

The political calculus of congestion pricing

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Abstract

The political feasibility of using prices to mitigate congestion depends on who receives the toll revenue. We argue that congestion pricing on freeways will have the greatest chance of political success if the revenue is distributed to cities, and particularly to cities through which the freeways pass. In contrast to a number of previous proposals, we argue that cities are stronger claimants for the revenue than either individual drivers or regional authorities. We draw on theory from behavioral economics and political science to explain our proposal, and illustrate it with data from several metropolitan areas. In Los Angeles, where potential congestion toll revenues are estimated to be almost \$5 billion a year, distributing toll revenues to cities with freeways could be politically effective and highly progressive.

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1. The political calculus of congestion pricing

It has been a commonplace event for transportation economists to put the conventional [congestion theory] diagram on the board, note the self-evident optimality of pricing solutions, and then sit down waiting for the world to adopt this obviously correct solution. Well, we have been waiting for seventy years now, and it's worth asking what are the facets of the problem we have been missing. Why is the world reluctant to do the obvious?

Charles Lave (1995)

Most transportation planners and economists agree that congestion pricing is the best way, and perhaps the only way, to reduce traffic congestion. Most politicians, however, see congestion pricing as a complicated new charge for something that has always been free. Congestion pricing therefore requires explanation, and as the political saying goes, “when you are explaining you are losing.” Proponents sometimes respond by arguing that once congestion pricing is implemented the public will understand its benefits, and its political problems will disappear. Implementation, however, will not solve the political

problem, because implementation *is* the political problem. The political difficulty with congestion pricing is persuading people to do it in the first place, not in convincing them of its value after the fact.

Congestion pricing has broadly distributed costs (most people end up paying tolls) and broadly distributed benefits (drivers suffer less congestion and the tolls can pay for added public services). What pricing lacks is a constituency who will derive *concentrated* benefits that exceed their costs. The high political cost of supporting road pricing falls entirely on those who spend their time, money, and political capital trying to implement tolling. Unless new tolls offer someone benefits that exceed these political costs, few people will take action.

Congestion pricing suffers, therefore, from an absence of strong advocates. “There is nothing more difficult to take in hand, or more uncertain in its success,” Machiavelli wrote in *The Prince*, “than to take the lead in the introduction of a new order of things. Because the innovator has for enemies all those who have done well under the old order of things, and lukewarm defenders in those who may do well under the new.”

Machiavelli wrote those words in 1532. Wachs (1994) made the same point, albeit in less florid prose, when he summarized the political dilemma that faced congestion pricing: “In addition to professors of transportation

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economics and policy, who hardly constitute a potent political force, I can think of few constituencies who would willingly and vigorously fight for the concept.”

2. A constituency for congestion tolls: Cities

In this article we propose a new way to create political support for congestion pricing on urban freeways: *distribute the toll revenue to cities, and particularly to the cities through which the freeways pass*. With the revenue as a prize, cities can become the champions of congestion pricing; the benefit to public officials in these cities can be worth far more than the costs of supporting the tolls.

Policy proposals often succeed not because (or not only because) they benefit the public interest, but because they benefit *particular* interests, and these interests organize to champion the policies. Yet when transportation planners recommend tolls to reduce traffic, they tend to focus on the widespread economic benefits of congestion relief, rather than on the political benefits. But as Goodwin (1997, p. 2) says, “discussion of road pricing without explicit attention to the use of revenue streams is *inherently* unlikely to be able to command a consensus in its support. I treat this as an axiom of contemporary transport policy.” Rather than spend the revenue to reduce drivers’ opposition to congestion pricing, we propose distributing the revenue to increase local political leaders’ support for congestion pricing. In economic jargon, we propose creating politically influential *residual claimants for the toll revenue*: a group entitled to the net revenue from the priced roads. Wilson (1980) posited a theory of “client politics” that provides the framework for this argument. Wilson contends that policies with concentrated benefits and widely dispersed costs are likely to succeed:

When the benefits of a prospective policy are concentrated but the costs widely distributed, *client politics* is likely the result. Some small easily organized group will benefit and thus has a powerful incentive to organize and lobby; the costs of the benefit are distributed at a low per capita rate over a large number of people, and hence they have little incentive to organize in opposition (p. 369).

If toll revenues are given to cities with freeways, elected officials from these cities stand to gain considerably, and have a strong incentive to lobby for the tolls. The drivers who pay the tolls, in contrast, will each lose only moderately and any loss will be at least partially offset by reduced congestion.

Four basic conditions for the political approval of congestion pricing help explain why cities are the appropriate claimant for the revenue. We just discussed the first condition, that the potential gains to revenue claimants must be obvious. Second, the claimants must be organized and politically powerful. Third, the claimants must have some defensible claim to the revenue. And fourth, the gain must be *concentrated*. There cannot be so many claimants

that no one gains enough to make political action worthwhile. Drivers who pay the tolls might have a defensible claim to the revenue in the form of a reduction in other road user fees, such as the gasoline tax, but they nevertheless are not suitable political claimants because they are many and dispersed which makes them unlikely to generate political power.

Freeways have regional benefits, so it might seem sensible to allocate the money to some regional authority—a public transportation or highway agency, for example. But here we can introduce another condition for receiving congestion toll revenue: the recipient must have a claim to the revenue that is both economic *and* political, with the political claim being more important. And while there are some good arguments for giving the toll revenue to regional agencies, they are not *political* arguments. A regional agency would be hard-pressed to produce a public service that the region’s residents considered a reasonable compensation for the loss of free access to the freeways. Even spending the revenue on regional transit improvements may do little to improve the prospects for pricing. In the United States a politically weak and unorganized minority rides public transit, which dims the chance of effective political support.

Individual cities, however, could conceivably arrive at a mix of public goods and services that would create support for congestion pricing. Dividing the toll revenue among cities would allow each community to choose its preferred mix of public goods and services; the gains to individuals in their roles as residents of their cities, when combined with time-savings from the tolls, could outweigh the losses to individuals in their roles as motorists. Instead of a regional agency profiting at the expense of all drivers, citizens of each community would benefit from tolls levied on motorists from outside their borders. While that distinction is more one of perception than reality (motorists from neighboring cities would just end up subsidizing each other’s public goods) the way that choices and policies are framed matters tremendously in political decision-making (Bertrand et al., 2005). Similarly, distributing the money to cities means that the toll revenue would be spent locally but collected region-wide, allowing local officials to claim credit for providing new benefits while shielding them from the resentment attached to congestion pricing’s costs.

