Introducing Congestion Pricing on a New Toll Road

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A demonstration project to test the effectiveness of congestion pricing in an urban area is proposed. The general theoretical case for such pricing is reviewed, and recent international interest in congestion pricing is summarized. The need for demonstration projects is outlined, both to add to current knowledge about the effectiveness of congestion pricing and to address political and other public-acceptance barriers to implementation of the concept. A new toll road being planned for Orange County, California, is proposed as a test site for congestion pricing. It is suggested that, instead of charging flat-rate tolls, the transportation agency could charge peak and off-peak tolls, increasing the level of the peak charge each year over a period of up to 10 years, until toll revenues decline below the levels forecast under the flat-rate toll alternative. Measurements of traffic flow and ridesharing behavior would be made, as well as calculations of emission-reduction effects. Finally, a brief discussion of marketing and political considerations involved in conducting such a demonstration is provided.

For more than three decades, economists have urged that direct pricing of road use be implemented to bring demand and supply into balance. To date, pricing for congestion control (as opposed to tolling to pay for road construction and operation) has seen only limited use, and only overseas. Singapore and several Norwegian cities have implemented area pricing to limit vehicular traffic entering the central business district (CBD).

But implementation of congestion pricing, or even serious consideration of that practice, has been held back in the United States both by technical and political problems.

The technical problem has been the difficulty of pricing with conventional methods—either toll booths or access-control stickers. Stickers, used in Singapore, permit only a single price to be charged for access to a certain region or facility. And toll booths, in addition to being unpopular with users and causing additional congestion, do not lend themselves to variable pricing (being set up with fixed-price exact-change lanes, for example). The advent of automatic vehicle identification (AVI) systems makes it feasible to implement sophisticated pricing schemes in user-friendly ways (*1*).

The political problem is at least equally intractable. During the 1970s FTA (formerly the Urban Mass Transportation Administration) offered grants to cities willing to serve as test sites for some forms of road pricing. However, the idea was considered too controversial. Likewise, when California's special task force on transportation proposed the idea in 1976, it was viewed as an anti-automobile measure and dropped as politically infeasible.

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Increased concern over vehicle emissions and congestion levels has made both ridesharing and mass transit popular causes in the past decade. The idea that drivers should pay the full costs of their automobile use has gained increasing respectability, especially in the context of achieving overall air quality goals.

These changes are beginning to affect transportation policy overseas. Norway has begun to use congestion pricing, with Trondheim the first city to implement such a system using electronic toll collection. Bergen and Oslo are converting the existing toll-rings around their CBDs to electronic toll collection (but have not yet instituted peak-hour differentials). The Dutch government has announced plans for electronic congestion pricing in Amsterdam, Rotterdam, Utrecht, and The Hague as part of its national environmental policy plan to reduce urban air pollution. Singapore plans to convert its sticker-based CBD pricing system to a full-fledged congestion pricing system using electronic toll collection. Cambridge and Edinburgh plan to be the first cities in the United Kingdom to implement congestion pricing on city streets (*2*,p.1).

NEED FOR DEMONSTRATION PROJECTS

The idea of charging for freeway use is still unfamiliar to most Californians and their public officials. More foreign, even within the toll-road community, is the idea of using prices as a means of managing traffic demand (as opposed to simply a means of financing the road). The theoretical work carried out to date suggests that regionwide congestion pricing in southern California would have significant impacts on vehicle miles traveled and vehicular emissions (*3*). However, even if the theoretical benefits were overwhelmingly persuasive, it is unlikely that state or local officials could be persuaded to implement such a far-reaching measure on every congested freeway in the region.

Demonstration projects are therefore an attractive next step. There is much that economists and transportation planners still do not know about possible behavioral response to the choices posed by congestion-priced facilities. Also unknown are the political dynamics of congestion-priced projects: which groups will support or oppose such projects and why.

In selecting sites for demonstration projects, the least desirable place to start would be existing freeways, no matter how congested. Putting a price on something that has traditionally been offered free at the point of use risks major public and political resistance, akin to that encountered when an existing freeway lane is taken away to create a high-occupancy vehicle (HOV) lane (e.g., the infamous Diamond Lane episode on the Santa Monica Freeway). The two best types of facilities for introducing the concept are

- Existing toll facilities, where off-peak discounts and peak-hour surcharges can be introduced as fine-tuning the existing pricing to benefit users through reduced congestion and rideshare incentives, and
- Completely new facilities that give users a choice compared with existing, unpriced facilities. New toll roads offer an ideal setting.

