

Does Parking Work as a Transportation Demand Management Tactic?

Explanation

Transportation demand management (TDM) aims at dealing with urban congestion problems through public policies and strategies (Giuliano 1992, 327). Over the past few decades, as traffic congestion has increased, so have efforts to curb it and its negative effects on society. Although TDM tactics have changed over time, the basic goal of reducing traffic so as to also reduce traffic congestion has remained the same. TDM strategies especially aim at reducing peak period travel by changing commuters' and employers' habits that relate to transportation. More recent strategies focus more heavily on and include "attracting solo drivers to carpool or transit, shifting work schedules away from traditional peak hours, and allowing more employees to work at home," while TDM tactics in previous years include ramp-metering and traffic signal coordination, as well as vanpool subsidies (Giuliano 1992, 327-328).

There have been many studies done on TDM tactics over the years. Many are in the form of surveys on commuters' habits (Shoup 1995, 15). TDM strategies can be effective if they provide incentives that significantly change relative cost and/or convenience of travel choices and alternatives to commuters. Price-based incentives are more effective than what might be labeled soft, or altruistic-based, incentives, such as appealing to commuters' sense of duty, etc. Parking fees, subsidies, free transit passes, special high occupancy vehicle (HOV) lanes, etc., deter solo-driving more so than does relying on toothless appeals for public cooperation and/or mere persuasion, one researcher concluded. Furthermore, incentives that offer commuters more travel choices and information tend to garner more public support than do prohibitive and punitive tactics (Giuliano 1992, 333).

Parking fees are just one of many TDM tactics. Through cost and inconvenience, parking fees can be an effective way to discourage solo-drivers, to encourage commuters to carpool or use mass-transit. There is a temptation for local governments and planners to assume that parking is the overriding, main issue for a downtown and that relaxing parking requirements, for example by simply providing more parking spaces downtown, will allow more people to work, shop, and live downtown. This completely overlooks the bigger picture relating to traffic and traffic congestion, which is that by relaxing parking requirements and adding more parking traffic congestion actually increases, making it instead much more difficult for people to work, shop, and live downtown (Roberston 1999, 42). The often-overlooked fact by local governments and planners is that parking can have farther-reaching consequences on quality of life and economic well-being of both residents and businesses than expected (Revell 2000, 17). Cities often bring traffic congestion problems upon themselves by confusing the parking issue. In many instances, cities' own zoning ordinances stipulate that developers meet minimum parking requirements, or that they construct a minimum level of off-street parking. Unfortunately, minimum parking requirements act like "fertility drugs for cars," slowly increasing the city-wide density of cars. This higher density creates more traffic congestion, subsequent street widening, and intersection flaring. While minimum parking requirements appear to accommodate demand in the very short term, they are only "an addiction masquerading as a cure," worsening the traffic and parking situation in the long term (Shoup 1995, 20).

One particular facet of the parking issue that can nullify TDM tactics is employer-paid parking. Employer-paid parking is parking that is provided at no cost to commuting employees by their employers. By providing guaranteed free and available parking, employers are in effect providing an incentive for their employees not to carpool or use transit, but to drive alone to work. A number of surveys in the 1990s found that between 82 and 95 percent of commuters parked free at work, almost totally in employer-paid parking. One researcher calculated that employer-paid parking in effect subsidizes nearly one-third of all vehicle travel in general and nearly two-thirds of all vehicle travel during the morning peak rush hour (Shoup 1995, 15).

Finding the balance in the parking issue is a difficult task (see Appendix). Because parking can have such far-reaching consequences on quality of life and economic well-being, the questions of whether or not to charge for parking and at what price are the two most troublesome questions for local governments and planners (Revell 2000, 17). Free parking and/or parking that is priced too low only tend to invite and encourage more traffic. However, parking that is priced too high can discourage economic activity. The trick to pricing curb parking, for example, seems to be to price parking so as to result in an 85 percent occupancy rate. In this way, drivers can quickly find a place to park near their destinations. The right “market-clearing” prices will reduce the number of parked cars just enough to create some vacancies so that parking will never be too difficult to find. If there are too few vacancies, meaning that finding a parking place is difficult, then a higher price is necessary to discourage too many people from parking. If there are too many vacancies, meaning that it is too expensive to park, then a lower price is necessary (Shoup 1995, 24-25). The problem with employer-paid parking is that finding a place to park is both too easy and too inexpensive for commuting employees, resulting in more solo-drivers and, consequently, more traffic congestion.

