CHAPTER 21

TRAFFIC CONGESTION

LOUIS A. ROSE
Professor of Economics
University of Hawai'i

"Is there a long-term solution to traffic congestion?"

How much would you pay to get an extra half hour for yourself each day? You might use it to play with your kids or take a stroll with your spouse or read a book or do volunteer work or exercise or take a nap or enjoy a hobby—the possibilities are endless. Sounds pretty good, doesn't it?

If you're like most people, you waste at least an extra half hour on most days (15 minutes each way) contending with traffic congestion. There are over 600,000 vehicles on O'ahu, and it probably seems as though most of them are on the road exactly when you have to drive to and from work. Buses are available, but for most people that option is even more time-consuming.

Most people would be willing to pay a reasonable fee to get from here to there faster. But before explaining how this fact of life supports what I call a "market approach" to traffic management, I will provide a bit of background.

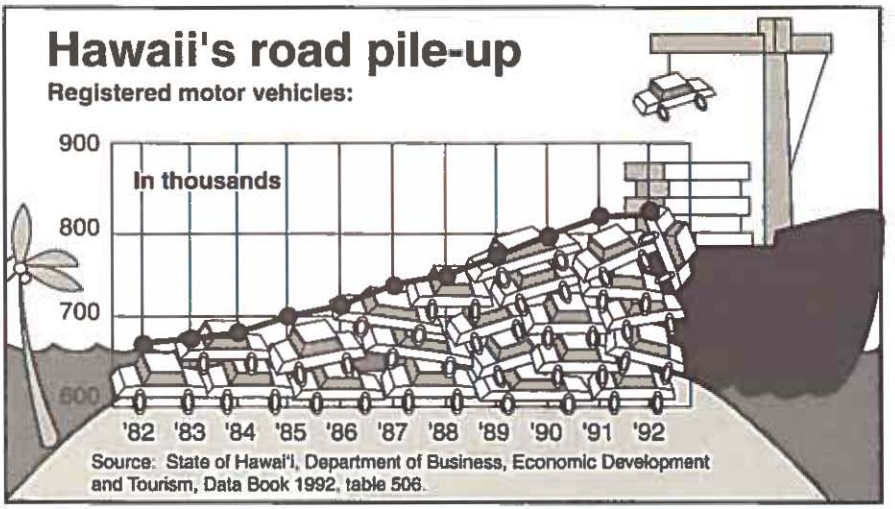
Traffic management. Road use generally is regulated by government planners and engineers. In Hawai'i, these well-intentioned experts have tried to relieve congestion primarily by better managing traffic on existing roads through use of devices such as contraflow lanes, coordinated signals, and HOV lanes; widening and extending existing roads and providing new ones; and providing and improving public transit services. I would hate to think of how bad traffic would be

without these band-aid, short-run solutions. But, while most of these efforts have been socially beneficial, none of them permanently solves the problem.

Ironically, Hawai'i's efforts to relieve congestion are part of the problem because they encourage more driving at each improved location. Drivers who formerly traveled at other times or on alternative routes soon converge on an improved road. In the long run, developers create new subdivisions along the road, feeding additional drivers into its lanes.

The same is true of new or improved mass transit facilities (such as better bus service or a fixed-rail system). Whatever relief they provide tends to be short-lived as newly uncongested roads become magnets for yet more cars.

In short, government planning and engineering are absolutely necessary, but they only forestall the inevitable. A permanent solution requires a market approach.



The market approach. The provider of roads should charge for their use, just as the providers of electricity and long-distance telephone calls charge for what they provide.

Roads are like power plants or telephone systems. Most of the time they have a lot of excess capacity. It is only during the peak demand periods that their capacity is overloaded and cannot satisfy everyone.

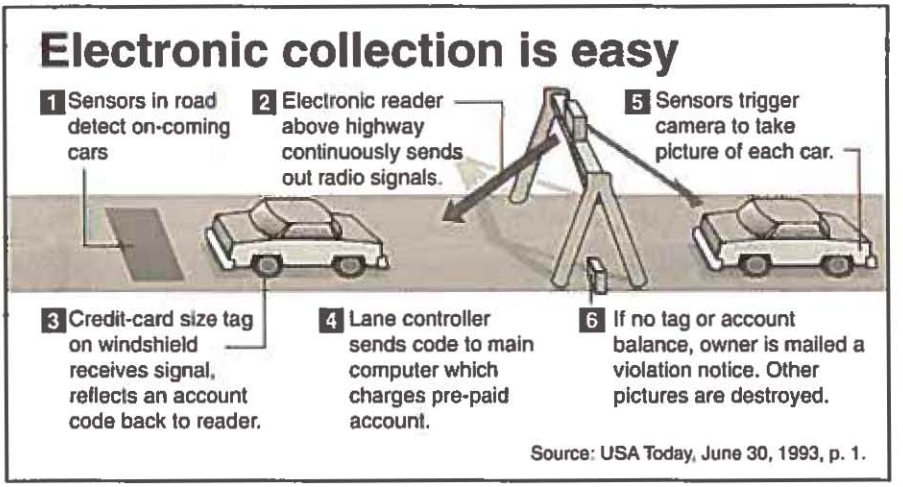
The power and telephone companies wisely charge higher rates at such times, thereby encouraging some of us to use electricity and make calls at other times of the day. Thus demand is spread out over slack periods.

