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# Parking Policy in Delhi: A Golden Opportunity?


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## Table of Contents



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## Abstract

The aim of this paper is to explore a neighborhood parking policy in Delhi, India from a cost and benefit perspective in comparison with examples of differing systems of arranging parking from around the world. The broader objective is to elevate the understanding of parking policy from a rational economic focus on incentives that drives behavior. The suggested framework is based on three models of parking, conventional supply driven, demand driven and market driven. Possible identifiers for further exploration and key fault lines that drive policy are shown within the neighborhood as well as in the broader international context. Discussion focuses on if and how applications of different models across international examples fulfill the objectives of each model. Assessment of model efficacy will be examined in comparison with one another. Furthermore, the potential for policy change and subsequent benefits in neighborhood case example is explored.


## Introduction

Population growth, economic development, and urbanization are fast expanding the demand for transportation and road use in urban areas. Economic liberalization and globalization, furthermore, have enabled rapid growth of a middle class. As a result, personal car ownership has increased. However, the cumulative demand of urban populations for road and parking space generates significant, negative externalities when institutions needed to coordinate the use of space are absent. Without mechanisms to bring supply and demand into balance and to regulate the use of public areas, decentralized decision-making results in shortages of road and parking space (traffic congestion and time wasted searching for parking) and in pavements and public parks being used for parking purposes. These problems, collectively, are known as "spill over." Despite a general recognition that providing or enabling some form of coordination is desirable, "The current approach towards creating surface parking spaces, decongesting

automobile traffic in main arteries and providing a better public transport network [in Delhi] is *ad hoc* and not planned according to any well-established criteria." Rather than addressing the parking situation in all of Delhi, we suggest that empowering commercial areas to price parking and enforce parking rules on roads in their commercial areas represents an achievable win-win improvement for pedestrians, drivers, businesses, customers, and budget-constricted police departments.

## The Challenge

Growing wealth, population, and urbanization are increasing car ownership worldwide. Approximately 33% of India's 1.2 billion live in urban areas and economic liberalization and globalization have enabled rapid growth of the middle class[1]. In Delhi, the income of the average citizen has grown from 1.16 Lakh Rs to 1.35 Lakh Rs. a rate of 15.6% annually between 2009-2011[2]. Car ownership rates in the past decade have grown at a rate of 10-15%[3]. These developments are welcome signs of growing affluence, independence, and mobility. However, the cumulative demand of urban populations for road and parking space is resulting in significant, negative spillover effects on city dwellers due to the lack of effective institutions to coordinate the use of this space. Examples of such spillover effects abound: congestion, wasted time and fuel spent searching for parking, increased air pollution, pavements and parks being used for parking, danger to pedestrians, and cars taking up ever more of valuable urban real-estate. Such uncoordinated competition for space causes waste and conflict among car owners and between car owners and other

[1] Ministry of Urban Development, *National Urban Transport Policy*, Page 1
[2] Government of N.C.T of Delhi, *Estimates of State Domestic Product 2010-2011.,*Page 6
[3] Sharma, Jain, Singh, *Growth rate of Motor Vehicles in India – Impact of demographic and economic development*., Page 146

groups. Unless solutions to this challenge are created and implemented, such waste and conflict will only persist and grow in intensity

Despite a general recognition that providing or enabling some form of coordination is desirable, "The current approach towards creating surface parking spaces [in Delhi] is *ad hoc* and not planned according to any well-established criteria[4]." Fortunately, solutions do not have to be invented from scratch. The experiences of cities in Europe and Asia offer many lessons for Delhi. One approach, in particular, offers the promise of addressing these problems in a progressive, systematic, yet relatively simple way: market-based parking.

## Market-based Parking

To many, the parking situation and the ever expanding use of the space for cars seems to be an almost inexorable fact of nature. Citizens and policy makers endlessly clamour for more parking space as the only way to deal with increasing demand. This approach fails to appreciate, however, the costs of this approach and the availability of alternate approaches to deal with the problem. Paul Barter, an expert in parking policy at Lee Kuan Yew School of Public Policy, identifies three existing approaches parking policy:

1) Conventional supply-driven approach,

2) Municipal "Parking Management," and

3) Market-based approach.