We do not rule out other claimants to the revenue, nor do we argue that political considerations are the only ones that matter. Once cities are mobilized, logrolling and vote-trading will doubtless occur en route to pricing’s approval, and the cities may well have to share the toll revenue with transportation agencies to gain their support or at least quell their opposition. And depending on the specific context of each region, various extensions and adjustments can be made to the revenue distribution, based on equity or planning concerns. But political support for congestion pricing will depend on *who* gets the toll revenue, and no one will receive any revenue until congestion pricing is adopted.

A final note before we move on: if our proposal sounds like rent seeking, it is. City governments will lobby for a regulation (congestion pricing) because it will deliver them a revenue windfall. The term “rent-seeking” is usually employed pejoratively, and for that matter so too is “client politics”—Wilson coined the term but he did not write approvingly of the practice. The individuals or groups who seek rents generally do so to shelter themselves from the discipline of the market. Competing by regulation, rather than innovation, dissipates otherwise productive resources and stifles industrial development; the company that spends its money lobbying for a protective tariff rather than improving its products is a drag, not a boon, to the larger economy (Tullock et al., 2002). In this case, however, cities that rent-seek (or “toll-seek”) will be introducing—rather than curtailing—a market mechanism. Congestion pricing can be ushered into existence through efficient rent seeking.

In the remainder of this article we first situate our revenue-distribution proposal in political and economic theory, using the concepts of client politics and loss aversion. We then evaluate other proposed claimants for the toll revenue in light of these theories. Next we outline the reasons for giving the revenue to cities, and then illustrate how such a distribution program might work. In Los Angeles, distributing the money to cities with freeways would be both progressive and politically expedient. In the Twin Cities we suggest a distribution that reflects the region’s existing commitment to regional redistribution. The important point is that coalitions of local governments would have the power and incentive to create political momentum for congestion pricing.

3. The politics of congestion pricing

Congestion pricing will do two things: reduce congestion and raise revenue. We thus cannot predict who will receive a net benefit from congestion pricing until we know how the toll revenue is used. In a study of the congestion pricing pilot program in Stockholm et al. (2006) estimated that the toll revenue was about three times the benefits of reducing congestion. That is, motorists pay \$3 in tolls for every \$1 of benefit they receive from congestion relief. To achieve equity, the distribution of the toll revenue is thus more important than the distribution of congestion-relief benefits.

Even before any distribution of the revenue, congestion pricing will create a net benefit for two groups because of improved traffic flow:

1. Drivers whose time saved is worth more than the tolls they pay.
2. People who already use transit and will not pay tolls but will travel faster.

Again before considering the use of the revenue, congestion pricing will create a net loss for three other groups:

3. Drivers whose time saved is worth less than the tolls they pay.

4. Drivers who switch to a less convenient route to avoid the tolls.
5. People on non-tolled routes whose traffic increases when drivers from group 4 switch to their roads.

Members of groups 1 and 2 are better off regardless of whether they receive any benefits from the toll revenue, while members of groups 3–5 are better off only if they receive benefits from the toll revenue that outweigh the tolls they pay.

If we focus only on how congestion pricing affects *drivers*, and if we neglect the potentially large number of people who will benefit from the toll revenue in their role as residents of the cities receiving the revenue, the losers almost certainly outnumber the winners. But if we also consider the benefits to residents from the public services (or tax reductions) financed by the toll revenue, congestion pricing can produce many more winners than losers. Although pricing may harm most drivers, no one is *only* a driver. That is, many people in groups 3–5 may gain more in their role as residents who receive the added public services than they lose in their role as drivers. The political results of congestion pricing thus depend crucially on how the toll revenue is spent.

For example, consider the possible outcomes for the members of group 3. Suppose they each pay \$100 a month in tolls but save time that is worth only \$60 a month. The tolls impose a net cost of \$40 a month on these people in their role as *drivers*. Now suppose the toll revenue pays for added public services these drivers think are worth \$50 a month in their role as *residents*. The outcome of the congestion tolls *and the added services financed by the toll revenues* is a net benefit worth \$10 a month for all members of group 3, even though the tolls make them worse off in their role as drivers. When we consider the value of added public services financed by the tolls, congestion pricing can similarly make the members of groups 4 and 5 better off. And the members of groups 1 and 2 are also better off even without the added public services. In Stockholm, for example, Eliasson and Mattson (2006, p. 618) estimate that congestion pricing would create a net cost per resident of 482 Swedish kroner a year before considering the use of the revenue, but a net benefit of 222 kroner a year after considering the use of the toll revenue of 704 kroner a year.

Consider the prospects for congestion pricing in Los Angeles County, which has the worst traffic congestion in the United States (Texas Transportation Institute, 2005). Giuliano (1992) argues that in auto-dependent regions such as Los Angeles, congestion pricing will initially make many drivers worse off. The demand for driving in Los Angeles (as most other urban areas in the US) is highly inelastic, so most people confronted with congestion pricing will end up paying the tolls or driving a less convenient route instead of switching to another travel mode or time. Los Angeles, in other words, has a disproportionate number of people in Groups 3–5. If we neglect the benefits of the added public services financed by the toll revenue, congestion pricing

makes these people worse off. A study of congestion pricing's likely impacts in the Twin Cities made a similar point: for all but two small groups—transit users and affluent drivers—the tolls would exceed the time savings (Anderson and Mohring, 1997). Survey evidence from Calfee and Winston (1998) also suggests that most drivers in the United States do not value time savings enough to receive a net benefit from the tolls they would pay.

Will congestion pricing will be politically successful only if it creates more winners than losers? The winners did outnumber the losers in London, Singapore, and Stockholm, which have three of the most prominent congestion-pricing programs. When Singapore introduced congestion pricing in 1975, it had only one car per 16 people, so only a small minority paid the tolls (Cervero, 1998, p. 171). When London introduced congestion pricing in 2003, only 12% of all commuting into the cordoned area was by private car (Transport for London, 2003). Before Stockholm began its trial of congestion pricing in 2006, only 33% of the household travel into the toll zone was by car, and 59% was by public transit (Armelius and Hultkrantz, 2006, p. 167). Because all three cities used the toll revenue to improve public transport, the toll burden fell on the motoring minority while the benefits accrued to the transit-riding majority.

