

CAR PARKING PROBLEM

Car parking is a major problem in urban areas in both developed and developing countries. Following the rapid incense of car ownership, many cities are suffering from lacking of car parking areas with imbalance between parking supply and demand which can be considered the initial reason for metropolis parking problems. This imbalance is partially due to ineffective land use planning and miscalculations of space requirements during first stages of planning. Shortage of parking space, high parking tariffs, and traffic congestion due to visitors in search for a parking place are only a few examples of everyday parking problems.

The paper examines car parking problem in the city; its different causes and conventional - yet non-successful - approaches. Modern technology has produced a variety of new solutions and techniques in this respect. The paper reviews new planning trends and creative technological solutions which can help alleviate the strain of the problem. Because car parking solutions are not an end in itself, but rather a means of achieving larger community goals in order to improve urban transportation and make cities more livable and efficient, the paper also discusses the environmental impacts which should be taken into considerations for solutions proposed.

Parking issues in India

- **Saturated parking spaces**

One of the most common problems today is a saturation of parking spaces. Vehicles continue to outnumber existing parking spaces, thus clogging roads. Incidences of violence over occupancy, deformed cars due to a space crunch, and overcharging for parking are some problems that result.

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Most cities propose increasing parking spaces to combat the problem. Parks and vacant plots are used as potential parking spaces and multi-level facilities are being built, irrespective of the limited land space and resources. However, some academics like Donald Shoup stand firmly opposed to this approach, arguing that controlling demand is a better alternative than increasing the existing space.

- **Unregulated tariffs**

An unregulated tariff structure leads to a scarcity of parking spaces. In Indian metros, parking is either free or minimally priced, the fees being unregulated for many years now. For instance, Mumbai charges the same parking fee as it did 20 years ago and has one of the lowest tariffs in the world. Because parking price stops increasing after a certain period of time, the longer one stays in a parking space, the less one has to pay. In Sarojini Nagar in Delhi, parking price is a meager Rs. 20 per hour with a standard fee of Rs. 100 for 24 hours, making parking even cheaper.

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Why is this a problem? Parking space is a scarce commodity today and should come with a price. A low parking price encourages more vehicles on the road, contributing to air and noise pollution. The best way to manage the parking is by charging the right price for it. This can be done by using demand to price parking and optimize occupancy. If the price is too high and spaces remain vacant, operators lose revenue, nearby shops lose customers, employees lose jobs, and governments lose tax revenue. If the price is too low and no spaces are available, it leads to traffic congestion and chaos. Pricing can thus be a very effective tool for the management of travel demand as a whole.

- **On-Street vs. Off-Street Parking**

Another problem in Indian metropolises is the skewed demand for on-street parking since it's cheaper than off-street parking. On-street parking issues in India often cause delays, especially on roads with heavy traffic. A balance in tariff is necessary for both types of spaces to be optimally utilized. For example, the Sfpark Garage policy in San Francisco varied

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hourly prices based on demand and gave off-peak discounts to lessen congestion in and near garages at rush hour.

Also read: [The Importance of On-Street Parking](#)

- **Cruising**

Another problem that arises due to a lack of parking spaces in Indian cities is cruising i.e. vehicles looking for a parking space causing long queues, congestion, and pollution. Typically when free on-street parking isn't available, drivers choose to cruise instead of paying for parking. By underpricing on-street parking, Indian metros create an economic incentive to cruise. Once occupied, low-cost parking isn't vacated for hours and instances have been recorded of cars being parked for days.

- **Parking in residential areas**

Residential apartments in Indian metros almost always see the construction of parking spaces due to the notion that residential plans without them will not attract buyers. This increases the overall cost of construction which becomes even worse when parking spaces go unoccupied. Because parking

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construction costs are the same regardless of whether the building is a luxury high-rise or modest apartments, lower-income residents, who are less likely to own cars, end up shouldering the burden of parking costs, effectively subsidizing parking for other people. Residents also often suffer from spillover parking because of commercial visitors and excessive vehicle ownership.

- **Parking on special occasions**

In Indian cities, special occasions mean unending traffic – festivals, concerts, college fests etc. A large number of vehicles come out on the streets, exerting immense pressure on parking spaces. This means more cruising, chaos, quarrels and long queues than usual. For instance, during **Durga Puja** in Kolkata, almost the entire city is out, which spells trouble for parking availability. As *pandals* encroach roads, traffic becomes so terrible that distances requiring fifteen minutes are covered in approximately two hours.

- **Environmental degradation**

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Parking lots accumulate a lot of pollutants that do not get absorbed and are thus flushed into water bodies during the rains. They also contribute to the production of sulfur dioxide and particulate matter, which have adverse health effects.

Final words

The demand for parking in Indian metros is seeing no signs of stopping. Because land resources are limited, it isn't possible to conveniently plan parking spaces according to demand. Instead of increasing available parking spaces, an effective technology-based solution must be employed to optimize the use of available spaces. Using sensor and software, smart parking solutions can provide both parking operators and drivers with a real-time map of available spaces.

Apart from allowing drivers to reserve spots based on their convenience, smart parking apps also make mobile payments possible. Not only does this save drivers time spent searching for a spot, but it also reduces environmental degradation resulting from congestion caused by parking. Many smart cities in India are gradually taking to technology as part of a

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set of interventions to solve their parking woes, an encouraging development for mobility and parking issues in India's urban areas.