Local governments and planners must also determine parking prices so as to maximize revenues. Underpricing parking lots and meters can mean that local governments do not earn revenues—the benefit to local governments of parking. Underpricing can be especially painful if the local government helped to fund the construction of a parking structure or put in expensive meters. Installing parking meters can be very costly to a local government (Courlet 2001, 19). Overpricing parking lots and meters, however, can discourage parking to the point that drivers will seek alternative parking options elsewhere. This can have further consequences by discouraging potential customers away from local, downtown businesses to shopping malls in suburbs, where parking is ample and free (Revell 2000, 18).

Finally, there is the risk that too much free parking can result in business owners and employees, as well as residents, monopolizing all of the parking in an entire area.

Charging the right price for parking gives visitors more options and actually helps local businesses and business districts attract more customers (Courret 2001, 14). Also, installing parking meters can have a negative effect on the aesthetic quality of an area (Courret 2001, 14).

Evaluation

There are various TDM solutions to the parking issue as related to traffic and traffic congestion, but the most effective have to do with charging adequate prices for parking. An abundance of inexpensive, or even free, parking tends to have the effect of inviting and encouraging more solo-drivers to drive to work. As a means, therefore, of discouraging employees from driving to work, in addition to dispensing with employer-paid parking, local governments and planners can prohibit all-day curbside parking, limiting meter parking to short-term only. Also, in residential parking permit areas, or areas where parking is permitted only for local residents, parking can be sold at market value, which tends to be much higher than the price at a meter, further discouraging solo-driving (Shoup 1995, 22-23). The above TDM tactics can also help local governments increase their parking revenues in addition to discouraging solo-drivers.

The main purpose of TDM strategies is to make solo-driving continually more inconvenient and expensive to the point that alternative travel choices, such as carpooling and transit, become more appealing to commuters. Parking fees, especially without the availability of employer-paid parking, seems to be at least somewhat effective at managing traffic demand. Several studies have been done to show this (Giuliano 1992, 328-333; Shoup 1995, 15). Parking by itself, however, cannot be effective as a TDM tactic, but must be a part of a greater strategy that combines a number of tactics to decrease traffic and traffic congestion.

On a scale of 1 to 4 (with one being the lowest and four the highest), relaxing parking requirements earns a score of 1, maybe even zero. In theory it would seem to increase economic efficiency, social equity, and the overall individual experience. Lowering the cost of parking, for example, would seem to offer commuters free and/or less expensive

parking. It would seem to make the cost of parking more equitable to poor commuters who previously could not afford to pay for parking in ramps and at meters. It would seem to improve the individual experience, creating the temporary illusion that solo driving was practical due to free parking, almost as if free parking were the reward of the solo-commute. In actuality, however, relaxing parking requirements would result in more traffic and traffic congestion by increasing the density of cars in downtown areas. While the cost would be equitably free to all drivers, local governments would lose revenue, perhaps even after having paid to build parking structures. The sudden increase in traffic would result in a worsened individual experience. Also, increased traffic and traffic congestion due to increases of solo-drivers who were lured by free parking would have an increasingly detrimental effect on the environment.

Works Cited

- Couret, Christian. 2001. "City frees up downtown parking for visitors." American City and County 115 (No. 6):14.
- Giuliano, Genevieve. 1992. "Transportation demand management: promise or panacea?" Journal of the American Planning Association 58 (No. 3):327-335.
- Revell, John. 2000. "To charge or not to charge, that is the parking question." Public Management 82 (No. 11):17-20.
- Robertson, Kent. 1999. "Planning the future: guiding downtown development." Public Management 81 (No. 6):41-43.
- Shoup, Donald C. 1995. "An opportunity to reduce minimum parking requirements." Journal of the American Planning Association 61 (No. 1):14-28.

Appendix

A Checklist for Successful Parking Planning (Revell 2000, 19):

1. What are the options? Are free and fee parking the only two options, or is it possible to rely on a mix of the two?
2. What is the parking plan meant to accomplish? Are planners trying to support urban businesses by providing free parking to patrons, or are they hoping to generate revenue.
3. What is working in other communities? How can the experiences of localities with similar demographics help point the way?
4. Who should pay for parking? The money has to come from somewhere. Will it come from residents, businesses, or visitors?
5. Are there systems in place to assure the success of the parking program? Even after a program has been developed, a number of factors--like security, enforcement, and staffing--still must be addressed. Does the parking plan account for these factors?