The Conventional supply-driven approach to dealing with parking supply and demand mismatches is the attempt to mandate or create sufficient supply of parking for every car at zero price for the car driver. The approach basically involves ascertaining the number of

[4] Center for Science and Environment, *Choc-A-Block Parking Measures to Address Mobility Crisis.,* Page 10

existing parking spaces, the number of cars, and creating additional spaces to make up the difference. This approach is based on the faulty notion that parking is an absolute "need" and that the opportunity costs of using limited urban real-estate for parking can, therefore, be ignored. Demand for space by car owners, however, is not essentially different from any other competing demand for space. Like other demands, the demand for parking is not an all-or-nothing proposition, but is one in which consumers desire varying quantities depending on the costs of alternatives they face at the margin. As the cost of parking rise, drivers begin to find substitutes such as taking fewer trips, carpooling more, using more public transport.

Mandating free or low-price parking supply requirements distorts decisions about car ownership and road use to overuse of roads (congestion, parking shortages) and under provision of alternatives to driving, such as public transport and more dense urban development[5].

A more sophisticated approaches that attempt to employ a variety of tools to moderate demand as well as supply is known as "Parking Management." In this approach, a planning body weighs various tradeoffs and conflicts and to uses a variety of tools to bring about what they believe are the best balance of these conflicting uses of space[6]. Parking Management sees parking in the context of the goals drivers have, such as transportation and storage, and thus can more easily appreciate the fact that people are able to employ substitutes to achieve the same or similar goals.

[5] Barter, Paul., *Off Street Parking Policy Without Parking Requirements: A Need for Market Fostering and Regulation,* Page 574
[6] Ibid., Page 575

The last, market approach, uses property rights and market prices to coordinate individuals' use of parking space in the same way that prices coordinate the supply and demand of most other scarce resources. In market-based parking, drivers' demand for parking competes with peoples' alternate demands for the same real-estate (for parking or for other uses) through the price they are willing to pay. Car owners make choices about parking space and are capable of varying the quantity they demand in response to varying prices in the same way consumers of other goods are. As the price decreases, people choose to drive and park more to take advantage of the lower price. When prices increase, drivers search for substitutes such as carpooling, travelling at a different time of the day, using public transportation. This effect of prices coordinates the demand given the available supply. The relative prices of parking versus other uses also send signals to landowners to increase or decrease the quantity of off-street space available for parking over time. Compared to municipal, planning-based Parking Management, markets have the potential to coordinate decisions regarding land use in a far more sophisticated way because of the more accurate and nuanced picture of demand that prices convey and because of the strong incentives prices give people to adjust their own decisions in accordance with the wants of others. One motto of market-based parking policy is "let prices do the planning"[7].

It should be strongly noted, however, that for markets to supply parking, two conditions must be met. First, legal barriers to building parking structures and adapting land use for it must be low or non-existent so suppliers can increase the supply of off-street parking when necessary. Second, on-street parking must be sufficiently limited and priced in practice to discourage people from using the road, sidewalks, parks and other public spaces to park for

[7] Barter, Paul., *Off Street Parking Policy Without Parking Requirements: A Need for Market Fostering and Regulation,* Page 577

free. When institutions (laws and or customs) do not exist to constrain individuals' use of common areas, they can "free ride" causing negative externalities to others. Unless on-street commons are regulated and priced properly, no parking markets will emerge. Consumers will have little or no incentive to pay for parking and land-owners will, therefore, have little or no incentive to use land to provide parking rather than for other commercial uses.

The connection between free parking and spillover effects of car ownership is not widely understood by the common observer. Clear reflection, however, shows that parking problems in developing countries such as India result from public policy that allows common areas to be used for parking at no price either because official prices are set too low and or because property rights (rules and prices) are not effectively enforced.

### Examples of Market-based Parking in Practice

Several European and Asian cities have implemented market-based approaches in whole or in part. These experiences both confirm the theory behind the approach and show that it is able to deal with the most common parking-related problems in practice.