Because motorists are a small minority in many developing countries where automobile traffic obstructs public transport used by a large majority, it might seem surprising that congestion pricing has not been widely adopted. A non-motoring majority should help to adopt congestion tolls, but it is clearly not sufficient. And because motorists are a large majority in the United States, it might seem even more surprising if congestion pricing were ever adopted. To explain both the absence of congestion pricing in congested cities with a minority of motorists and the prospects of congestion pricing in cities with a majority of motorists, we will discuss two important political barriers to congestion pricing: *loss aversion* and the *free rider problem*. We will then propose ways to overcome these barriers.

3.1. Loss aversion

One explanation for the unpopularity of congestion pricing is that its practical advantages are also political liabilities: tolling is both local and transparent. On a priced road, as drivers pay the tolls they alter their behavior because they face new costs. As the manager of Singapore's system told a journalist, road pricing works because drivers "feel the pain" (Baum, 2001). The transparency of congestion pricing makes it prone to *loss aversion*. Loss aversion is the reluctance to part with a benefit one already has, and the tendency to view a new benefit—even one of equal or greater value—as less desirable than one given up. If avoiding loss is more important than acquiring gain, the phenomenon of loss aversion leads individuals to pay more to keep something they have than they would pay to buy it

in the first place, and to fight more to protect an existing benefit than to gain a new one of commensurate value. "The disutility associated with losing a benefit," as Kahneman et al. (1991, p. 194) explained, "is greater than the utility associated with acquiring it." Or, to quote Adam Smith, "Pain is ... in almost all cases, a more pungent sensation than the opposite and corresponding pleasure."

In the context of congestion pricing, loss aversion suggests that efforts to placate drivers by returning the toll revenue to them will not work. The loss of free access to the roads will weigh more heavily than any benefits of the toll revenue. Even if all the revenue were returned to drivers in the form of lower vehicle registration fees or lower gas taxes, most drivers would probably still view congestion pricing as a loss. What economists consider an acceptable trade is instead rejected as intolerable and unfair.

A toll is a visible and repetitive new cost, while a rebate on a registration fee is an infrequent and hidden benefit—it happens once a year and is buried in the minutiae of a large bill that most people rarely examine. The same could be said about a reduction in the gas tax. Compared to the daily task of paying for road access, a slight decrease in the gas tax would seem like no compensation at all, even if market fluctuations in the price of gas did not swamp any price reduction that results from the tax cut. Loss aversion helps explain why a majority of people are unlikely to support congestion pricing at the outset. But the loss aversion literature also suggests that initial resistance is likely to be much stronger than subsequent opposition. Individuals will pay much more in time or energy to keep a benefit than they will to regain that benefit once it is lost (Kahneman et al., 1991; Haneman, 1991). The primary political challenge for congestion pricing is thus not to maximize the number of winners, but rather to overcome initial antagonism to the idea. Once pricing becomes the status quo, its political problems will steadily diminish because it will benefit from the same political inertia that now works against it.

3.2. The free rider problem

In their research on the politics of congestion tolls, Deakin and Harvey (1996, pp. 5–15) note, "the beneficiaries of pricing often will be harder to mobilize politically than the losers; for example, those who would share the benefits of toll revenues may be a large group but individual benefits may be fairly small." Loss aversion often prevents drivers from understanding that they could gain (or at least not lose) from congestion pricing. But even when the gains are understood, they are often not large enough to convince individuals to mobilize and lobby for tolls. A free rider problem emerges: even if most drivers think they would be better off with congestion tolls, no one will be so much better off that they will take the lead to implement the program.

In *The Logic of Collective Action*, Olson (1963) explained the paradox that widespread individual interest does not necessarily lead to group action. “It does *not* follow,” Olson wrote, “[that] because all the individuals in a group would gain if they achieved their group objective, that they would act to achieve that objective, even if they were all rational and self-interested” (1963, p. 2). Olson further argued that as a group gets larger, the chances of its engaging in collective action decline, because the average rewards to individual members decline as well. Frozen by free riding, group members pursue their individual interests at the expense of their collective interests.

The inertia of large groups opens the door for what Olson calls “the exploitation of the great by the small” (1963, p. 3). Small groups are less prone to free riding, are easier to organize, and have a greater incentive to engage in political action because it yields larger rewards to the group’s individual members. Thus policies can be adopted when a small but well-organized group of supporters outmaneuvers a large but poorly organized group of opponents.

3.3. Client politics

James Q. Wilson’s theory of client politics extends Olson’s work. The insight of client politics is that small groups can mobilize and triumph politically only when they have a strong incentive to win. Success is determined not by the absolute number of winners and losers, but by the relative ease of collective action, and the extent to which the winners win. Such is the well-documented calculus of light-rail politics. Many rail projects are politically viable in part because their benefits are concentrated among contractors, unions, and local politicians, while a large share of their cost is spread widely over all federal taxpayers (Castelazo and Garret, 2004; Richmond, 2004; Altshuler and Luberoff, 2003). The local beneficiaries from a federally subsidized rail project have an incentive to fight for it, while those who pay have little incentive to fight against it, and indeed may not even know they are paying.

Congestion pricing will never enjoy all of urban rail’s political advantages, of course, because the costs of pricing are transparent while the costs of rail can be hidden. Drivers on priced roads, unlike the taxpayers who pay for rail transit, will always know how much they are paying. But drivers, like the taxpayers who pay for rail, can be difficult to organize. The same free rider problem that inhibits drivers from supporting congestion pricing can also forestall their rallying against it. The key to political success for congestion pricing does not lie in turning dispersed costs into dispersed benefits, or in other efforts to engineer widespread support. Congestion pricing will be politically viable when it has well-organized winners who see massive gains, and these massive gains are to be found in the toll revenue.

3.4. Previous revenue proposals

Goodwin (1989) and Small (1992) have both offered proposals to spend congestion toll revenue in ways designed to maximize political support. Although similar in some respects, their proposals do not share the same logic. Where Goodwin’s approach is intended to create constituencies who would benefit from pricing, Small’s is intended to prevent opposition from those who would lose.

Goodwin argues that congestion pricing does not suffer from a lack of proponents, but that it does suffer from a perception that the proponents are mutually exclusive of one another. Proponents want the tolls implemented *their* way, which is another way of saying that they will support pricing only if they get the revenue. It follows that pricing loses support as it moves closer to reality, because as potential candidates for the revenue are eliminated the number of interest groups willing to support it declines.

Goodwin’s solution to this dilemma is his “Rule of Three,” which calls for distributing toll revenues in a manner that retains the broadest possible group of supporters. He proposed that a third of the toll revenue be put toward road improvements, a third toward public transport, and a third toward the general fund of the city or state. The Rule of Three is thus intended both to create political beneficiaries and to compensate the travelers who pay the tolls.

