Tolls Rule

by Ronald C. Fisher and Robert W. Wassmer

Ronald C. Fisher is a professor of economics at Michigan State University, and Robert W. Wassmer is a professor of public policy and administration at California State University, Sacramento.

In this edition of State Fiscal Affairs, Fisher and Wassmer look at how states can finance transportation infrastructure and regulate its use.

As state governments grapple with the dual issues of how to finance transportation infrastructure and regulate use of those facilities to control congestion, economists have long argued that pricing may provide an answer. Prices — set with “economic efficiency” in mind — for use of roads and public transit generate revenue; help measure demand (including for expansion of facilities when appropriate); affect user decisions about transport mode, location, and time; and reduce congestion, air pollution, and greenhouse gas emissions.

These issues have become even more important for two reasons. First, gasoline excise taxes levied at fixed per-gallon amounts have been generating less revenue, not keeping up with transportation use, and thus are not meeting their primary intended purpose of funding maintenance and construction of roads. Rising fuel efficiency of vehicles and substitution of electric vehicles are the primary causes. As a result, state governments have been continually increasing their excise tax rates — 26 states in the past four years, according to Pew research.¹

Second, by many measures congestion on roads and some public transit systems has been getting worse. According to Urban Mobility Scorecard data,² annual road travel delay increased from 5.2 billion to 6.9 billion hours from 2000 to 2014, an increase of nearly 33 percent.

So, what to do? Some have suggested that fees per mile driven (which could vary by type of vehicle, location, and time could be an alternative to traditional motor fuel taxes. But vehicle mileage fees do not have public support (yet), are opposed by the trucking industry, and face a variety of implementation challenges (how to measure, how to collect, privacy concerns, interstate transportation, and so on). So far, vehicle mileage fees have been tried only in a few pilot programs and used to any degree only in Oregon.

However, road and parking tolls are an old and relatively familiar form of transportation fee or price, and use of those financing methods has been increasing dramatically. As shown in the figure, user charges from toll highways increased in real terms by nearly 59 percent from 2007 to 2015, and parking charges by more than 45 percent. Both swamp the overall increase in total state-local government user charges over that period, which was about 20 percent.

Since 2007, user charges have become fiscally more important for state and local governments overall, with user charges growing roughly twice as fast as general revenue (20 percent versus 10 percent). User charges for transportation — roads, parking, and air transport — have been among the fastest-growing components. In fiscal 2015 state and local governments collected about $15.3 billion in highway tolls and more than $3 billion in parking charges.

In contrast, state-local motor fuel tax revenue has grown only 1.3 percent in real terms since 2007 (despite the tax rate increases). Of course, state motor fuel tax revenue, $43.8 billion in fiscal 2015 (plus about another $36 billion in federal motor fuel taxes), still is much larger than vehicle tolls and fees. If the great difference in growth rates continues, however, that difference in magnitude will shrink.

Not all road or transit tolls are the same. Increasingly, tolls differ based on congestion or demand. Many public transit systems charge higher fees during peak times. Parking garages, including those owned by local governments, typically charge higher prices for events with great demand. Per-mile tolls on roads often differ based on usage. And now a few road systems, several in Virginia, are using dynamic pricing, in which the toll varies continuously based on traffic to maintain a specific traffic flow.

Of course, one significant source of hesitation about the idea of a vehicle mileage fee (a simpler toll system) is opposition to electronic collection using a transmitter on vehicles that allows the tracking of individual vehicles. Perhaps the answer is to couple the rollout of such a system with an increase in the excise tax on gasoline, and then give drivers the choice of paying a monthly vehicle mileage fee to avoid the gas tax. That can be accomplished by use of “smart” gas pumps that detect the transponder and charge the user a lower per-gallon tax.
In some ways, then, the advocacy by academics and some practitioners for vehicle mileage fees, as well as the public opposition, has been eclipsed by policy action. Highway tolls and parking fees are already being used to a much greater degree than in the past. The remaining questions seem to be whether that use will continue to grow, whether the tolls will be dynamic (adjusting to demand), and whether vehicle mileage fees — a comprehensive toll — will be adopted.