### Availability of Parking Space

The example that most fully embodies the market-based approach to parking management is Tokyo, Japan. A bustling metropolis like Delhi, Tokyo has high demand for car use and land use is at a premium. Tokyo has a population density of 6,017 per square kilometer[8] and Delhi 11,297[9]. Unlike Delhi, however, free parking spaces rarely exist, if at all, and there is

[8] Ministry of Internal Affairs and Communication., *Population Density and Regional Distribution.,* 2010
[9] Government of NCT Delhi, Directorate of Census Operations., *Delhi Population Census.,* 2011

no "shortage" of parking. The price of on-street parking is up to $2.60 USDs per hour[10]. In University of Tokyo study, 71.4% of respondents stated that the most important factor in searching for car parking was the closeness of the parking space to and from their destination, not price, while 14% reported that cheapness as the primary factor in looking for parking[11]. According to Donald Shoup, a parking expert from University of California, Los Angeles, when prices are high enough to ensure that 15% of on-street parking space is unused at any one time, parkers are always able to find a space[12].

To long-term parkers like employees and business owners, such a price might seem unbearable. Tokyo solves this in two ways, the Japanese government offers financial subsidies to ubiquitous off-street parking operators to handle long-term parking needs at a significantly reduced price to the consumer[13]. At the same time, it invests in providing high-capacity and efficient public transportation throughout the city[14]. In addition to supporting off-street parking, on-street parking rules are well-enforced. Illegal on-street parking does happen in Tokyo. Before enforcement reforms took place in 2006, double parking, parking in non-authorized zones was more common[15]. After reforms, illegal practices have been brought down without any significant effort to increase off-street parking.

Tokyo parking regulations do not make every parker happy all of the time, they may not always get to use the spaces they might feel entitled to, but, in fact, they coordinate incentives so that long-term parkers park off-street allowing most on-street parkers are able

[10] Barter, Paul., *Parking Policy in Asian Cities*., Page 32
[11] Morikawa, Asao, Igo and Kato., *Institutional System and Current Problems of Car Parking in Japan*., Page 10
[12] Barter, Paul., *Off Street Parking Policy Without Parking Requirements: A Need for Market Fostering and Regulation,* Page 576
[13] Barter, Paul., *Parking Policy in Asian Cities.,* Page 52
[14] Morikawa, Asao, Igo and Kato., *Institutional System and Current Problems of Car Parking in Japan*., Page 9
[15] Barter, Paul., *Parking Policy in Asian Cities.,* Page 63

to find a close spot to their destination. Tokyo demonstrates that a market-oriented pricing and parking provision, at least with minimum encouragement of supply, can coordinate usage of space so that no shortage of parking emerges.

### Search Time

Closely connected to the issue of parking availability is search time, the time it takes drivers to find a parking space. Search time causes two problems. First, drivers searching for parking slow down, stay on the road longer than they would if they found a space immediately, block traffic and thus cause congestion. Secondly, searching for parking can be costly in terms of time.

Congestion and the cost of waiting is not only frustrating to drivers, it can decrease the turnover of business in commercial areas. Tragically, it is often business owners and employees who take up parking for long-periods and increase search times for customers. Individuals we interviewed in Hauz Khas Market reported that in the evenings and on weekends they can spend 10 to 15 minutes looking for a parking space. Our research also showed that the average customer, even at a zero price per hour, tends to park for short periods (when they can find space), while owners and employees tend to take up parking spaces in the market all day (see Figure 1)

When parking is free, people have little incentive to reduce their demand or to shorten the duration of their use. As Tokyo shows, high enough pricing gives long-term parkers the incentive to park further away, leaving space available for more, short-term parkers. Vienna, Austrian, provides a strong example of how market-based approach solved this problem. Prior to 1974 Viennese customers experienced the same situation similar to Delhi, finding difficulty securing parking, employees and business owners parking for nine hours or

more. Subsequently, parking had low turnover, customers returned with less frequency and businesses suffered. Vienna policymakers implemented "Parkraumbewirtschaftung" or parking policy, by raising prices in designated zones across the city. The first fee put in place was only 0.29 Euros per hour in 1974 and now remains constant across all city districts at 0.80 Euros per hour[16]. The average parking duration has gone down from nine hours to less than one hour, with less illegal parking and the search time for parking down from nine minutes to three. Higher availability of on-street parking enabled higher turnover, increased customer frequency. Businesses thrived.