Small objected to Goodwin’s proposal on the grounds that it devotes too much money to roads and public transportation. Small proposed his own three-way distribution of the revenue: one-third to “travelers as a group”; another third to reduce general taxes that fund transportation; and the last third put toward new transport services, be they public or private. Specific steps to meet these goals might include lower vehicle license fees and gasoline taxes; reducing the sales and property taxes dedicated to transportation; and the provision of commuting allowances.

Small’s plan is at odds with what we know about loss aversion; a variation of his proposed distribution was attempted in 1984, and failed. In 1984 the government of Hong Kong tried to sell a congestion-pricing program by assuring the Hong Kong Automobile Association (HKAA) that tolling would be accompanied by a commensurate reduction in vehicle license fees. But the promise of revenue neutrality convinced neither the HKAA nor the public at large. The HKAA, which is a reasonable proxy for “drivers as a group,” rejected the plan, and Hong Kong did not adopt congestion pricing (Borins, 1988).

Other proposals to allocate toll revenue directly to drivers address the problem of loss aversion, but fail to address the free rider problem. To spread the benefits over the largest group of people, Kockelman and Kalmanje (2005) suggest that toll revenue be allocated as credits to all licensed drivers, and that the credits be used on priced roads. Drivers would pay out-of-pocket for tolls only if they exceeded their credit allowance, and drivers with

unused credits could exchange them for cash. (The transaction costs of collecting and distributing the tolls, however, mean that drivers would get back less than they pay.) Anderson and Mohring (1996) also discussed this sort of distribution as part of a congestion-pricing proposal for the Twin Cities region. But even if a giveback program to all drivers were financially viable, and some of Anderson and Mohring's finding suggest it would not be, spreading the toll revenue around would do little to mobilize drivers to fight for pricing's initial implementation. A credit system or other giveback program combines pricing's dispersed costs with dispersed benefits, and dispersed benefits will not create strong advocates for pricing. Strong advocates for pricing will only be forged from the prospect of concentrated gains.

Goodwin's proposed constituencies do have a reasonable claim to the toll revenue. Public transport seems, at first glance, to be a reasonable claimant for toll revenue, particularly since the pricing programs in London and Singapore both pour the bulk of their revenue into regional transit systems. In the United States, however, where fewer than 3.5% of all trips are made by transit, public transport simply does not have enough riders to make it a politically viable claimant for toll revenue.

We are not suggesting that transit agencies have no stake in debates about congestion pricing. Congestion pricing will be a boon for public transport even if none of the money goes to transit agencies. Priced roads will cause some drivers to switch to transit, and transit, particularly in the US, needs new riders more than it needs new subsidies. Less congested roads will also help buses move faster, improving the quality of transit service and reducing its high time costs. Small (2005) has laid out a scenario where congestion pricing creates a virtuous circle for public transport even if no toll revenue is put toward service upgrades or improvements. He points out that peak-hour automobile tolls will increase transit ridership, and reduced congestion will speed up public transport that shares the roads with cars. The faster public transport will further increase ridership, and the higher speeds will reduce the cost per ride. Higher ridership and lower costs will enable transit providers to increase service frequency, and the lower costs will allow lower fares, both of which will further increase ridership. As more riders are diverted from cars, congestion is reduced and the virtuous circle continues. Small estimates that congestion pricing in a typical US city could increase bus ridership by 30% and increase bus speeds by 9%; it could also reduce bus fares by 26%. But these benefits will accrue to public transport *only* if congestion pricing is approved, and congestion pricing will *not* be approved if the toll revenue is allocated to public transport. With congestion pricing, public transport will gain not through greater subsidies but through greater ridership and efficiency.

Road improvements, like transit, also appear at first glance to be a good candidate for toll revenue. As with transit, however, congestion pricing can improve road

travel even if none of the toll revenue is invested in road improvements. First, taking a few cars off the road can significantly reduce congestion. By increasing speed and flow, tolling during congested periods can thus have the same effect as adding lanes to freeways (Garrison and Ward, 2000). Second, tolls can reveal where road improvements are most justified, thereby making an often profligate investment process more efficient. At specific bottlenecks, the tolls might be extraordinarily high, and these high tolls will provide an excellent guide for highway investment decisions.

In the United States, where roads are financed primarily through gasoline taxes, congestion pricing can make gas tax expenditures more cost-effective by showing where expansions in road capacity are most productive. It may be politically wise to set part of the toll revenue aside for road expansion, however, simply to alleviate suspicion that cities will leave bottlenecks in place to extract maximum revenues from them. But there is little political advantage in dedicating a large stream of toll revenue to road improvements. Doing so is unlikely to reduce drivers' opposition, and even if it does, reducing drivers' opposition to pricing is not the same as convincing them to champion it.

4. Cities as claimants

The last of Goodwin's three claimants for congestion toll revenue is the city or state general fund. Giving the money to the state fails for the same reason that giving the money to a regional authority would fail: it is unlikely that any state program will be valued as highly as unpriced roads, at least *ex ante*. Cities, however, have the advantage of being well-defined entities with established influence and power. They already have lobbyists and officials whose explicit purpose is to promote their interests, and who can be effective advocates at the state and national level. Los Angeles, for example, is one of the largest lobbyists in California, and intergovernmental lobbying is one of the state's largest categories of lobbying activity. Cities, counties, and municipal leagues all lobby actively at higher levels of government, and studies of local officials, such as city managers, show that they function effectively as *de facto* lobbyists via their job-related contact with officials in other levels of governments (Cammisa, 1995; Agranoff and McGuire, 1998; Marlowe, 2003). In contrast to millions of dispersed drivers, cities are already organized and their comparatively small numbers will give them high individual payoffs from the toll revenue—a powerful incentive to collective action. Because local governments are limited in their ability to raise new revenue, they will have a strong interest in making road pricing a reality.

City leaders can influence officials at higher levels of government and also bring along the constituents they represent. Local leaders are attuned to the public goods and services their constituents want, and they can allocate their share of the toll revenue to provide those goods and

services. At the local level there is a greater chance that these goods and services will be viewed as a reasonable compensation for loss of free access to the freeways. The rich and poor communities of a region would likely never agree on the proper way to spend congestion revenue. But if a rich community could dedicate its funds to more street cleaning or burying power lines, while the poor community could pay for new parks or after-school programs—and each community felt (correctly) that its programs were being funded largely by other cities' drivers—then some of the political opposition to congestion pricing could evaporate.