Designing and carrying out demonstration projects is important because there is a great deal that the transportation community does not know about user response to congestion pricing. A controversy has developed between traditional toll-road planners and economists over the appropriate modeling techniques to use for congestion pricing (*4*). Thus far, the financial community is cautious about revenue projections based on anything other than traditional analysis using flat-rate tolls; they have no empirical data on which to make judgments about revenue projections for congestion pricing.

Specifically unknown is the response of drivers in automobile-oriented California to peak-hour pricing incentives. What fraction of users will shift their travel to off-peak times? To what extent will time-sensitive drivers be attracted to a less congested highway? What fraction of people will opt for ride sharing or transit, and how will this choice vary by income level and other socioeconomic factors? To what extent will there be displacement of traffic onto nonpriced or conventionally priced facilities? Also, despite the potential environmental benefits (such as reduced emissions and reduced automobile use), to what extent will environmental and pro-transit organizations support congestion pricing?

These significant unknowns can best be assessed by means of carefully designed demonstration projects. Because the potential gains from congestion pricing are enormous, it is important that such experiments be designed and implemented in the near future. If congestion pricing on the entire freeway network would be a more cost-effective way of achieving important transportation goals (e.g., increased vehicle occupancy, reduced vehicle miles traveled, and increased demand for transit), then it is vital to quantify those effects so that this information is available for use in transportation and air-quality planning.

DEFINING THE EXPERIMENT

As noted previously, a new toll road provides one possible venue for demonstrating congestion pricing. The proposed site for such a demonstration is the San Joaquin Hills Transportation Corridor (SJHTC). This 17-mi (14.5-mi tollable) route is an extension of the Corona Del Mar (73) Freeway in Orange County, from Newport Beach and John Wayne Airport southeast to San Juan Capistrano (*5*).

The current design for this tollway is referred to as a 3-2-3 configuration: three lanes southbound, three lanes northbound, and (at a later date) either two reversible HOV lanes or two concurrent-flow HOV lanes in the median. In addition, the median has room for further HOV lanes or a bus or rail transit corridor. The configuration is referred to as the demand management concept, intended to limit the overall width of the tollway to three primary lanes in each direction, plus the median.

The SJHTC corridor has several advantages as a site for the demonstration project. First, the area is affluent, which means objections to pricing based on ability to pay or on equity (rich versus poor) grounds will be fewer for this corridor than for many possible alternatives. (On the other hand, price may be less effective in deterring peak-hour use than it would be in a less affluent area.)

Second, there is some degree of support for the concept on the staff and board of the San Joaquin Hills Transportation Corridor Agency (TCA). On February 14, 1991, the TCA board adopted a resolution supporting its decision to postpone construction of HOV lanes in the median until 2010 by stating, "Tollways provide an inherent financial incentive to encourage HOV usage," and noting, "If additional incentives are necessary [to achieve targeted vehicle occupancy rates], the Board of Directors of the Agency shall adopt appropriate financial toll discounts for high occupancy vehicles in order to achieve equivalent occupancy rates as would occur with construction of the planned HOV lanes" (*6*). The board cited an assessment by Wilbur Smith Associates (WSA) showing that it is possible to decrease tolls for HOV vehicles (in lieu of HOV lanes), and increase them for general use, without a major loss of revenue (*7*).

The proposed controlled experiment on the SJHTC would have three principal purposes:

- To determine the levels of peak-hour price differentials that will produce a given level of net traffic reduction, permitting traffic to flow more smoothly on the SJHTC (Service Level C or better) compared with traffic service levels on the competing parallel routes (Highway 1 and the I-5/405 corridor);
- To compare ridesharing behavior on the SJHTC and the parallel free routes; and
- To quantify the degree of emission reductions brought about by congestion pricing.