### Pedestrian Welfare

Only 60% of the roads in Delhi have sidewalks[17]. If pedestrians do not have the protection of reserved spaces for walking, such as curbs and sidewalks, wonton speeding and reckless drivers can do harm. Between 2001-2005 in Delhi, the average proportion of pedestrian fatalities of total road fatalities is 53 out of 100[18]. Turning road space into pedestrian zones has repeatedly demonstrated success in large metropolises in reducing pedestrian fatalities and injuries.

In Calgary, Canada, large overhead signs displaying the word "PEDESTRIAN," with two large mounted flasher units with a push button function allowing the pedestrian to activate the flasher were installed. The words changed to, "WHEN LIGHT FLASHING-MAXIMUM 20 — DO NOT PASS — HERE TO CROSSWALK," when the button was pressed. Studies after the installation showed notable declines in pedestrian fatalities[19].

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[16] Technical Committee on Transport. Action 342., *Parking policies and the effects on economy and mobility.*, Page 120

[17] Delhi Integrated Multi-Modal Transport Systems., *Traffic Survey Results Report*., Page 4

[18] Mohan, Denish., *Road Accidents in India*., Page 76

[19] U.S. Department of Transportation Federal Highway Administration., *A Review of Pedestrian Safety Research in the United States and Abroad.*, <http://www.fhwa.dot.gov/publications/research/safety/pedbike/03042/part3.cfm >

In New York City, Time Square use to be one of the most congested downtown areas of New York until Mayor Bloomberg decided to close down 42nd through 47th street and build pedestrian parks between them. The resultant effect on pedestrian safety was staggering. A decrease of 35% to pedestrian injuries and 63% to motorist was observed[20]. Additionally, businesses loved it. Commissioner Khan of the transport department said, "Studies have shown that pedestrianisation is good for business, as pedestrians, and not motorists, make the best consumers. After we pedestrianised Times Square, five flagship stores moved into the area. Times Square is now one of the top ten retail destinations in the world[21]," For pedestrians to be safe, clear definition of driving and non-driving, parking and non-parking areas must be defined and enforced.

Funds collected from paid parking can be used to improve infrastructure including areas for pedestrians. Opportunities in provision of privatized on-street parking and management represent real cost savings for the police and government administrators. In Berne, Switzerland, privatization of parking enforcement lowered on-street enforcement costs by 20%, relieved police resources for more violent crimes such as rape and assault[22]. In the US, Old Pasadena's city officials were able to diffuse significant opposition to paid parking by promising to reinvest parking revenues back into public infrastructure. Successful follow through has made Old Pasadena, previously a dilapidated area most avoided to an area more vibrant and teeming with businesses than the newer parts of town [23].

## Air Pollution

[20] The Times of India., *What Delhi can learn from New York City*., 15/04/12 < http://articles.timesofindia.indiatimes.com/2012-04-25/mumbai/31398819_1_pedestrianisation-livable-cities-pedestrian-plaza>

[21] Ibid.

[22] Technical Committee on Transport. Action 342., *Parking policies and the effects on economy and mobility.,* Page 71

[23] Shoup, D,. Kolozvari.,D., *Turning small changes into big changes*.,2003., Page 4

It is a banal point that increased use of cars, searching for parking, and congestion causes air pollution. In France, U.S., and Canada, Park and Ride shuttle services connecting commuters parked in long-term parking facilities to downtown areas have lowered motor vehicle traffic[24]. In cities like York in the UK, motorists filling in 1.1 million vehicles[25] have diverted from searching for on-street parking to parking their cars at off street sights and taking Park & Ride services to downtown areas. Such significant change helped the advent of pedestrian walkways, Park & Ride Shuttle services and non-motorized forms of transport to flourish. When on-street parking is sufficiently priced, more people will make use of public transportation and make alternate arrangements than using their cars.

