phase out diesel light commercial vehicles

The Delhi government has taken the decision to phase out 15 year old diesel light commercial vehicles (LCVs). This is complemented by a fiscal incentive scheme that has been prepared to encourage voluntary phase out the vehicles that are less than 13 years old. To enable the transition the Delhi government has announced a subsidy scheme. The subsidy will be equivalent to VAT (12.5 per cent) that will be provided on purchase of new LCVs. Owners of LCVs below 13 years of age can avail benefit of the VAT subsidy. This is a voluntary programme. This programme has started in 2008.

iv. Fiscal support for CNG fuel

Delhi government has implemented one of the largest CNG programme. To make this programme cost effective Delhi government has implemented fiscal measures targeted at the CNG fuel and also at conversion of the vehicles fleet. These measures have been implemented in the beginning of the programme during 2000-2001 under the Supreme Court directive of July 28, 1998. These measures include the following:

a. **CNG fuel for automotive use has been fully exempted from sales tax**: This has helped to maintain an effective differential with diesel fuel that CNG has replaced in public transport buses and petrol used earlier in three-wheelers. The CNG prices have dropped further by 2 per cent in 2008 on account of adjustment in central excise duty announced in the Union Budget. The revised price stands at Rs. 18.90 per kg. The current price of diesel is Rs. 31.76. It is important to maintain this differential to promote clean fuels. This differential between CNG prices and diesel ad petrol prices is also working as a very powerful incentive

among the car owners. About 3000 to 4000 cars are estimated to be converting to CNG every month in Delhi. This has certainly helped in the expansion of the programme.

b. **Subsidized loan for conversion of auto rickshaws and taxis:** The Supreme Court order of July 28, 1998, had directed fiscal incentives for three-wheelers and taxis. Loan with 4 per cent subsidized interest was granted to the beneficiaries. There was no provision for fiscal incentive for the bus owners except a late decision to offer subsidized loan to the owners of lower socio economic classes from the fund created from the penalty collected from the diesel bus owners from April 2002 onwards until the complete phase out of the stage carriage diesel buses. Only 80 bus owners were able to avail of this scheme.

However, it is important to learn from Delhi's experience. The fiscal incentive for the taxi and auto rickshaws could not be utilized effectively as the three-wheelers owners often could not meet the criteria for loan. About 5000 to 6000 three-wheeler owners were able to avail of this incentive. The market was beset with middle men who facilitated purchases. The most important incentive that worked for them was the wide differential between petrol and CNG prices and the fares that were linked to the higher prices of petrol. This made cost recovery easy.

Bangalore

i. Green tax

Bangalore has taken the lead to introduce Green tax that is imposed on the older vehicles. This was introduced on April 1, 2002. The tax schemes are different for transport and personal vehicles. The transport vehicles that are more than 7 years pay the green tax at the rate of Rs. 200 at the time of the annual renewal of their permits. Two-wheelers and cars that are more than 15 years old are taxed at the rate of Rs.250 and Rs.500 respectively at the time of the renewal of their registration after 15 years from the date of purchase and first registration.

ii. Fiscal incentive for LPG conversion

Bangalore has launched one of the largest LPG three-wheeler programmes. One of the key elements of this programme is fiscal incentive for conversion. The city government has offered a subsidy of around Rs 2000 to three-wheeler owners to help bear the cost of conversion. Nearly 70,000 autorickshaws have already converted to LPG.

Tamil Nadu

Green tax on old vehicles

The state of Tamil Nadu has also enforced green tax that is quite similar to the Bangalore model. This was enforced in August, 2003.

Transport vehicles including autorickshaws and other commercial vehicles that have completed 7 years of age from the date of its registration have to pay Rs. 200 and Rs. 500 per annum respectively as green tax.

Personal vehicles, cars and two-wheelers, that have exceeded the age of 15 years, pay Rs. 500 and Rs. 1,000 respectively as green tax for 5 years.

According to status report of Chennai city submitted to EPCA in May 2008, more than Rs 15 crore can be generated from this green tax in a year. As of now revenue from this tax has not been earmarked for any special purpose.

Hyderabad

Exemption of motor vehicles tax on vehicles running on CNG, battery and solar power
In order to promote alternate fuels and technologies, the Andhra Pradesh Motor Vehicles Taxation Act, 1963 provides for exemption of motor vehicles tax for a period of 5 years from the date of registration of motor vehicles using CNG, battery and solar power.