The road charges would not be applicable at most places or at most times of the day—only at locations and times when there would otherwise be traffic congestion. The amount charged would be whatever is necessary to get the traffic flowing at a reasonable speed. Perhaps a typical commuter vehicle on H-1 would incur a charge of one dollar for a 7:00–7:30 A.M. trip and another dollar for a 5:00–5:30 P.M. return home. A half hour later, the charge might be only fifty cents, and an hour later there might be no charge at all. If these charges failed to reduce congestion to the desired level, they would be raised. It wouldn't take long to determine the proper charges.

These charges would not affect the commuting behavior of most drivers, but they would affect enough to bring about a permanent reduction in the number of vehicles on otherwise-congested roads. Some people would carpool to share the charges, or drive at an off-peak time to avoid them completely. Others would drive on alternative (uncongested) routes, and still others would take the bus or use available paratransit services. In the long run, some would even rearrange work hours, work at home, or move closer to their jobs to avoid paying the charges. Without a doubt, this method would *permanently* solve the congestion problem.

The technology for electronic collection (rather than inefficient toll booths) is currently in use on toll roads and bridges in mainland states; and several European nations are on the verge of installing similar systems for congestion control. The newest systems are easily administered and enforced without invasion of privacy by government, and the cost of installation and operation is typically only 5–10 percent of the revenues collected.

Other possible solutions. There are a couple of other tactics that would permanently provide congestion relief. Both of them are based on market incentives rather than government decree. The first is simply to raise the gasoline tax. This instrument is sufficiently powerful, but too blunt for curing the congestion problem. That's because it discourages driving at all times and locations, not just at the times and places of congestion. Thus it is wasteful in the sense that it discourages



otherwise worthwhile trips. (This may be a desirable effect for purposes of reducing pollution, but that is the subject for another discussion.)

Another approach is to deter rush-hour driving by discouraging parking at the end of the commute. Many public and private sector employers currently subsidize parking for their employees, thereby encouraging them to drive their own cars to work. Government should stop this practice and encourage employers to offer cash instead of subsidized parking. It could also levy surcharges on morning parking. These tactics would immediately reduce the number of vehicles on the road during the two rush hours of the day.

Government should also rescind its requirement that developers provide a specified amount of parking spaces with each new office building. This would have a similar effect in the long run.

Fairness. One way to define what's fair is to say that those people who cause others inconvenience should compensate them for it. Those who would be persuaded by the charges to stay off of the road could be compensated for their inconvenience by those who enjoy uncongested rush-hour driving. The compensation could be in the form of lower gasoline taxes financed by collected road charges. A reduction in gas taxes equal to the net amount of road collections would appeal not only to those who endorse this concept of fairness but also to those who oppose new taxes.

Another way to define what's fair is to say that the group of people

who are charged should receive corresponding benefits. This rule is satisfied for those who pay and commute during the rush hours, since they enjoy time savings. It is further satisfied if the annual collections along any given route are expended on socially beneficial transportation improvements for the users of that route. Improvement proposals currently in need of funds include encouragement of commuter-van pools, car pools at designated pickup points, shared-ride taxis, small-van jitneys, demand-responsive services, subscription vans, and BusPlus. Although these improvements cannot approach the cost effectiveness and fairness of road charges, they do promise to be socially beneficial, and they could be subsidized by net road charges.

"AT LEAST IT'S FAIR...NOBODY GETS ANYWHERE..."