Traffic forecasts prepared by the TCA staff (the Corridor Design Management Group) indicate that the SJHTC will experience serious congestion during its initial 15 years. The planned toll rate of \$0.138 per tollable mile, though considered high compared with rates charged on most existing toll roads in the United States, appears to be lower than what the traffic would bear.

The planned flat-rate toll is based on demand studies carried out by WSA. WSA used trip tables and link-node traffic networks from the Orange County Environmental Management Agency, revising them to account for the addition of the SJHTC and other new expressways through 2010. WSA then used a capacity-restrained assignment model, with a dual-path choice feature to assign trips to tolled and nontolled segments. For each assignment condition, three separate capacity-restrained assignments were made: a.m. peak, p.m. peak, and off-peak. Separate values of time were used for peak and off-peak conditions and for three types of trip: to and from work, company business, and recreation/other.

The WSA demand studies produced a toll sensitivity curve (toll revenues versus toll rate) with a continued positive slope at the maximum toll rate shown—$0.207/mi. A visual extrapolation of that curve suggests a revenue-maximizing toll of around $0.224/mi (see Figure 1). The shape of the curve suggests that significantly higher tolls than the planned 13.8 cents/mi could be charged without reducing total revenue and that even higher tolls might be feasible for congestion control with only a slight reduction in total revenue. How high might that price level be, and how would the optimum level be established? To take maximum advantage of this experimental setting, a number of different price levels must be tested. Each should be left in place sufficiently long to permit behavior patterns to stabilize—between 6 and 12 months. Because price levels for other goods and services can be expected to continue rising at perhaps 5 percent per year, the experimental design will call for the peak-period toll to be increased by at least 10 percent each period (so that what is being tested are higher charges in real terms).

Perspective on the proposed pricing levels can be gained from the 1975 simulations of congestion pricing in the San Francisco Bay Area by Keeler and Small (*8*). Their estimated optimal (long-run marginal cost) peak-hour charges for urban freeways ranged from $0.145 to $0.343/mi and, on urban-suburban freeways, from $0.033 to $0.091/mi, in 1972 dollars. Converted to 1990 dollars, that would be $0.429 to $1.02/mi for urban routes and $0.0976 to $0.269/mi for suburban routes. Southern Orange County is best described as suburban, so the $0.10 to $0.27/mi should be taken as representative 1990 figures. The proposed peak-hour prices are in line with these numbers derived from simulation modeling.

One possible scheme for the pricing strategy is presented in Table 1. The basic idea is to keep the off-peak toll constant at $0.10/mi while increasing the peak-period toll by 10 percent each period, starting at $0.13/mi (slightly less than the currently planned flat-rate toll). Thus, the differential between peak and off-peak charges would begin at 33 percent and would increase to nearly 100 percent by the 5th period of the experiment. If the experiment continued for another five periods, the differential would exceed 200 percent by the 10th period. A period would be anywhere from 6 to 12 months. If 6-month periods were used, the increase in nominal tolls would be 20 percent per year, large enough to be significant if consumer price inflation continues at moderate levels.

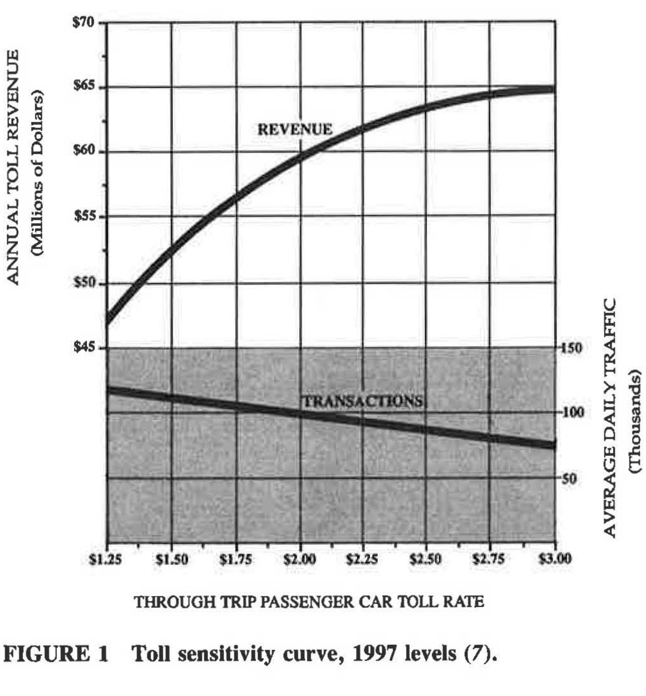

FIGURE 1 Toll sensitivity curve, 1997 levels (*7*).

