

An Analysis of Strategies for Inducing Use of Public Transportation

Working Paper 304

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It is the author's desire that the information contained herein be publically available and accessible as an educational aid. Every reasonable effort has been made to conduct scholarly research and present relevant findings in a meaningful and unbiased way.

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With increasing concerns related to the environmental and societal impacts of excessive auto-dependence, it is becoming apparent that the automobile is not the solution America once thought it was. It is destroying our cities' fabric, wasting non-renewable energy, polluting our air and water, and costing a fortune to maintain. Public transportation is much more feasible, sustainable, and city-friendly. But how to discourage the automobile in a society that has long taken for granted its luxury and convenience is not so obvious.

One commonly suggested idea is to impose higher gas taxes or taxes on driving in order to discourage driving and at the same time generate revenue which can be used for public transportation. It sounds like a great idea. After all, it not only discourages driving but also generates much needed funds for public transportation. Nevertheless, there are several major problems with such taxes on driving or gas. It should be remembered that gas is not only used by single occupancy vehicles, but by trucks, taxis, emergency vehicles, and many other driving-dependent users. To propose an increase in tax on gas would be to increase their costs, which would mean an overall increase in product/service prices to all consumers. Even companies whose operational costs are not affected by the gas tax would likely take the opportunity to raise their prices and take advantage of whatever amount of price inflation the market will bear.

An even greater problem related to imposing higher gas tax is related to inherent conflicts of interest between profitability and principle. Tax revenues are a significant source of income, and are depended upon by the governments or municipalities imposing them. If drivers are discouraged from driving due to higher gas taxes, then the revenue from these taxes will drop. It is hard to imagine any government or municipality taking a genuine stand to discourage driving as long as they are making money from people driving. Consider the

situation with cigarettes and tobacco taxes? This is the problem with trying to force people away from driving by imposing taxes or other public fees. As long as municipalities rely on these tax revenues for sustenance, they will make sure people keep driving. If the goal is truly to discourage driving and to induce people to choose more sustainable methods of transportation, taxes on driving (or gas) are not the “win-win” solution they seem to be.

A better way to discourage driving—and at the same time improve urban conditions—is to limit the number of parking spaces in cities and to charge higher rates for parking. This sounds cruel, but it provides many benefits. It discourages automobile use, and encourages short-term parking which allows for more potential users per day. It also reduces demand for parking spaces by eliminating those who are unwilling to pay, making street parking easier to find. Historically, there has always been a tendency among business owners to want to provide free parking because they believe it attracts customers. (de Cerreno 132) But studies such as Allison de Cerreno’s *Dynamics of On-Street Parking in Large Central Cities* show that “free parking” can be very harmful. Free parking encourages long stays, low turnover, and auto-dependence. Boston, among other cities, has taken the initiative to educate business owners in the importance of charging for parking “in order to generate turnover, and thus, more potential customers.” (132) Not only is this good for businesses; it is also good for cities in that it helps improve urban design and restrain urban sprawl. (132)

As Marc Cutler—manager of transportation planning for Boston’s Central Artery/Tunnel project—testified, when Boston implemented a freeze on parking, parking prices rose and public transit became vibrant. (lecture 10/5/07) The strategy of limiting parking proved very successful in many ways. Not only does limiting the supply of parking discourage auto-dependence and encourage more sustainable modes of transit; it also prevents the urban fabric from being ruined by unsightly parking structures, and reduces

traffic congestion. Those who are willing to pay a little bit to drive benefit from shorter commute times and reduced consumption of gas.

Another interesting approach in parking reduction can be seen in the 1992 Hamburg Parking Place Directive, which was designed to ease congestion in central Hamburg (Germany) by preventing new parking spaces from being built. (Enoch, Potter, and Ison 151) Historically, developers had been required to provide parking spaces for new developments, much like the situation in the United States. However, now instead of building parking garages, the developers were required to pay a fee to help fund more sustainable forms of transportation, including public transit. (151) While this might not work in all regions and cultures, it can be extremely effective for encouraging people to use public transportation, especially in dense urban areas where much development is under way.