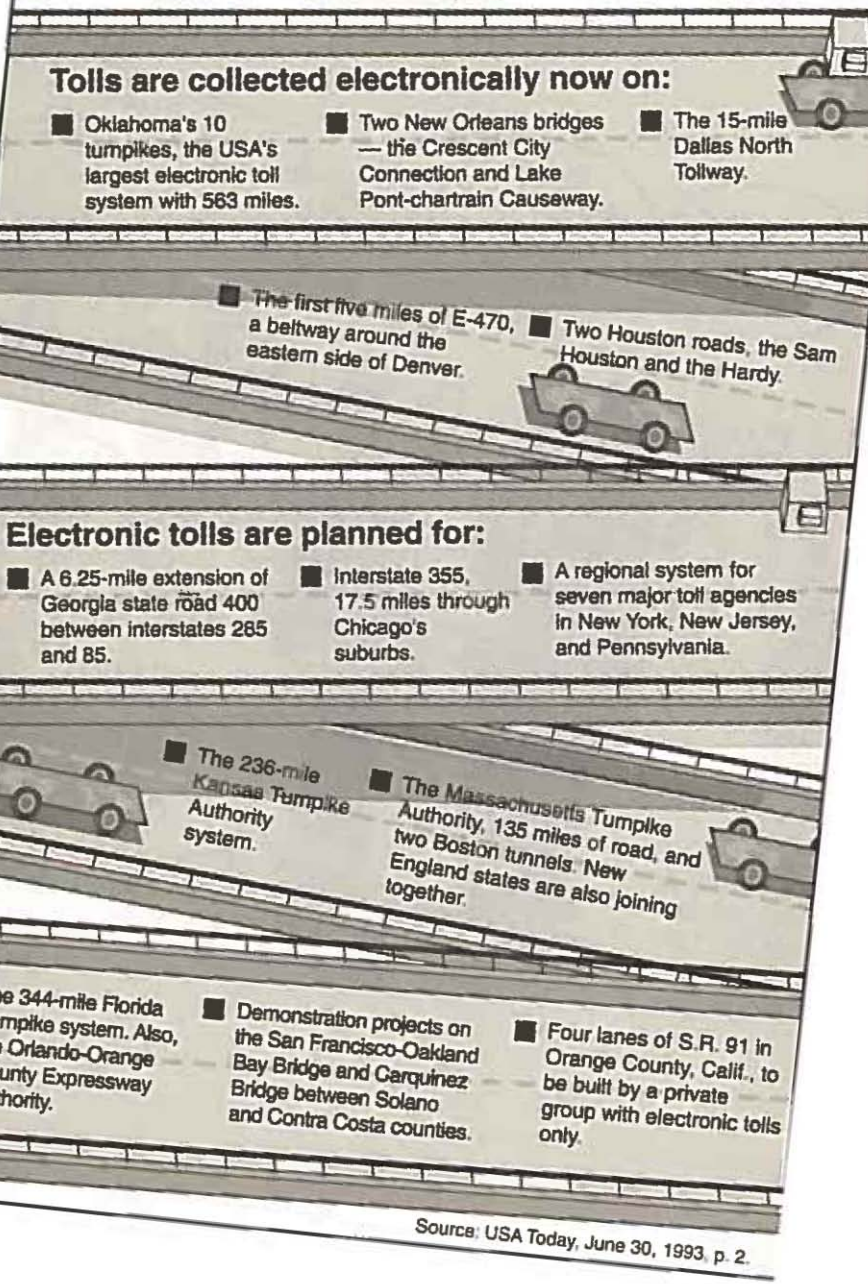
Still another notion of fairness is that user charges should be at least proportional to income. Regressive charges (ones that require lower-income people to pay a percentage of their income that is higher than that required of higher-income people) are unfair. Though existing studies indicate that road charges satisfy this rule of fairness, additional research needs to be done to clearly establish this conclusion. The gasoline tax, however, is highly regressive, so using road charges to reduce the cost of gasoline would be consistent with this notion of fairness.

No pain, no gain. Nobody likes to pay for something they have been getting for free. But, in the long run, you have to hit motorists in the pocketbook to get the traffic flowing.

Surely you would be willing to pay *something* for that extra half hour mentioned at the beginning of this chapter. And make no mistake, the amount of time you waste in traffic will slowly but surely increase (as will taxes needed for additional band-aid solutions) unless we take a market approach. Can you even imagine what traffic (and taxes) will be like for our kids and their kids if we don't make a commitment to a long-term solution?

For whom the road tolls

Tolls will soon be collected electronically all over the country. Here are a few examples:



Source: USA Today, June 30, 1993, p. 2.


I'D GIVE YOU AN 'A'....
WHAT A COINCIDENCE - WE GIVE YOU AN 'A', TOO...
LEGISLATURE
YOU, TOO? I GAVE ME AN A, TOO...
HERE'S YOUR A...
AND HERE'S YOURS.
WE'RE ALMOST OUT-ORDER MORE AS...
HEY, WHY IS YOUR A BIGGER THAN MY A?...
SO DID I! I GOT ME AN 'A', TOO...
GOT AN EXTRA A
CORKY