

4

Elements of a city parking policy

Global experience bears out that parking management is one of the most powerful instruments to reduce travel by personal vehicles that also influence commuting choices in favour of public transport. Parking management when combined with appropriately priced parking, limit on parking space and improved access 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.

This however, is not expected to be easy when in most cities the dominant thrust is on increasing parking provision to meet the insatiable demand for parking spurred by untamed motorization. However, it is possible to deepen public understanding especially as parking congestion has taken the proportion of full blown mobility and social crisis in Indian cities. Parking devours scarce urban land, aggravates congestion, and pollution. Regular neighborhood brawls, fist fights, even enraged killings over scarce parking spaces have escalated to a serious law and order problem in the city. Parking crisis is an ugly manifestation of automobile dependence.

This study is an effort to improve public understanding of the challenges that parking of vehicles present and the ways parking regulations can be leveraged to restrain traffic in Indian cities. Parking levers must be applied to influence transportation choices in cities, decongest, and discourage car use. Findings of this study are revealing.

Parking entails enormous cost: Car boom is aggressively encroaching upon the scarce urban commons. Our investigation in Delhi shows that given the numbers of registered personal vehicles more than 45 million sq m of land is needed for parking. If on an average three different car spaces are needed per car in the city then the current fleet occupies nearly 9-10 per cent of Delhi's geographic area. The daily registration of cars (as on 2005) generates demand for 2.5 million sq m – roughly equivalent to 310 international football fields. At the current real estate value the land cost of providing parking of this magnitude is thus enormous. Transport planners consider 23 sq m of land as appropriate to park an average car. This means in a prime business district of Connaught Place the rent of such an area can be as high as Rs 36,000 per month. But the municipal laws in Delhi make cars pay a miniscule as "misuse parking charge" of Rs 4000 once for lifetime – not even one rupee per hour. The dynamics of structured parking lots that have just begun

Briefing Paper 4

in Delhi and other cities will add more cost elements. The true cost of providing parking is thus never factored into the car dependent infrastructure that has begun to dominate cityscapes.

Hidden subsidy to rich car owners: The existing policy perpetrates hidden subsidy to rich car owners as the cost of using up scarce and valuable urban space for parking are not recovered through proper pricing and taxes. As available surface areas are becoming increasingly clogged with cars, city governments are now planning to build extremely expensive multistoried car parks in prime areas. While this increases the cost of providing parking manifold, — nearly Rs 4 lakh to 6 lakh per car space as opposed to near free surface spaces, there is no plan to recover the full cost from the car park users. Instead, to keep the parking rates cheap nearly 30 per cent of the parking structures are being allowed for other commercial activities so that profit and rent from this can further cross subsidise parking fees. Parking fees can then remain at Rs 10 per hour instead of full cost rates of Rs 30-39 per hour. Even that minimal increase to Rs 10 per hour may hit roadblock as the willingness to pay for parking among car owners is very low as people have got used to paying paltry for using high cost services.

Flawed pricing fails to reduce congestion: Without a pricing and a management strategy the capital intensive parking structures can remain grossly underutilized and the basic objective of reducing parking congestion cannot be met. Our survey shows that the existing structured parking facilities in Delhi and Mumbai remain nearly empty due to disparity in parking rates for surface and structured parking.

Despite the high demand for parking in busy commercial places these structures remain nearly empty. This issue must be addressed in the early stages of planning to prevent wasteful investments. Nor is there any management model to use these structures to curtail surface parking to reduce congestion in the vicinity. Yet taking steps to correct pricing is not an impossible task as is evident from Kolkata that has one of the highest surface parking rates – Rs 7 per hour – among the metros, and also shows better utilization of its multilevel parking structure. Worldwide experience shows that appropriately priced parking can influence demand for parking and commuter choice for alternatives.