It follows that the toll revenue should have minimal earmarks on how to spend the money (on the grounds that each jurisdiction will know best how to spend its own money) but strict auditing requirements (to ensure that the revenue is not misappropriated). It also follows that the uses of toll revenue will vary widely, both within and across regions. Such open-endedness is essential to generating local political support. Spending the toll revenue for a regional purpose like public transit, by contrast, would most likely founder on the heterogeneous preferences of the region's residents.

This brings us to a final implication of our proposal: it can overcome the political cooperation problems in fragmented metropolitan areas. Fragmented metropolitan government creates fiscal disparities and makes regional policies difficult. Because small local governments tend to be internally homogeneous, they can reach consensus more easily about how to spend potential toll revenue. Further, a major problem with fragmented regions is that cities do not have the same resources to finance public services (Orfield, 1997). Our proposal distributes additional revenue among cities in a way that does not threaten existing resources under local control, such as property taxes.

The cities-as-toll-recipients proposal parts company with most transportation research, where fragmentation is often decried as an obstacle to sound regional policy. The evidence seems mixed, but fragmentation, whatever its merits, seems here to stay, and transportation planners might be better served by turning it to their advantage rather than hoping it will disappear. Gómez-Ibáñez (1992) argued that fragmentation could be an obstacle to congestion pricing. Yet he assumed that congestion toll revenue from a fragmented region would be given to the central city, or to a metropolitan transit agency whose riders are disproportionately central city residents. In such instances the tolls could be interpreted as a tax on suburban commuting and a subsidy to a city government that plays little role in most commuters' lives. Gómez-Ibáñez's point is sound, but the lesson to be drawn is not that fragmentation hurts pricing's political prospects. The lesson is that we cannot distribute toll revenue in fragmented regions in the same way we would in areas with few jurisdictions. The suburbs must not only receive money but also be allowed to spend it on services important to their residents. Many suburbanites have little

connection to the center cities in their regions, and we cannot pretend that they will share the preferences of central city residents, nor happily donate their toll payments to a jurisdiction that little concerns them. Instead we should allow the multiple governments in the region to spend the revenue in multiple ways.

5. A precedent: San Diego County

We have argued that congestion pricing is unlikely to be politically successful unless powerful claimants benefit from the toll revenue. Even in London, where congestion revenue is spent almost entirely on public transportation, the driving force behind congestion pricing was not Transport for London, the city's transit agency, but Ken Livingstone, the city's larger-than-life Mayor.

An example similar to London can be found in Southern California, in the case of the I-15 FasTrak corridor in San Diego County. The FasTrak program converted an existing but underused high occupancy vehicle (HOV) lane into a high occupancy/toll (HOT) lane. Unlike an HOV lane, which excludes all vehicles that do not have more than one occupant, San Diego's HOT lane allows carpools to travel for free, and allows single-occupant vehicles to travel if they pay a toll. The toll varies with the level of congestion and is adjusted every six minutes.

Converting an HOV lane into a HOT lane is not as politically difficult as introducing full-fledged congestion pricing. Loss aversion is not an obstacle; indeed, by being allowed to buy their way into lanes from which they had previously been excluded, solo drivers gain rather than lose options. Yet the free-rider problem still looms large: tolling a lane that runs through multiple jurisdictions requires strong incentives to organize and cooperate, because many people oppose tolls—even tolls on an HOV lane. It is worth examining the political support for creating the HOT lane, particularly if, as Fielding and Klein (1997) argue, HOT lanes can function as stalking horses for fully priced freeways—that we can toll one lane, and then another, until the gradual expansion of HOT lanes gives us “congestion pricing, one lane at a time.”

Evans et al. (2007) explain that the desire for light rail was, ironically, the political impetus for the I-15 HOT lane. The lane's major proponent was Jan Goldsmith, who in 1991 was mayor of the small city of Poway. In 1991 the San Diego Association of Governments (SANDAG), which is San Diego's regional planning agency, allocated money for light rail service to south San Diego County, but not for the northern cities in the county, citing a lack of funds. Goldsmith wanted transit funds for his city (“we had no money for transit and I was making a big deal of it,” he said later) but after meeting with SANDAG representatives he became convinced the agency really did not have additional transit funding. What the agency did have, however, was access to federal funds to test a HOT lane. Goldsmith and the SANDAG planners decided to propose converting the I-15's HOV lanes into HOT

lanes—essentially sell off excess HOV space—and then dedicate the revenue to public transportation.

Goldsmith's desire for light rail turned him into a champion of congestion pricing. He campaigned aggressively for the HOT lane, and while he devoted considerable effort to selling the idea to the public (through op-eds and public talks) it is telling that most of his politicking was directed at his fellow elected officials:

I went to all of my colleagues in San Diego County, the mayors of all the cities affected, the County supervisors, and all of the legislators. I had one-on-one meetings and I would bring some traffic planners along to talk about this project. This was in advance of introducing the legislation. By the time we introduced the legislation, we had support from every elected official in San Diego County whose district was affected.

At the end of 1992 Goldsmith was elected to the State Assembly, where he wrote a bill to permit the HOT lane conversion and began shepherding it through the legislature. The bill had a number of powerful opponents, including Bill Lockyer, who was State Senate President ProTem; Richard Katz, the Chairman of the Assembly Transportation Committee; and the Automobile Club of Southern California. Lockyer had previously killed an effort put congestion tolls on the Bay Bridge in San Francisco. The Auto Club, with the help of Katz, attached a "poison pill" amendment to Goldsmith's bill, authorizing congestion tolls on *all* of the I-15, not just its HOV lane. Goldsmith was able to beat back both Lockyer and the Auto Club because he had already assembled the support of local politicians. The mayors and legislators in northern San Diego knew he had no intention of tolling all the lanes on the I-15. And Goldsmith neutralized Lockyer by arguing that the HOT lane was matter of local prerogative, not ideology. If all the elected officials in his district wanted to toll solo drivers in a carpool lane and put the money toward public services, why should the state government stand in their way?

Faced with this argument, Lockyer agreed not to oppose the bill. The legislature authorized the HOT lane, and the I-15 toll revenue now funds an express bus service, the Inland Breeze, that runs along the I-15 into downtown San Diego. Ridership on the Inland Breeze is low, and most of its riders had been using transit previously, meaning the bus had little direct impact on congestion. Indirectly, however, the bus probably contributed significantly to reducing congestion, because it provided the motivating force that led elected officials to fight for the variably priced toll lane. Indeed, the bus's greatest contribution to fighting traffic may have been its role in creating the HOT lane. Congestion pricing was, for Goldsmith, a means to an end, with the end being transit. But the transit was also a means to an end, with the end being congestion pricing. The HOT lane made the bus possible just as the bus made congestion pricing possible. What was important, again,

was not only *how* the revenue was spent, but *who* wanted the revenue.