Most of these measures have been introduced recently. It is therefore, not yet possible to assess the impact of these schemes. Implementation of these schemes should be publicized adequately to make the target groups aware and to encourage them to avail of the benefits. It is also important to monitor the impact from time to time to assess if the schemes are making the desired impact.

Box

Central taxes with environmental linkages to vehicles

Lower central excise duty on small cars for efficiency gains
The central excise duty has been crafted to give an advantage to the small cars in India for fuel savings. The current rate of 12 per cent excise on small cars and 24 per cent on bigger cars and SUVs has been maintained in the budget. We would in the future like to see this differential increase. This is the only measure that is linked to addressing the need of fuel efficiency of vehicles in India.

However, the flaw in the current tax scheme is that the small car segment has been defined as a car of length not exceeding 4,000 mm and with an engine capacity not exceeding 1,200 cc for petrol cars and 1,500 cc for diesel cars. The more relaxed limit for diesel cars has brought within net a large number of mid segment diesel cars to qualify for the tax cut. This has created incentive for small diesel cars when clean diesel fuel and technologies are not available in the country. This can have adverse public health consequences.

3. Tax policy to promote public transport in cities: A non starter

As of now no effort has been made to rationalize the transportation related state taxes to promote public transport. Public transport is among the key strategies to reduce congestion and pollution and requires strong fiscal support.

The National Urban Transport Policy has proposed that the Central Government must encourage the levy of dedicated taxes to be credited to an urban transport fund to exclusively meet urban transport needs. These could be in the form of a supplement to the petrol and diesel taxes, betterment levy on land owners, or even employment tax on employers.

The city of **Surat** in the state of Gujarat is the only city in the country where a dedicated metropolitan fund has been created for urban transport projects. So far this fund has been created through budgetary allocation and not through levy of dedicated taxes. But this is an important step forward.

Across the country, buses pay the highest taxes as compared to cars or two-wheelers. This is also confirmed by a 2004 World Bank study that estimates total tax burden per vehicle km is 2.6

times higher for public transport buses than cars in India. As cities are gearing up to design fiscal measures they should attach priority to creating fiscal incentive for public transport.

This issue will have to be addressed urgently in all cities to reverse the trend and stimulate investment in bus transport sector and to make public transport usage more competitive vis a vis usage of personal cars and scooters. It is not appropriate to treat bus operation as a mere commercial enterprise and put heavy taxes on it. Bus transport is an essential public service; it moves more people than personal vehicles; emits less toxic and uses less fuel per passenger kilometer than personal vehicles. But currently tax rates are not related to the space used by the vehicles, or emissions and congestions caused by them. Keeping in mind the environmental and congestion reduction benefits of an efficient public bus transport system, tax policies need to be corrected to make bus transport economically more attractive.

The review of the available information on the incidence of state motor vehicle taxes in the concerned states brings out the distortions in taxes on buses and cars and the inequitable burden of taxes on buses in the cities. (See the annexed table: *Motor vehicle taxes on personal vehicles and buses*). All cities impose motor vehicle tax on vehicles as road tax on vehicles and road/passenger tax on buses. In the case of personal vehicles these taxes are imposed on the vehicle at the time of purchase for the lifetime (15 years from the date of registration). In public transport buses these taxes are calculated annually on the basis of the number of passenger carried. Currently, buses are actually penalized for carrying more passengers than cars. This will have to be reversed. Cars that occupy more road space but carry less passengers should be made to pay more.

The city action plans, monitored by the Hon'ble Supreme Court, requires the cities to meet a target of modal shift in favour of public transport. To fulfill this all city governments will have to invest heavily into augmentation public transport especially bus transport. This will need i) reduction in the capital cost of rolling stock of buses by minimizing/eliminating central excise duty and VAT; ii) reduction in operational cost of buses by lowering/eliminating state taxes on bus operations; iii) Increasing taxes on usage of personal vehicles.

The Union Budget of 2008-09 has reduced excise duty on buses and their chassis from 16 per cent to 12 per cent. But excise duty on buses is still equal to the excise duty on small cars. While the Central government would have to look at the ways to further lower the Central excise to help lower the cost of a bus, the state governments should also reduce the burden of state taxes on bus operations drastically. This can go a long way to promote public transport.

Parking pricing

So far there are no instances of tax measures to restrain car usage in cities. Only a few cities have taken preliminary steps to revise the parking rates to integrate the elements of graded parking rates according to duration of stay and importance of a place. New Delhi Municipal Council, Bangalore Municipal Corporation, Kolkata, Mumbai are moving in that direction.