Need parking policy as car restraint measure: The world over it is recognized that demand for parking is infinite and any amount of supply cannot meet this demand if additional measures are not implemented to control car growth and usage and also use parking lever itself to control the demand. It is important to rethink strategy on multilevel parking in India. These should be integrated as far as possible with the interchange points of the public transport networks to encourage park and ride and thus remove congestion from the commercial hub. Civic agencies must plan to improve access to the commercial sites through improvement in public transport, and at the same time cap parking supply through actual physical restriction on further expansion of parking and also by pricing parking high. This is

Briefing Paper 4

most effective in stimulating the switch from private cars to alternative modes of transport.

Other governments have begun to act: Global experience bears out that parking management is one of the most powerful instruments to reduce travel by personal vehicles that also influence commuting choices in favour of public transport. The big cities including Portland, Seattle, Bremen, San Francisco, New York, Tokyo, Bogota among others have hiked parking fees and limited parking supply to dampen parking demand and reduce car usage. Hong Kong, Bogota, Singapore etc have also gone much further ahead to improve public transportation.

Though many cities of the world have experimented with different types of parking strategies, it is still very difficult to find a perfect and 'one size fits all' strategy. An appropriate combination of measures will have to be customised to meet the local requirements and imperatives. These strategies that largely hinge on pricing of parking provision and innovative management of the available parking spaces must be designed in an integrated way. At the same time supplementary measures are needed to improve access and connectivity through improved public transport so that overall parking demand can be further reduced.

The way ahead

Parking demand is gregarious, aggressive, and insatiable. No amount of parking provision can help to satisfy the growing demand. Therefore, parking provision should work on the principle of parking restraint to put brakes on car growth and usage. Provide parking not to incite more demand but manage and restrain its provision to discourage people from using personal vehicles. The future roadmap should hinge on this principle.

1. Utilize parking facilities to improve usage of public transport and non-motorized public transport: The new parking structures should be used innovatively to improve usage and integration of public transport. Locate parking structures close to the interchange points of the public transport nodes like metro and bus stations, and, use them for park and ride system to reduce pressure in the commercial centres. Link them with the targeted commercial areas with feeder services that include three-wheelers, cycle rickshaws, small buses or easy pedestrian ways. Improving access and connectivity of places through improved public transport that can reduce overall parking demand. Ticketing system of public transport should incorporate park and ride component. Parking rates should favour intermediate transport including three-wheelers and taxis and also non motorized vehicles. Review the proposed sites for the multi level parking structures to see to what extent these can be located at or close to the public transport interchange nodes with a good feeder system that links the key commercial destinations. This can help to decongest the busy commercial areas. Free shuttle buses and free transit service connect destination with remote parking facilities. These facilities can also be developed as an overflow parking plan and other special event transportation management. Taxis and three-wheelers can play an important role in the feeder system for park and ride system.

Briefing Paper 4

2. Free parking should be minimised or eliminated: It is important to eliminate or minimise free parking. Pricing of parking should be based on user pay principle and aim to go for full cost pricing. Use pricing in a manner that it reduces peak demand, and congestion in convenient places. Experts point out that parking charges gradually make urban road users aware that driving within city cannot be free.

3. Use variable rates more widely to reduce peak demand: Parking fees should be designed to target the peak hours and peak demand to influence commuter choice and open up options. All municipal agencies must develop variable parking fees according to commercial importance of areas; according to duration of stay to reduce peak demand; according to weekdays when demand is high, and weekends when low.

NDMC in Delhi has already started enforcing graded fee structure. There is no reason why other agencies cannot develop similar system. This strategy should be developed on a city-wide scale. Civic agencies in other cities should begin to evolve similar pricing strategies. Also agencies must discourage payment of parking rates as a fixed annual amount to replace graded fee structure to be paid on usage. Annual payments will defeat the purpose of using parking rates as a demand management tool. This will grossly under-price parking of personal vehicles and act as a subsidy for the car owners.

4. Let parking rates be lower at park and ride sites to influence commuting choices and reduce congestion: With park and ride system the long term parkers who are largely the office goers will not crowd at the commercial centres but utilise long distance parking facilities. The proportion of the short-term and long term users vary from site to site though the short-term users dominate in most sites. The longer term parkers (employees and employers) should be encouraged to use parking that are located at some distance from the work place, but connected with a good feeder service. These can be priced lower than the convenient places located close to the work place. This will also encourage long-term parkers to shift to public transport. Short-term users who are largely shoppers and visitors prefer convenient spaces close to the work place and these spaces are priced higher. Limiting parking duration for short-term users can also ensure higher customer turnover rates for local businesses and also reduce local congestion. Ticketing system of public transport should incorporate park and ride component. Parking rates should favour intermediate transport including three-wheelers and taxis and also non-motorised vehicles.