## Hauz Khas Market: A Microcosm of Parking in Delhi

We conducted a survey to collect data about the parking behaviour and opinions in a commercial area of Delhi. We chose Hauz Khas Market to do the survey because it has all of the elements of a parking eco-system (off-street, on-street, residential property, shops, etc.) and thus can be seen as a microcosm of the bigger problems and possibilities of parking in Delhi. We surveyed 75 random respondents in the Hauz Khas Market area.

### Current Parking Behaviour

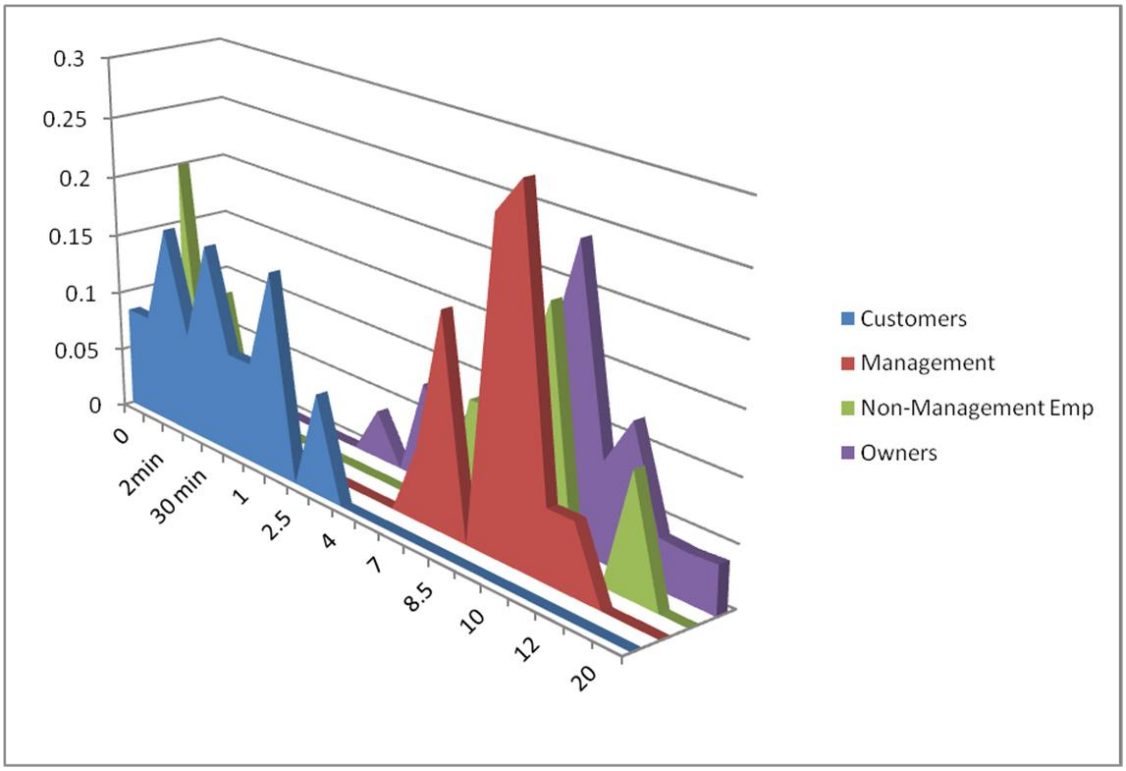
In personal interviews, many people indicated that, depending on the time of day, searching for a parking space could take up to 15 minutes and that the main market road was badly congested every evening. Our survey data indicated that, as elsewhere, shop owners and employees tend to take up available parking in the market all day, excluding customers and decreasing business turnover (Figure 1). Double and sometimes even triple parking narrows

[24] Technical Committee on Transport. Action 342., *Parking policies and the effects on economy and mobility.,* Page 25
[25] Ibid., Page 61

the road for car travel reducing the area for maneuvering. Any car stopping or slowing causes all the traffic to slow to a stop.

**Figure 1: Average Parking Duration by Group**

(X-axis: average parking duration. Y-axis: portion of interviewees parking at each duration.)