The financial community has been cautious about the untested idea of congestion pricing. It must be emphasized that, for urban tollways facing competition, a pricing strategy that offers low rates during nonpeak hours and high rates at peak hours is likely to produce more revenue than the conventional flat-rate toll. User sensitivity to price will be quite high at off-peak hours when the parallel free routes are relatively uncongested; by the same token, time-sensitive users will be relatively insensitive to price at peak hours, so it makes sense for the tollway to charge a significantly higher rate then.

To persuade the financial community to consent to this experiment, provisions would still have to be made for deferring or eliminating the next planned increase in any period in which total annual toll revenue was projected to fall below the sum expected from the flat-rate toll. This procedure would ensure that debt-service payments would continue to be made at planned levels.

How realistic are the peak-hour charges proposed in Table 1? The WSA studies for the TCA use average commuter value-of-time numbers of $10.68/hr in 1995, $12.54/hr in 2000, and $15.48/hr in 2005 (*7*). The principal alternatives to the SJHTC are the Pacific Coast Highway (Route 1) and the San Diego Freeway (I-405/I-5). Assume that peak-hour speed on these alternative routes averages 20 mph in 2005 and congestion pricing keeps average peak-hour speed on the SJHTC at 45 mph. For the 14.5-mi tollable length of the SJHTC, the toll road would offer a saving of 24 min during rush hour. On the basis of the WSA figure for 2005, that time saving would be worth $6.23 to the average commuter—well above the highest peak-hour charge of $4.43 in Table 1.

The use of AVI will facilitate this experiment. Toll authorities using coin machines generally price in multiples of $0.25 to maximize the use of exact-change lanes (which have much greater throughput than change-made lanes). AVI will permit fractional prices (such as those shown in Table 1) to be charged, because the charging will take place electronically rather than by means of coin machines. As a further incentive for users to sign up for AVI, the tollway could round each fractional toll to the nearest multiple of $0.25 for cash (tollbooth) customers, thereby giving a small price break to AVI patrons.

The AVI system also greatly facilitates price changes, which is useful when changing from one peak-hour rate to another for each new period of the experiment. It will also be useful on a daily basis in making transitions from off-peak to peak prices. When users know that access conditions will be easier after a certain point in time, they tend to form queues to wait for the transition to easier access. (This phenomenon occurs on Route 66 outside Washington, D.C., when the highway switches from HOV-only to regular access.)

To alleviate this problem, the AVI system can be programmed to make a smooth or stepwise transition between the off-peak and peak rates. If, for example, the peak period is defined as ending at 8:00 p.m., the transition to the off-peak rate of $0.15/mi could be carried out in $0.01 intervals from 8:00 to 10:00 p.m. This transition period would be widely

TABLE 1 Proposed Pricing Schedule for SJHTC Congestion Pricing Demonstration

Period	Peak-Hour Toll	Max. 1-Way Charge	Off-Peak Toll	Peak/Off-Peak Ratio
1	$.13/mi.	$1.88	$.10/mi.	1.33
2	.143	2.07	.10	1.43
3	.157	2.28	.10	1.57
4	.173	2.50	.10	1.73
5	.190	2.76	.10	1.90
6	.209	3.03	.10	2.09
7	.230	3.33	.10	2.30
8	.253	3.67	.10	2.53
9	.278	4.04	.10	2.78
10	.306	4.43	.10	3.06

publicized so that users would know there was little benefit in waiting by the on-ramps until 9:00 p.m., for example, because their savings would only be, say, $0.01/mi for every 3 min they waited. The toll system could also display the current toll rate electronically on roadside or overhead displays at intervals along the route. If the experiment runs for 5 years and the SJHTC opens for traffic in 1995, then by 2000 extensive data will have been collected and analyzed on the effectiveness of congestion pricing. This information will then be available for transportation planning on other southern California facilities and may help in decisions about possible regionwide use of congestion pricing.