Parking pricing is one of the most powerful instruments to reduce travel by personal vehicles. It helps to influence commuting choices in favour of public transport. Parking management when combined with high price for parking, limiting parking space and improving access to the same place through other modes of transport, it is most effective in stimulating the switch from private cars to alternative modes of transport. There is therefore considerable opportunity in Delhi and other cities of India to develop parking policy as an instrument to decongest, shift commuter choice towards public transport, and discourage car use.

Kolkata: "Car crowd tax" – Life time tax on cars increased

West Bengal government has announced one-time increase in registration tax that will range from Rs 2,000 to Rs 8,000, depending on the engine capacity. The new rates will cover registration of cars, buses and battery-operated vehicles. The one-time revised tax is valid for five years after which the owner of the vehicle can pay the levy at the old rates. For those who are paying a five-

year road tax for old cars, there will be no change in the structure. A special tax for vehicles with air-conditioners remains unchanged but a new category has been introduced for engine capacity beyond 2500cc.

Bangalore: Lifetime tax on cars increased
Bangalore proposes that the lifetime tax on all passenger vehicles except two-wheelers would be increased by two per cent. To meet the increasing expenditure on development and maintenance of the road network in the state, some of the burden is being passed on users of cars and multi-utility vehicles. And slow down the alarming rate at which vehicles are being added in urban areas, causing traffic jams and pollution.

4. Sign post

The move made by the city governments to implement fiscal measures to address the problem of vehicular pollution is important. This needs active encouragement and dissemination to popularise this practice. It is therefore recommended that the concerned state governments examine the fiscal measures already in place in different cities to -- promote clean technology and fuels; to discourage older vehicles; to encourage public transport, and to create dedicated funds to meet the cost of pollution control. This will help to ease the cost of transformation. A large number of fiscal measures are possible. Each city should evolve its model of tax regime customized to the local requirements and imperatives. Experience sharing among the peer cities will be a critical element of this strategy.

However, this is a small beginning. More proactive steps are needed to create a basket of tax measures to restrain personal vehicle usage and promote public transport ridership in cities; and at the national level central tax measures are needed to push for technology and fuel quality improvements.

The state governments should develop a comprehensive model of tax measures with the following focus.

- **Implement tax policy to improve ridership and augmentation of public transport**: Revise tax policies to reduce the tax burden on public transport. This can help to lower the operational costs and make public transport more cost effective. The reduction in revenue on this count can be offset by higher taxes on personal vehicles and their usage.
- **Create dedicated funds by taxing polluting technologies and fuels:** Higher taxes on personal vehicles and polluting technologies and fuels can help to create dedicated corpus to fund clean air programmes in the cities. This can be imposed on the basis of polluter pay principle and under the provision of the Air Act.
- **Use tax policy to introduce clean/zero emissions technology and fuels:** This is an important step to create market for advanced technologies that find competing with conventional technologies difficult. Waive off or minimize state taxes on these vehicles. The market for vehicles running on alternative fuels like CNG, LPG, battery operated vehicles and hybrids are expected to expand. Fiscal measures can help in the make over.
- **Fiscal measures for congestion reduction:** A wide gamut of fiscal measures has evolved globally targeted to restrain personal vehicle usage that include road pricing, congestion pricing, parking pricing. But the Indian cities have not developed these tax systems yet. It is important to make the beginning now. A phase in plan is needed to introduce similar measures customized to local needs. As a first step some of the cities are already working towards developing parking policy that will include parking charges as a car restraint measures.
- **Develop monitoring system to assess the impact of the fiscal policies:** Most of the tax measures are very new and therefore it is too early to understand the effectiveness of

these measures. But these will require constant impact monitoring and active publicity of the schemes for effective implementation. This will also help to modify strategies and make improvements.

- **Facilitate database on taxes on vehicles:** There is enormous variation in the tax structure and quantum of tax related to transportation in different states. It is important to review the current tax structure and rates. This will help to convey the existing distortions and the reforms needed to achieve the desired objectives. This information is important to expedite reform and implementation of green taxes.
- **Develop Central tax measures to promote clean technology and fuels**

Annex

Incidence of motor vehicle taxes on vehicles in selected Indian cities

The limited information available from the states indicates enormous distortions in the taxes on buses and personal transport. Buses are taxed several times higher than personal vehicles.