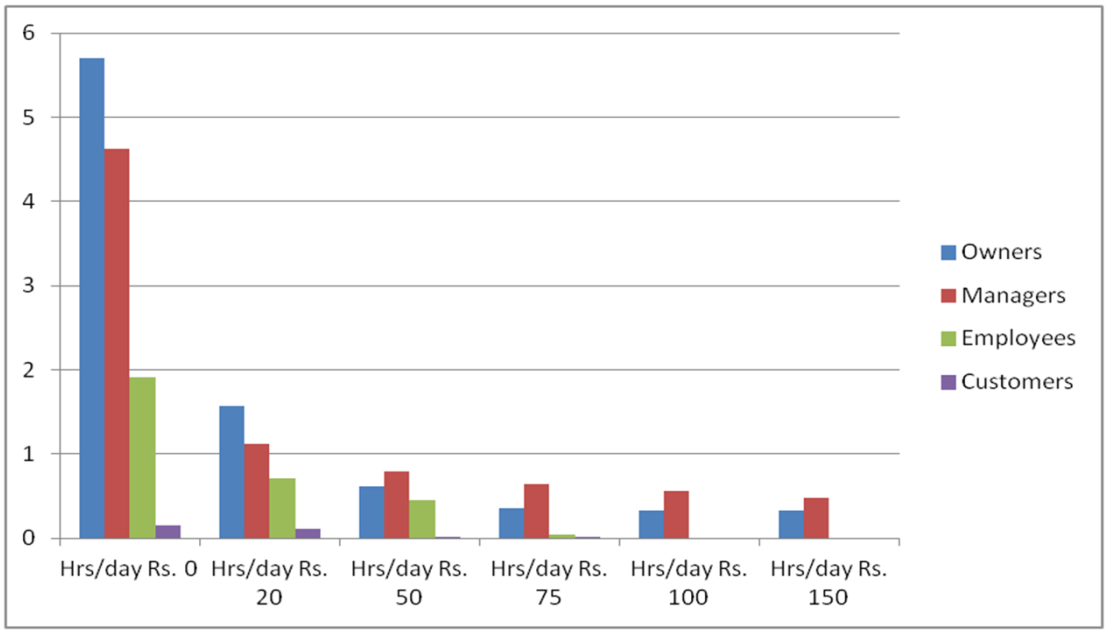



Most owners did not identify this as a problem. One, however, a practical businessman with no schooling in economics, understood it vividly and spontaneously explained why the long-term use of the parking by shop owners and employees was causing them to lose business without us prompting him. One of his customers drives from 40 kilometers away and often has to wait an extra 15 min to find parking. If there were a closer shopping option for this person with less of a parking problem, she might cease doing her business in Hauz Khas Market. Alternately, people from farther away might come to Hauz Khas more often if parking were more available and it gave Hauz Khas a competitive edge over other markets. Interestingly, even if business owners did understand the issue individually, without proper enforcement and pricing, each owner could face a collective action problem, a kind of "tragedy of the commons," in which it would makes sense for him to take the spots

anyway. This is because even if they would each prefer to have customers take the spot, instead, and increase turn-over, at no price, other business owners or long-term parkers would likely fill the spot, excluding customers and forcing the owner to park further away. Without pricing and enforcement, owners cannot be sure customers will in fact have access to the spot. Given the available options, one might as well park near one's place of work. Credible enforcement of parking rules and prices is thus essential.

When asked what they would do if they had to pay for on-street parking at different rates per hour, almost everyone said they would reduce their use, shorten their trips, ultimately park elsewhere and use alternate means of transportation as prices rise (figure 2).

**Figure 2: Speculated Demand Schedule by Group**




Their answers showed a clear downward slope of the quantity demanded as the price went up. People's opinions about what they would do, however, are likely to deviate from actual behavior. Studies in Austria have shown that actual behavior changes less than respondents

initially expressed.[26] In reality, customers select their destinations based on the quality and attractiveness of the location and almost always consider parking afterwards[27]. Measures to regulate parking through payment systems enhances attractiveness by removing searching traffic, illegally parked cars and by making spaces available for visitors and customers[28]. Once faced with the situation in which parkers actually have to "demonstrate their preference," they may in fact differently than they expect[29]. Based on the report of that study, we expect that many frequent short term visitors would be more likely to use on-street parking for shorter periods of time more often than they indicated in the study. By the same token, long term parkers who believe their parking behavior would remain the same given pricing implementation would engage in using substitute more than they imagine.