This information will also be available well in advance of the planned removal of tolls from the SJHTC in 2010. Level-of-service estimates by the Corridor Design Management Group predict toll-free traffic volumes in 2010 that will result in Service Level F peak-hour conditions along nearly 50 percent of the northbound route and one-third of the southbound route (under the conservative HOV assumption) (*5*). If these projections are correct, service levels by 2015 or 2020 would be even worse, assuming continued traffic growth.

However, if the demonstration of congestion pricing works as well as theoretical models imply, and traffic flows can be maintained at Service Levels C or D during peak hours, then the TCA will have sufficient information to present an argument for the continuing, permanent use of pricing as a basic tool of congestion management from 2010 onward.

MEASURING TRAFFIC FLOW EFFECTS

The proposed demonstration project will compare traffic patterns on the congestion-priced SJHTC with traffic on the unpriced alternative north-south routes: I-405/I-5 and Route 1. Hence, measurements will be needed on all three of these routes at various times during each period of the demonstration project.

Peak and off-peak traffic counts will be needed for all three routes. A simple comparison would contrast forecasted annual traffic levels on these routes (by Caltrans, the TCA Corridor Design Management Group, or other transportation agencies) with the measured levels on each route. On the SJHTC, peak-period traffic volumes should be lower than those forecast and off-peak volumes should be higher than those forecast. Peak-hour traffic volumes on I-405/I-5 and Route 1 may be somewhat higher than those forecast, if there is diversion of some traffic from the toll road because of the higher peak-hour rates. These comparisons may not be highly reliable; many factors (such as changes in local land uses) can affect traffic levels on individual facilities. Nevertheless, to the extent that all three routes serve as substitutes for one another and are affected similarly by corridor-area growth, unemployment levels, and so on, these comparisons will have some validity.

Better estimates of diversion could be obtained from two additional forms of measurement. One would be surveys of random samples of I-405/I-5 and Route 1 users for every period, on the basis of license-plate readings and mail or telephone questionnaires. A second form of measurement could be carried out using AVI technology. If AVI monitoring equipment were installed on I-405/I-5 and Route 1 lanes, that equipment would record the passage of AVI-equipped vehicles on those routes. Presumably, vehicles carrying AVI tags purchased for use on the SJHTC that were operating instead on the alternative routes during peak hours would be vehicles diverted from the SJHTC.

MEASURING RIDESHARING EFFECTS

Increased peak-hour prices will lead to some degree of mode shifting, as some fraction of users who cannot shift to off-peak times or to alternative routes decide to give up the advantages of driving alone. One goal of the demonstration project will be to measure the degree of ridesharing on the SJHTC and the alternate routes as various prices are tested on the former. This goal will be achieved by means of each-period surveys based on license-plate readings and mail or telephone questionnaires.

Southern Orange County poses a difficult challenge to ridesharing. Orange County is one of the most affluent areas in the state, and the service area of the SJHTC is the most affluent portion of Orange County. Affluence is highly correlated with automobile ownership and use, with low-density suburbs poorly suited to bus and rail transit, and with professional and managerial jobs. Surveys of commuters show that individuals with above-average incomes greatly value the door-to-door speed, flexibility, absence of waiting time, privacy, and safety of private automobiles. Conventional transit is unable to compete with the private automobile as the mode of choice for most of these commuters.

Added to this demographic factor is the decentralized pattern of land use in Orange County. The county is renowned for having no downtown, yet it is one of the state's major centers of employment. Census data from 1982 identified nine CBDs in Orange County (defined only in terms of retail centers), compared with just two in 1977. The 1990 census will probably identify many more.

Giuliano and Small (*9*) shed further light on the decentralized nature of Orange County. They identify 32 employment centers in the five-county Los Angeles region. Six of these—Orange County Airport, Santa Ana, Fullerton–Anaheim, Santa Ana South, Orange–Garden Grove, and Garden Grove–Stanton—are in Orange County. However, of the 875,900 jobs (1980 census data) in the county, only 136,000 of them (15.5 percent) are in those centers. The rest are widely dispersed throughout the county.

The low density of employment makes both mass transit and informal ridesharing unusually difficult. In addition, the more affluent the area, the greater the value people put on their convenience, as well as on their time.