6. Los Angeles County

We can use Los Angeles County to illustrate how our proposal might work for congestion pricing on all freeways, not just HOT lanes. According to the Texas Transportation Institute's *2005 Urban Mobility Study*, Los Angeles has the worst traffic congestion in the United States, and it has five of the ten most congested freeway interchanges in the US. Seventy percent of the county's commuters drive alone to work, according to the 2000 Census, and only 7% use transit. The county is also highly fragmented: it has 88 city governments of varying size and fiscal capacity.

One way to implement our proposal is to charge congestion tolls on the LA freeways and distribute the resulting revenue to the cities with freeways on a per capita basis. Doing this would create a strong claimant coalition of 66 local governments plus the county. The geography of LAs freeways, however, along with the county's population distribution and the fiscal disparities that exist between its local governments, allows us to adjust our proposal. In Los Angeles we can use toll revenue to advance some equity and environmental goals, without sacrificing political support.

Los Angeles County's 882-mile freeway system passes through 66 of its 88 cities, and also through unincorporated territory (like a city, the County would receive toll revenue based on the population of the unincorporated area). The freeway cities and the unincorporated area include 97% of the county's population. It is unlikely, of course, that any toll revenue-distribution formula would be so simple. Both federal and state laws would have to be changed to allow pricing, and like much revenue-generating legislation, a road-pricing bill would doubtless emerge with its share of earmarks and a complicated allocation mechanism. For the sake of illustration, however, imagine a simple system where the entire freeway network is priced and all the revenue goes to the cities with freeways.

Estimates of congestion costs in Los Angeles County vary, but the toll revenue would be substantial by any measure. Using a transportation model calibrated for Southern California, Deakin and Harvey (1996, Tables 7-14 and 7-18) estimated the annual revenue that would result from congestion tolls in the Los Angeles region: \$3.2 billion in 1991, rising to \$7.3 billion in 2010. Small (1992, 371) estimated that congestion tolls in Los Angeles would have produced \$3 billion, net of collection costs, in 1991. The Texas Transportation Institute (2005) estimated that the total costs of traffic congestion in Los Angeles were \$8.4 billion in 1991 and \$12.8 billion in 2001.

One striking result of the toll revenue distribution in Los Angeles is how progressive it would be. According to the 2000 Census, the average per capita income in LA County was \$20,100 a year in the 66 cities with freeways, and

Table 1
Per capita incomes of cities in Los Angeles county (\$ per person per year)

66 Cities with Freeways				22 Cities without Freeways			
City	Income/Capita	City	Income/Capita	City	Income/Capita	City	Income/Capita
Agoura Hills	\$39,700	El Segundo	\$34,000	Norwalk	\$14,000	Avalon	\$21,000
Alhambra	\$17,500	Gardena	\$17,300	Palmdale	\$16,400	Beverly Hills	\$65,500
Arcadia	\$28,400	Glendale	\$22,200	Paramount	\$11,500	Bradbury	\$57,700
Artesia	\$15,800	Glendora	\$26,000	Pasadena	\$28,200	Cudahy	\$8700
Azusa	\$13,400	Hawaiian Gardens	\$10,700	Pico Rivera	\$13,000	Hermosa Beach	\$54,200
Baldwin Park	\$11,600	Hawthorne	\$15,000	Pomona	\$13,300	Hidden Hills	\$94,100
Bell	\$9900	Industry	\$9900	Redondo Beach	\$38,300	Huntington Park	\$9300
Bell Gardens	\$8400	Inglewood	\$14,800	Rosemead	\$12,100	La Habra Heights	\$47,300
Bellflower	\$16,000	Irwindale	\$13,100	San Dimas	\$28,300	La Puente	\$11,300
Burbank	\$25,700	La Canada Flintridge	\$52,800	San Fernando	\$11,500	Lomita	\$22,100
Calabasas	\$48,200	La Mirada	\$22,400	San Gabriel	\$16,800	Malibu	\$74,300
Carson	\$17,100	La Verne	\$26,700	Santa Clarita	\$26,800	Manhattan Beach	\$61,100
Cerritos	\$25,200	Lakewood	\$22,100	Santa Fe Springs	\$14,500	Palos Verde Estates	\$69,000
Claremont	\$28,800	Lancaster	\$16,900	Santa Monica	\$42,900	Rancho Palos Verdes	\$46,300
Commerce	\$11,100	Lawndale	\$13,700	Signal Hill	\$24,400	Rolling Hills	\$111,000
Compton	\$10,400	Long Beach	\$19,100	South El Monte	\$10,100	Rolling Hills Estates	\$51,800
Covina	\$20,200	Los Angeles	\$20,700	South Gate	\$10,600	San Marino	\$59,200
Culver City	\$29,000	Lynwood	\$9500	South Pasadena	\$32,600	Sierra Madre	\$41,100
Diamond Bar	\$25,500	Maywood	\$8900	Torrance	\$28,100	Temple City	\$20,300
Downey	\$18,200	Monrovia	\$21,700	Vernon	\$17,800	Walnut	\$25,200
Duarte	\$19,600	Montebello	\$15,100	West Covina	\$19,300	West Hollywood	\$38,300
El Monte	\$10,300	Monterey Park	\$17,700	Westlake Village	\$49,600	Whittier	\$21,400
				Average	\$20,100	Average	\$35,100

Source: US Census 2000.

The two groups' average incomes are weighted by the cities' populations.

\$35,100 a year in the 22 cities without them (see Table 1). Congestion tolls will thus shift money from richer cities without freeways (like Beverly Hills) to poorer cities with freeways (like Compton). Deakin and Harvey (1996, Tables 8-1 and 8-3) estimated that higher-income motorists will pay most of the tolls, in part because the highest-income quintile own 3.1 times more cars than the lowest-income quintile and drive 3.6 times more vehicle miles per day. Because higher-income motorists also drive more during the peak hours, the highest-income quintile will actually pay about five times more in tolls than the lowest-income quintile (Deakin and Harvey, 1996, Table 8-6). High-income drivers will pay to provide public services for low-income people.