Cities	Tax on personal vehicles (cars and two-wheelers)	Tax on buses	Tax policies are skewed against public transport
Lucknow and kanpur	Two-wheeler: Lifetime tax of Rs. 1600 Petrol cars: 2.5 per cent of the value of the car or Rs. 5000 (whichever is higher). Diesel cars: Twice of 2.5 % of cost value of the car	A standard bus with a capacity of approximately 54 -55 seats have to pay Rs. 1115 for the first 35 seats and Rs. 45 per additional seat per quarter. The actual amount of tax varies according to the estimated passengers carried.	If amortized over the lifetime of the vehicle, the owner of a petrol car worth Rs. 4,00,00 pays Rs.667 as tax annually. In contrast, a bus pays a tax of Rs. 7880/- annually. Thus, a bus pays nearly 12 times more than a car.
Ahmedabad	Two-wheelers: the lifetime tax on two-wheeler ranges between Rs.1500 – Rs.2000 Petrol car: pays lifetime tax at 5 per cent of the cost of the vehicle and a Diesel car: 7.5 per cent of the cost of the vehicle.	Standard stage carriage bus: For more than 9 passengers – Rs 840 per year, plus Rs 72 per seat, and Rs 36 per standing passenger. In addition to this a surcharge of 50% subject to maximum limit of Rs 636 is imposed. Roughly a standard bus, based on its sitting and standing capacity, pays about Rs. 5000 annually.	If the lifetime taxes are amortised, a petrol car costing Rs 400,000 pays about Rs. 1333 annually and a diesel car costing Rs 400,000 pays Rs. 2000 annually. The tax burden on buses is much higher as the total tax is calculated according to the passenger carrying capacity of a bus.
Bangalore	Two-wheelers: Lifetime tax according to the engine capacity. For each category the lifetime tax is calculated at 7 percent of the cost of the vehicle or an indicated amount whichever is higher.	Buses: Rs 500 per seat per quarter.	A two-wheeler costing Rs 40,000 pays a lifetime tax of Rs. 2800 which if amortized over its lifetime can work out to be Rs.187 annually. A car costing 4 lakh may have to pay Rs. 2400 per annum.

	Cars: 9 percent of the cost of the vehicle if the cost is less than Rs 10 lakhs. And 10 percent on cars exceeding 10 lakhs.		If the bus has 54 seats the annual tax can be as high as Rs.108,000.
Chennai	Two wheeler: Lifetime tax is imposed according to the engine capacity. Eg a vehicle with 170 cc engine pays a lifetime tax of Rs. 3000. Cars: 6% of the cost of the vehicle.	Stage carriage bus within Chennai metropolitan area: Rs. 80 per seat per quarter plus a surcharge of Rs. 20.	If amortized over its lifetime a 170 cc two-wheeler pays Rs. 200 annually. Car costing Rs. 4,00,000 will have to pay a life time tax of Rs. 24000/-. If amortized over its lifetime tax works out to be Rs. 1600 annually. Bus with a capacity of 54 passengers pays Rs. 17,360 annually.
Delhi	Two-wheeler: Life time tax of 2% of the cost of the vehicle. Car: Cars costing upto Rs. 4,00,000 pays 2 per cent of the value. Cars with cost exceeding Rs. 4,00,000 pays 4 percent.	Bus pays an annual tax of Rs. 1915 upto 18 passengers and Rs. 280 for every additional passenger.	If amortized over 15 years a car costing upto Rs. 4,00,000 pays an annual tax of nearly Rs. 533. A bus with a seating capacity of 40 passengers and 20 legal standee pays nearly Rs. 13675 as annual tax.
Hyderabad	Two-wheeler: Lifetime tax on two-wheelers is 9 per cent of the cost of the vehicle. Cars: 9 per cent of the cost of the vehicle.	Bus: 5 percent of the gross traffic earning in the city every year.	If amortised over lifetime a car costing Rs. 4,00,000 pays Rs. 2400 as tax. Bus pays a fixed percent on its earnings every year which is higher than the lifetime tax that the cars pay.
Pune	Two-wheeler: Lifetime tax of 7 per cent of the cost of the vehicle. Car: 4 per cent of the	Stage carriage bus: Rs. 71 per passenger per year plus a passenger tax at 17.5 per cent of the fare	Like other cities the tax burden on buses is several times higher than the personal vehicles

	cost of the vehicle.	collected. There is a proposal to reduce the passenger tax to 6 per cent.	

Source: Road Transport Yearbook 2004 -2005.Union ministry of shipping, road transport and highways; http://www.uptransport.org/tax.html;. http://www.tn.gov.in/sta/taxes.html