A significant incentive would have to be offered to change the behavior of these affluent drivers. This experiment will enable a test of the hypothesis that unusually high prices, especially for nonwork peak-hour trips, may be sufficient to motivate increased ridesharing behavior.

EMISSION-REDUCTION EFFECTS

Air quality is another important consideration. Congestion pricing can be expected to improve air quality in two ways. The first impact comes from the reduced level of congestion on the facility, compared with (a) the level of congestion on the parallel unpriced roads, and (b) the level of congestion forecast by the Corridor Design Management Group for the SJHTC under flat-rate pricing. The California Air Resources Board (ARB) points out that congestion (stop-and-go traffic) significantly increases emissions. As an example, one ARB report (*10*) estimates that a 10-mi trip, using an average 1987 automobile, results in running exhaust hydrocarbon (HC) emissions of 2 g at a speed of 55 mph but that HC emissions would be 7 g at an average speed of 20 mph, typically of stop-and-go conditions.

The second impact on emissions comes from the reduced number of vehicles on the SJHTC. To the extent that higher prices succeed in reducing vehicle miles traveled (rather than simply displacing traffic to the competing routes), there will be fewer vehicles on the road. It is impossible to predict how much of the reduced vehicle miles traveled on the SJHTC will be displacement to other facilities and how much will be true reduction in overall demand. True demand reduction will be less than would be expected in an areawide implementation of congestion pricing, but this is one of the limitations of such a demonstration project.

Between reduced congestion and reduced demand, there would be significant emission reductions from operating the SJHTC with congestion pricing. This reduction cannot be measured directly but will have to be calculated from data on traffic diversion, congestion reduction, and ridesharing increases.

In December 1991 the Southern California Association of Governments issued a finding of conformity with the federal Clean Air Act and the Regional Mobility Plan for the SJHTC. The finding was based on a Memorandum of Understanding with the TCA that the toll-pricing policy will produce HOV equivalency for average vehicle ridership (*11*,p.4).

The current planned removal of tolls from the SJHTC in 2010 would result in significantly increased congestion and the accompanying worsening of emissions—an important additional reason for using the results of this experiment to propose a permanent congestion-pricing regime for the SJHTC for implementation in 2010.

EQUITY CONSIDERATIONS

The equity issue will be less serious for this project than for many other possible demonstration sites, given the demographics of the SJHTC service area. Nevertheless, this issue must be taken seriously in designing the experiment and in explaining it to the public.

Transportation planners should point out that the reduction of congestion levels and increased trip speed on an entire facility will benefit users of transit. It is known that, on average, lower-income individuals are the principal users of public transit in southern California.

Transportation planners and public officials must also explain to the public that congestion pricing represents a step toward a more equitable method of paying for transportation systems. Existing county transportation improvement programs are paid for by a half-cent sales tax—a regressive form of taxation. The gasoline tax, though bearing some relationship to vehicle use, is also regressive in its incidence on income groups. Congestion pricing requires individuals choosing single-occupant vehicles to pay significantly more than those choosing any other form of transportation, and those users tend to be more affluent.

It is critically important that alternatives be provided (and publicized) for individuals who are priced off the SJHTC. As previously noted, the two existing north-south routes—I-405/I-5 and Route 1—are direct substitutes for the SJHTC for many users. Carpools and existing transit will provide alternatives for other residents. But, given the poor suitability of southern Orange County to conventional fixed-route transit, transportation planners should make a concerted effort to bring about traditional transit alternatives for this corridor.

Demand-responsive door-to-door (dial-a-ride) service is available from the Orange County Transportation District only to senior citizens and the handicapped. More generalized minibus and parataxi service could provide both scheduled and demand-responsive door-to-door service, similar to the airport-only service pioneered by SuperShuttle and now offered by numerous firms. Scheduled door-to-door service would overcome the unpredictable waiting times typical of mass transit, and sometimes of carpools and vanpools. Demand-responsive service would provide for the availability of a vehicle whenever the need for an unscheduled trip arose (e.g., for commuters during the day).