If we stretch our definition of freeway cities a bit, the revenue distribution is even more progressive. Los Angeles County has four poor, small cities that do not have freeways within their borders (Cudahy, Huntington Park, La Puente, and Temple City) but which are bounded closely by freeways on at least one side. It is reasonable to argue that these cities bear harmful freeway externalities. If we include these four cities among our toll recipients, the per capita income would be \$20,000 a year in the 70 toll recipient cities, and \$47,000 a year in the remaining 18 cities.¹

¹Removing the four poorest cities from the "without freeways" group sharply increases the per-capita income of the 18 remaining cities because

Because 9.2 million people live in the 70 toll-recipient cities and the unincorporated area, each \$1 billion in congestion tolls will produce about \$110 per capita in municipal revenue. If the congestion tolls yield \$5 billion a year net of collection costs (the 1991 estimate adjusted for inflation to 2005), they will generate about \$550 per capita for the recipient cities. The 70 toll-recipient cities' general revenues averaged \$577 per capita in 2001, so the tolls will almost double these cities' general revenues, and the poorest cities will gain the most in proportion to their revenues.²

The 20% of the population who live in the 33 poorest cities receive 12% of the county's income but get 21% of the toll revenue. In contrast, the 20% of the population who live in the 43 richest cities receive 30% of the county's income but get only 17% of the toll revenue. The 1% of the population who live in the eight richest cities receives 4% of the county's income and no toll revenue.

Given this distribution, it is reasonable to ask whether high-income motorists, who probably represent the most

(footnote continued)

the four poorest cities have large populations while most of the richer cities have small populations.

²The cities' general revenues are taken from the California State Controller's Office, *Cities Annual Report, Fiscal Year 2000–2001*. General revenues are defined as revenues that cannot be associated with any particular expenditure; examples include property taxes, sales taxes, and business license fees.

politically influential segment of the county, would thwart any attempt to price the roads. Of course this is possible, but high-income motorists also have a high value of time. While they may disproportionately pay the tolls, they will also disproportionately benefit from reduced congestion; indeed, the research cited above suggests that high-income motorists are one of the few groups who will benefit immediately after tolling begins. Like all motorists, many affluent drivers will doubtless oppose tolls before they are put in place, but this opposition again points to the need for powerful claimants in the early stages of a political campaign. Once the tolls are operational, it seems unlikely that wealthy drivers will want or be able to derail them.

7. Minneapolis-St. Paul

We can also use Minneapolis-St. Paul to illustrate how distributing toll revenue to cities would affect the political calculus of congestion pricing. The Twin Cities region, which has 13 governments per 100,000 people, is one of the most fragmented metropolitan areas in the United States. Anderson and Mohring (1996) estimated that congestion tolls could generate about \$250 million a year in the Twin Cities, or about \$90 per capita per year for the 2.7 million residents.³ Congestion tolls would yield much less revenue in the Twin Cities than in Los Angeles because of the smaller population and lower levels of congestion. And in contrast to Los Angeles, distributing the toll revenue to cities with freeways would not significantly reduce fiscal disparities in the Twin Cities. The average annual income is \$26,500 per capita in the 70 cities with freeways and \$27,700 in the 112 cities without freeways. The fiscal effects in Los Angeles, where every poor city could receive toll revenue and none of the richest cities would receive anything, would not be repeated in the Twin Cities. Nor would distributing the revenue to cities with freeways create a majority coalition of local governments in support of pricing: many more cities lack freeways than have them.

The Twin Cities region does have, however, an existing system of sharing tax revenue to reduce fiscal disparities, and congestion revenue could be used to augment or replace this existing redistribution mechanism. Under the region's Metropolitan Fiscal Disparities Act, 40% of each city's growth in assessed value of commercial and industrial property since 1975 is placed in a seven-county regional pool (Orfield, 1997). The assessed value of the regional tax-base pool is taxed at a uniform rate of 1%, and the revenue is distributed to cities according to their population and fiscal capacity. In 2004, the Fiscal Disparities Act transferred \$74 million from 51 "contributor" cities to 131 "recipient" cities. The average per capita income was \$32,300 per capita in the contributor

cities and \$23,900 in the recipient cities. The contributor cities paid an average of \$79 per capita into the pool but the recipient cities received an average of only \$41 per capita because the total population of the recipient cities (1.8 million) was almost twice that of the contributor cities (934,000).

The Fiscal Disparities Act has succeeded in reducing regional fiscal disparities (Hinze and Baker, 2005) but does so by transferring property tax revenue from cities with greater commercial and industrial property growth to cities with less. Congestion tolls, by contrast, can reduce fiscal disparities by leveling up, not down. Rather than taking from one government and giving to another, tolls take money from drivers (to reduce congestion) and give it to tax-poor cities. No city is forced to surrender its existing revenue stream.

Suppose the congestion toll revenue of \$250 million a year were used to replace the \$74 million a year now redistributed through the Fiscal Disparities Act. The 51 contributor cities would no longer pay \$79 per capita into the tax-base pool, yet the 131 recipient cities would receive \$136 per capita in congestion tolls, or \$95 per capita more than they now receive from the pool. Using congestion tolls to replace tax base sharing would therefore help all cities in the region, but would help the poorer cities more than the richer ones.

What the Twin Cities example shares with the Los Angeles and I-15 examples is the logic of using municipal government as claimants. This logic is the foundation that provides the political support for congestion pricing. The actual congestion-pricing program can be built atop this foundation, incorporating equity or environmental goals that are suitable to the region in question, so long as whatever additions are made do not undermine the political foundation or cause it to collapse. It is unlikely that any two congestion-pricing programs will look alike; what they will share is the initial prospect of enough revenue, for enough cities, to generate support for variably priced roads.

8. New York and San Francisco

We can use two other cities as examples to illustrate our proposal. First consider New York City, where transportation economists have long advocated congestion tolls for the bridges and tunnels between the city's five boroughs. Elected officials in the outlying boroughs such as Brooklyn and Queens strongly oppose peak-hour tolls because most of these tolls would be paid by their constituents who drive into Manhattan. "We look on it as a tax on the other boroughs [outside Manhattan]" said Councilman David Weprin from Queens. The president of the Queens Chamber of Commerce echoed the sentiment: "Residents and businesses of Queens, Brooklyn, Staten Island and the Bronx ... would suffer the most from the plan."⁴

⁴*New York Daily News*, "Biz panel rips congestion pricing plan," March 2, 2006.

³Anderson and Mohring (1996) estimated that Twin Cities drivers would pay \$940,000 a day in peak-hour tolls (1996, Table 11). We have adjusted this for inflation up to \$1,000,000 a day for our hypothetical example.