### Amount of Support for Paid Parking

In our survey, we asked individuals if they "would support a proposal to require people to pay for on-street parking in this area? Yes or No." We experienced a large amount of resistance regarding the idea from shop-owners who feared that requiring everyone to pay for parking would be an unbearable burden on them (thinking as long-period parkers) and would scare away customers (who want "free" parking). To our surprise, however, 67% of the respondents and 65% of shop-owners said they would support it. What they meant by this and how it comported with their resistance is not clear. It is also not clear that their beliefs about what they would do if they actually faced the choice.

[26] Technical Committee on Transport. Action 342., *Parking policies and the effects on economy and mobility.* Page 93
[27] Ibid., Page 94
[28] Ibid., Page 93
[29] Ibid., Page 76

We then asked if their support would increase *if* requiring people to pay for on-street parking did one of the following things:

- decrease congestion,
- decrease time it takes to park,
- made it easier to find a parking space when you urgently want one,
- number of customers visiting businesses,
- create a safer environment for pedestrians,
- reduce air pollution,
- if revenues obtained were reinvested in neighborhood infrastructure such as street lighting, road and sidewalk improvement, drainage, beautification, etc?

There was still a great deal of skepticism that these effects would result, but when pressed, 80% increased their support for paid parking if congestion lowered, 85% for decreased time it takes to park, 90.6% for easier to find space when urgently needed, 69.3% for increased number of customers visiting business, 92% for a safer environment for pedestrians, 92% for reduced air pollution and 98.6% would support a paid parking policy if revenues obtained were reinvested in neighborhood infrastructure such as street lighting, road and sidewalk improvement, drainage, beautification. One factor that people expressed that we had not included on the survey was the safety of their vehicle from theft and damage.

Finally, we asked, "Which *one* factor in the previous list is most important to you?" The answers, even among the same category of interviewee were quite evenly spread. 20% chose “reinvesting revenues back to in neighborhood infrastructure,” 22% chose "Safer environment for pedestrians," 19% for "decreasing congestion," 7% for parking time, 21.3% for "increasing the number of visitors to businesses," 8% for easier of finding parking and 4% for air pollution. If people were persuaded that such results could be achieved and that

reinvestment could be credibly ensured, they may be willing to support a proposal to require fees for on-street parking.

### A Golden Oppportunity

The Municipal Corporation of Delhi is building off-street parking in Hauz Khas Market. As mentioned above, however, the issue of on-street pricing and law enforcement must be addressed meaningfully to solve the problem. Yet, from our conversations with members of DIMTS (Delhi Multimodal Transport Systems), political will seems to be missing. The problem appears to us to be a combination of a lack of understanding and follow-through. While many government actors may understand the idea of parking management, they seem to be hamstrung by constituents who drive and want the visible solution: more free parking and roads. Policy makers also seem to be restricted by the inadequacies of ineffective law enforcement. A challenge in Delhi is credibility and communication. 76% of our respondents were not even aware of any legal limits to parking while only 48% reported receiving or knowing someone personally who received a penalty through parking illegally in Hauz Khas Market. A majority of our respondents also did not trust the government to keep promises and follow through on public works projects.

Public awareness and change of understanding might change the political possibilities. However, changing everyone's minds is costly. A better alternative might be finding a local set of business owners or investors who can be persuaded that such a system would be good for them and their customers. Owners and managers expressed to use that they feared that paid parking would reduce their business and cost them a lot of money. But if they were convinced that paid parking would lead to higher business

turnover, investment in the market (road and sidewalk improvements, drainage, street lighting), many expressed that they would be in favour of the proposal, even if it meant they had to park somewhere else and come to work by another means. If these business owners where to become a lobby group educated in the win-win benefits of paid and enforced on-street parking, they might be able to persuade the government to allow them to create a small experiment in their own market which could serve as an object lesson to others.