5. Need parity in rates of surface parking and structured parking. For the first time Indian cities are making a transition from lowly priced or free surface parking to cost intensive structured parking. If the cost of the investment in the structured parking is recovered through higher parking fees, it will have significant impact on parking rates in the city. This upward revision is important to recover the cost of investment and also to reduce parking demand. Investment in these

Briefing Paper 4

structures cannot continue unless there are clear plans on pricing. Moreover, this will require some revision of the surface parking rates for optimal utilisation of both. Higher parking rates in the structured parking lots will widen the gap with the current surface parking rates manifold. In this regard the following will have to be addressed:

? Rate of parking on surface and multilevel structured parking be brought to equivalent, or near parity rates. Civic agencies should develop a management model to ensure that parity works. In Delhi it is estimated that parking charges based on full cost pricing can increase parking charges in the multilevel parking lots to Rs 30 to Rs 40 per hour. In the initial stages NDMC has proposed to begin the rates at Rs 10 per hour. If this becomes the minimum floor price in the structured parking lots then the civic agencies must work out parity with the rates in surface parking lots and also develop a roadmap in advance for progressive increase in parking rates over time to reach full cost pricing to allow the market some time to adjust. A phase-in plan will also enable the commuters to adjust.

Parking charges: Some good practices

Asia

Shenzhen: After the increase in parking fees in Shenzhen recently, a remarkable 30 per cent drop in the parking demand has been noted. Out of the city's total 350,000 parking spaces, 50,000 parking spaces have become costlier. Under the new rules, parking fees in the city center have been increased from less than 5 yuan per hour to 15 yuan for the first hour and 1.5 yuan every additional 30 minutes during peak hours on weekdays. During weekend, the parking fee will be 5 yuan (US\$0.62) for the first hour and 1 yuan for each additional hour. Now few cars are reported to be using the parking lots in downtown Shenzhen on weekdays.

However, parking lots are found to be crowded during weekend, as parking is cheaper. There is no increase in the monthly parking fees for the 250,000 parking spaces in residential areas and public sector buildings. Temporary users, however, need to pay an extra 5 to 10 yuan per day. The government expects traffic flow to decrease by 12 percent temporarily and 4 percent in the long term due to the parking fee jump, which will alleviate downtown traffic congestion and encourage the use of public transport. The new rules could raise local car owners' monthly parking expenses from an average of 534 yuan to 694 yuan, an increase of 30 percent. The parking fees would count for nearly half the cost of keeping a car. The new tariff also made Shenzhen the most expensive mainland city - along with Shanghai - in terms of parking fees. Recently the Mayor of Shenzhen also asked the residents of his city not to buy any more car as this would further worsen pollution.

Beijing: In order to discourage people from driving into busy city areas, the municipal authorities in Beijing are considering to increase the parking fee. Busy commercial districts like the CBD and Zhongguancun, and congested areas like Yansha and Beijing Western Station are likely to be targeted. The currently applicable parking rates in the busiest areas are 2.5 yuan per half hour for small cars and 5 yuan per half hour for large vehicles, about 3 yuan more than other areas. The parking charges near public transport modes such as near major subway stations and bus terminals on the city's outskirts are to be lowered to encourage people to park their cars there and then travel to urban areas by public transportation. The city government announced to built 26 free or low-cost large-scale

Briefing Paper 4

parking lots near subway and bus stops to encourage drivers to use public transport in downtown Beijing. The new rates will be released after further consultation.

Tokyo: Parking pricing had a major impact in Japanese cities. Since June 1, 2006, enforcement against parking violations have drastically reduced congestion in major cities. Earlier, the police used to enforce the parking regulations and periodically check to see how long cars had been parked in banned areas, marking cars' positions with chalk and ticketing them if parked longer than 15–30 minutes. But after the revision of the Road Traffic Law, private firms have been assigned to issue tickets for parking violations regardless of the number of minutes vehicles have been parked in banned locations.