Suppose, however, the congestion toll revenues are returned to each borough in proportion to the share of the toll revenues paid by its residents. If 35% of the New York City residents who pay the congestion tolls live in Queens, for example, 35% of the toll revenues will return to Queens for added public spending in Queens. The E-Z Pass electronic toll system or a sample of license plates can determine the borough residence of the toll payers. Because drivers who live outside New York City will also pay congestion tolls that will be divided among the five boroughs, each borough will receive more toll revenue than its residents pay. New Jersey residents who drive into Manhattan, for example, will pay congestion tolls that all the boroughs will share.

Each borough can decide how to spend its own toll revenue. Brooklyn might spend some of its money to clean its subway stations, while Staten Island might want to repair its sidewalks. If each borough can spend its toll revenue on the added public services it values the most, returning toll revenues to the five boroughs will create the greatest political support for congestion pricing.

Another example is congestion pricing on the bridges of the San Francisco Bay Area. The Golden Gate and Bay Bridges are both tolled, but not at a rate that varies with congestion. A logical first step toward congestion pricing in the Bay Area would be to convert the existing bridge tolls into congestion tolls. The suburban communities who supply most of the bridge commuters would doubtless object because the bridge tolls would become, as [Gómez-Ibáñez \(1992\)](#) warned, a penalty on suburban commuting. If, however, each city in the region received all the added toll revenue paid by its own residents, the cities' elected officials might support congestion pricing. Again, FasTrak electronic toll data or a sample of the license plates of the cars paying the tolls would generate an accurate picture of the toll payments from drivers in each Bay Area city. And as in New York, because some portion of the daily traffic also originates from outside the Bay Area, the toll revenues would exceed what the Bay Area residents pay. Because the bridges are already tolled, the collection costs for the new congestion tolls would be minimal, and the system could be implemented quickly.

9. England

The most ambitious proposals for congestion pricing are being debated in the United Kingdom. [Glaister and Graham \(2006\)](#) estimate that a nationwide system of congestion tolls in England would have yielded about £11.5 billion in 2000, or about £23 per capita. They also point out a problem with reducing other charges on road users to make the congestion tolls revenue-neutral:

A policy of revenue neutrality at the national level creates difficulties. Whilst it may be neutral for road users as a whole, it will not be neutral from the perspective of most individuals. Those in busy, con-

gested circumstances (mainly urban) would be likely to pay more and those in rural areas, or who use out of peak times, would pay less. Broadly, substantial amounts of money would be shifted away from the conurbations and into the rural areas... . Whatever policy is adopted on revenue neutrality at the national level, it seems likely that road user charging will create pressure for an adjustment to the flows of cash caused by the present local government finance regime in order to mitigate the opposition from communities that would otherwise lose out. And that will take the road user charging debate into much murkier and less tractable territory (pp. 1415–1416).

To deal with this geographic problem created by returning toll revenues to motorists, consider instead returning the toll revenue to: (1) the cities in which the tolls are paid; (2) the cities in which the toll payers live; or (3) some combination of these two options. If toll proponents are very public about exactly how much revenue each city or other local authority would receive from the tolls, they might gain the support of many local political leaders throughout the nation. The tolls would redistribute little if any income from cities to rural areas. Individuals who drive at the hours of peak demand would pay more than those who do not, but they would also benefit more from the reduced congestion. Returning toll revenue to cities could move the congestion charging debate into much clearer and more tractable territory.

10. Conclusion

“Policy makers do not just happen to create inefficiencies,” [Winston and Shirley \(1998, p. 68\)](#) wrote. “When economists estimate large welfare losses stemming from public policies as if the losses were simple oversights that officials could correct by paying closer attention to what they were doing, it is the economists, not the officials, who are not paying attention.”

Economists frustrated by congestion pricing's lack of political support should keep Winston and Shirley's admonition in mind. Policymakers' great sin of omission—their failure to price the roads—is not the result of senseless intransigence, or of their inability to “get it.” Congestion pricing looks good only from an economic perspective. Politically it looks risky and possibly disastrous. We cannot assume that people will vote for congestion pricing simply it is economically efficient. The solution is not to make drivers want congestion pricing. Good ideas require advocates, and successful advocates are rarely those who pay the costs. Only the prospect of significant rewards will create strong advocates. Most discussions of congestion pricing's political acceptability revolve around using the toll revenue to buy the acquiescence of drivers, but acquiescence will not generate

strong political support, and it is in any event highly improbable.

Even if motorists think that pricing will benefit them, they are unlikely to organize and crusade for it. The absence of popular support does not, however, condemn congestion pricing to the fate of being often discussed but rarely tried. The idea that a policy cannot be approved in the absence of popular support is at odds with the way policies are actually advanced. Not every proposed policy lends itself to initial popularity, and some longstanding policies have never been popular at all. But a policy that will not be popular at the outset cannot be marketed as though it will be popular. Congestion pricing cannot be sold as a policy that harms no one, or even as a policy that helps everyone a little. It can, however, be positioned as a policy that will benefit important political actors a lot. Its success depends, to paraphrase Machiavelli, not on convincing those who benefit from the status quo, but on finding others who will “do well under the new order of things.”

We argue that earmarking the toll revenue can make congestion pricing politically successful. We do not mean conventional earmarks for specific *programs* or *purposes* such as public transit or road improvements. Instead, we mean earmarking the revenue for specific *places* and *people*. We contend that the toll revenue should be earmarked for cities, preferably the cities that are penetrated by the freeways. Cities are well organized and large enough to be powerful, but small enough to engineer consensus among their constituents about how to spend the money. The toll revenue can advance both environmental and equity goals, provided these goals do not undermine the political incentives for local governments to pursue congestion pricing. In Los Angeles congestion pricing revenue could be used to compensate cities for the various environmental and public health costs the freeways bring. We believe similar, although probably not identical, strategies could be adopted in other regions.

The overriding factor in our argument, however, is not abstract fairness but political calculation. Arguments can be made, on fairness grounds, for any number of claimants to congestion pricing's revenue. But no one will get the revenue if congestion prices do not exist. Just as the first goal of any politician must be to get elected, the first goal of any toll revenue distribution must be to secure the *initial approval* of congestion pricing. For this reason the path to congestion pricing does not go through transit agencies or highway bureaucracies, and it does not involve efforts to buy off motorists. Rather it involves igniting the self-interest of cities. Only when it offers concentrated benefits to strong political forces will anyone rise to fight for congestion pricing.

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