A high-demand corridor traversing an affluent area offers a prime location to test door-to-door commercial transportation service, as an adjunct to the tollway. If such commercial services (other than airport shuttles) existed, they would naturally tend to use the toll road during peak hours. In such a business, time is money, and a charge of $5.85 to go the full length of the SJHTC (at $0.39/mi) would be spread over four to eight passengers, adding only a small amount to each person's fare. A reduced toll rate could be given for such vehicles, if further economic incentives were considered necessary. It might be useful to charge a reduced rate until several companies were established and had built up a market in the corridor. But, if the service ultimately proved as popular as airport shuttles, there would be no need for permanent incentives of this sort.

FTA has funded research and demonstration projects on various forms of paratransit and might be interested in aiding such services in Orange County. The TCA could take the lead in encouraging the development of an effective door-to-door paratransit industry in the San Joaquin Hills corridor. Such services would be a natural complement to congestion pricing—offering an additional alternative mode for those tolled off the facility by the higher prices.

MARKETING AND POLITICAL CONSIDERATIONS

How realistic is this proposed experiment? The basic issue of charging tolls is not in question because the SJHTC is already defined as a toll road. The controversial issues will be the environmental acceptability of congestion of pricing instead of earlier implementation of HOV lanes and the fairness of allowing some to pay higher rates for (presumably) better service.

In contrast to a conventional freeway or even a flat-rate-priced toll road, a congestion-priced SJHTC should permit traffic to flow smoothly even at peak hours, thereby producing up to 70 percent less emissions per vehicle trip (*10*) and somewhat fewer trips, as well. These potential environmental benefits, it can be argued, may be greater than those provided by a conventional toll road (or possibly even a conventional toll road plus HOV lanes). The demonstration project is needed to quantify these potential benefits. If the experiment produces evidence to validate the results of the Environmental Defense Fund's recent computer modeling of regionwide congestion pricing (*3*), there will then be a case for considering wider implementation of this pricing policy.

The experiment will also offer an opportunity to introduce a new form of commercial transit service to Orange County. Door-to-door van service, offering attributes superior to that of conventional mass transit and informal ridesharing, may be the breakthrough that finally gets middle-class commuters out of their single-occupant automobiles. But it will take an uncongested, premium-service thoroughfare to make this form of transportation competitively attractive. This, too, is an important reason to test congestion pricing on the SJHTC—and it may be a factor that gains support from environmental and protransit groups.

On the fairness issue, it can also be pointed out that Americans are accustomed to selecting among combinations of price and service in using air travel (which, since deregulation, has become a truly mass-market phenomenon). Paying more to go first class is an ordinary occurrence, whether it is restaurants, hotels, grocery stores, department stores, or airline service. The government-operated postal service now offers Express Mail, a premium-priced alternative to first-class letter mail, to meet the competition of private express services such as Federal Express. Last December the Immigration and Naturalization Service announced that it would test express pay lanes for travelers at selected border crossings with Canada and Mexico (*12*). Those who wish speedier service will be able to pay to get it.

There will certainly be opponents of congestion-pricing experiments. Environmental and protransit organizations have generally opposed the building of the SJHTC. Others have ideological objections to charging tolls, believing that the nation's highways should remain freeways. It is not intended here to make the case for building the SJHTC or for making it a tollway rather than a freeway. The existence of the SJHTC has been assumed, and reasons why this toll road, if built, would be a good place to conduct a demonstration project with congestion pricing have been suggested.

Assuming that the road will be built, and built as a toll road, there is at least a plausible case for diverse interests to support this experiment. Environmentalists should be interested in learning whether peak-hour pricing can significantly reduce vehicle miles traveled and the resulting total amount of vehicle emissions. Transit advocates should be interested in learning whether high prices on roads stimulate demand for new and old forms of transit.

Political support for this experiment may come from several parts of the political spectrum. Political conservatives interested in reducing the need for tax increases may be interested in the potential of highways becoming more self-financing. Liberals seeking a more balanced transportation system, with greater transit alternatives, may also find merit in a system that they would see as creating a more level playing field between automobile use and transit.

In short, the traditional fear that congestion pricing may be a political impossibility may well be overblown. Well-designed demonstration projects, carefully explained and justified, may find diverse support in the search for ways to deal with the serious problem of congestion.

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