Depending on the type of violation, the parking fines for regular cars range between 10,000 yen to 18,000 yen (US\$86–155). Strict enforcement along with no grace period (15 minutes or more of "free" parking for drivers) led to expensive on-street parking, which costs 10,000 yen (US\$86) (as a penalty fee) for parkers. This implementation effectively increased the on-street parking prices for drivers and also increased the average parking prices in major cities in Japan at the same time. Three months after the implementation, the National Police Agency reported a decline in illegal parking on main roads in Tokyo (73.9 per cent) and Osaka (73.3 per cent), reduced congestion length on main roads from 27.3 per cent to 23.1 per cent at 2p.m. -4p.m, and increased travel speed at 2 p.m. -4 p.m. by 9.5 per cent and 11.8 per cent, respectively, compared to same period of the previous year. The agency estimated economic benefits of this policy to be 181 billion yen (US\$1.6 billion) and the reduction in CO2 emissions to be 15.2 thousand tons/yr. Retail shops with parking lots have also attracted more people since implementation, while popular restaurants without parking lots are said to have experienced a decrease in customers. Increases in the average prices of off-street parking lots are also observed, due to heightened demand for off-street parking. Also, more people have been using taxis and buses to reach restaurants since the strict parking policy was implemented.

Singapore: The Singapore government already controls the increase in car numbers with a variety of restrictive measures that include very high road pricing, licensing, regulated permits for car purchase and various development controls norms. As a result, it does not have to use parking levers to control car usage in commercial and public places separately. Parking policy in Singapore therefore states that "Actual number of parking spaces provided in a development should be the parking demand that the use of the development will likely generate. However, the number should not be lesser than the requirement under the Parking Places (Provision of Parking Places and Parking Spaces) Rules." Comparison of the parking norms in Singapore shows that Indian norms allow more ECS for the comparative land use category.

– Other cities

New York: Very high parking fees and limited parking supply has dampened car ownership phenomenally in one of the richest cities of the world, New York. Car ownership rate in this city is estimated far below the average rates in other US cities and much closer to European cities.

Bremen: There is no free or unregulated parking in urban centres. The parking prices are related to the demand (that is highest prices at attractive locations). Parking prices are fixed so that the car use plus parking charges should not cost less than using public transport. As a result, 50 per cent of trips to city centre are made by public transport and 22 per cent by cycle. Public transport is used by 58 per cent of the shoppers in the central district.

Briefing Paper 4

Berne: Spatially coordinated parking fee system exists in Berne. Parking at public facilities is charged. No public parking over two hours is allowed in the city centre. There is area wide parking guidance system in city centre instituted by owners of private car parks. Park and ride has been promoted. The residents parking zones have been designated as blue zone parking spaces. In 1999 Local Authority have been given legal power to oblige a shopping centre to charge fees on its customer spaces. The current approach is now to get companies to sign voluntary agreements on parking policy measures. High level of public transport service has been provided. As a result only 27 per cent of commuters in the city travel by car. Introduction of blue zones (which included removal of 10 per cent of parking spaces) resulted in a decrease of traffic volumes by 14 per cent in morning peak and 21 per cent in evening peak.

Bogota, as part of the city's programme to reduce private car use was to increase public parking-fee and to remove limit on the fees that private parking companies could charge. The additional revenue is dedicated to road maintenance and public transit service improvement.

Germany: German cities have complied with parking restriction measures— strict reductions in the number of parking lots in the city centres. Some particular streets or areas are closed for passenger cars (except deliveries and taxis and sometimes buses). There are restricted parking areas (residents only) and parking guidance systems. All parking areas are regulated. In most cities, the parking fee is at least 1 Euro per hour except Munich where it is around 3 Euro per hour. In other cities, parking tickets may be used by two persons as public transport tickets for trips within city centre during the parking time. In all mega events (concerts, sports events), the entrance ticks includes public transport ticket.