Due to follow-through and enforcement challenges by government here, a market business association or an investor holding sufficient investments in the market to align his own interests with the welfare of the other there, can if given the right to hire private enforcement contractors to collect funds and tow vehicles in their area. The same individual or association would have to have the authority to monitor the private enforcement party and to be empowered to dismiss the it if it failed to follow through on contractual requirements such as reinvestment in infrastructure and fair use of their enforcement power so as not to scare away business with a bad reputation. According to a study done by the European Cooperation on Science and Technology organization, COST for short titled "PARKING POLICIES AND THE EFFECTS ON ECONOMY AND MOBILITY" [30]:

> "Parking enforcement though may pose problems, especially in those countries where the collection of non-paid fines is a matter for the judiciary. Judicial authorities prefer to concentrate their actions on more serious offences...The result is that enforcement of parking rules need not compete with the other priorities of the police and so get the priority that is needed.
>
> "Also this situation introduces the possibility of contracting out the task of enforcement. Thus providing possibilities to set priorities in a practical way, to

[30] Technical Committee on Transport. Action 342., *Parking policies and the effects on economy and mobility.,* Page 12

achieve a reasonable cost-benefit ratio and at the same time maintain flexibility in operation."

For such an arrangement to work, 1) the entity given the power to hire a local enforcement would have to have a secure right that would not be taken away or infringed upon easily. 2) The right to collect fines would also have to be a matter of civil debt rather than a criminal penalty to allow private parties to perform the function. In addition, 3) funds collected would have to be able to remain as local funds for reinvestment in public goods in the marketplace such as road and pavements by the association or investor. According COST Action 342 EU, "it is advisable to organise this so that the local authorities who carry the burden of parking also get the revenue of the related income[31]." This includes local private enforcement parties[32]. In Madrid, Spain, the city council contracted out the management of 40,000 pay and display parking spaces at city center to three private operators in 2002. By 2003, parking ticket sales had increased by 13.6% over the previous annual average and 11.5% again in 2004[33]. Combined with a park ride system that ferry motorists from these lots to destinations across the city, Madrid was able to lowered vehicular traffic searching for parking by 20,000 per day[34]. The success has empowered the city council to extend the regulation range for private operators. For more implementation successes, one could look to examples from Oxford, UK, and the Netherlands.

For successful implementation, examples from Asia and Europe have shown that communication to be the key facet in mitigating opposition and building stakeholder

[31] Technical Committee on Transport. Action 342., *Parking policies and the effects on economy and mobility.*, Page 13
[32] Ibid., Page 30
[33] Ibid., Page 38
[34] Technical Committee on Transport. Action 342., *Parking policies and the effects on economy and mobility.* Page 61

support. From our data, a credibility and follow-through crisis were clear reservations among our respondents. They indicated doubt that the Delhi government had the ability to reinvest into neighborhood infrastructure and providing revenues for improving road conditions. Creating a credible model that would ensure this and communicating it to stakeholders would be essential. In London, media campaigns on parking were undertaken in 1994, 1996, 1998 and 2001. The object was to educate the public and the need for parking controls and to explain the consequences of illegal parking[35]. In London, objections were considered before any plan was put in place, for this they dropped leaflets and arranged public meetings[36]. For detailed communication strategy approaches, consult examples from Switzerland, Oxford(UK) and Vienna(Austria).

Empowering local market associations or investors to take hold of parking policy that affects them promises the possibility of both a bright future Delhi's commercial areas. Successful implementation could increase business revenues, make public spaces safer and more people friendly, reduce congestion and make finding parking no task at all; and where funds from parking are used to improve marketplace infrastructure and public goods. Such a proposal avoids a utopic attempt to change the whole society. Instead, it focuses on the win-win possibilities and rightly-understood self-interest of the interested parties: just small marketplace communities. Fear of the introduction of paid parking in turning away business is based on wrong assumptions on assumed behavior. For such a proposal to work, communication to various stakeholders would be crucial.

Such an experiment would be a golden opportunity for businessmen to increase business by engendering an easier parking experience, providing safer walkways and more public good

[35] Ibid, Page 67
[36] Ibid, Page 68

amenities. Community leaders and politicians, too, can experience cost savings, achieve better results and establish reputations of starting a model that showed the way to improving the public welfare through parking policy.

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