It is interesting to note that much-needed new development and housing in metropolitan areas of the U.S. is often prevented by the high cost of building/providing enough parking to satisfy city codes. With costs of constructing parking garages ranging from \$25,000 per parking space up to \$100,000 per space in extreme circumstances (such as multi-level subterranean garages with small footprints that don't allow efficient parking layouts), most development proposals lose feasibility fast. Only the most expensive, high-dollar developments can absorb the cost and be built, which means that everything and everyone else is driven away from the city center. There are better ways to do things, and studies have shown that many developers prefer to pay fees for public transportation in exchange for providing less parking.

Another way to encourage people to use public transportation is through car-sharing, sometimes referred to as “the ‘missing link’ in the package of alternatives to the private automobile.” (Transportation Research Board ES-2) Car-sharing is a program which allows people to use and pay for cars on an “as-needed” basis. For many people, it is

inconceivable to live without a car. Public transportation may suffice for most transport needs, such as the daily commute to and from work. But once in a while they do need a car.

Because most people need a car *sometimes*, many automatically assume they have to *own* a car. From a sustainability perspective, the problem is that once a person owns a car and has paid for car payments, insurance, etc., each additional trip costs very little. There is little financial incentive to drive less. Car-sharing solves this problem in two ways. Firstly, it allows people convenient and affordable access to a vehicle whenever they need one. This makes it feasible for a person to live without owning a car—that is, to rely exclusively on public transit and car-sharing. Furthermore, because car-sharing is pay-per-use, there is always a financial incentive to drive less. Unlike car ownership, which is essentially “pre-paid” auto-use, car-sharing is pay-per-use. If everyone paid per use, people would be much more conservative in their driving, and would more frequently choose public transit.

With better public transportation, car-sharing, and increasing emphasis on smart growth on the positive side—and rising costs of gas and parking on the negative side—it seems that people would have little excuse for keeping their cars. Yet the personal automobile still dominates so many American cities. Is this because of the way our cities are designed and because of America’s romance with the automobile? Or is it that public transportation is sometimes less efficient or seems like a second-class substitute for driving? While these aspects may play a part, it seems more plausible that many Americans have not given up their cars because they are absolutely unaware of the true cost of driving—and of practical alternatives. If they had any realization of how much they are actually paying for driving, many would not own cars.

In a 2006 article “Contentment Without a Car,” the *Washington Post* quoted the annual cost to own a car at \$8,410. (Cost includes car payments, insurance, fees, taxes, gas, oil, car washes, parking, and repair.) Yet how many American have done the math and

realize that \$8,410/year is actually \$700/month, or \$23/day? Perhaps because it seems like a necessity no one questions the absurdity of this cost. Several Bostonians have commented that since the MBTA fare increase, public transportation costs more than driving. If one only considers the cost of gas and parking (which is often free), this may be the case. Yet in reality, a monthly unlimited-use pass costs only \$59, less than ten percent the cost of owning a car for a month.

As high as the personal cost of owning a car may be, this value still represents only a fraction of the full cost of driving. There is also the cost of acquiring land and building/maintaining roads and highways, which we all pay through city, state, and federal taxes. There are significant environmental costs: greenhouse gas emissions, pollution, consumption of un-renewable resources and energy, micro climate changes due to large quantities of concrete, etc. And there are costs related to personal health and quality of life: illnesses due to fine particulates and unclean air, traffic noise, driving-related stress, accidents, wasted travel time, and opportunity costs of land covered by roads and parking structures. But because most of these costs are “hidden” and are not paid on a trip-by-trip basis, they never enter the cost equation in most peoples’ minds. Have we ever counted the full cost of driving? If instead of paying taxes in advance for roads and highways people paid per-use each time they drove, Americans might have an incentive to drive less and consider alternatives. Of course, as a country with some of the largest auto manufacturers in the world and powerful financial interests at stake, it’s no secret why we are so auto-dependent. But it’s important that people understand the full cost of driving if we as a country are ever to be healed from it. People might not stop driving for the sake of the “greater good,” but they will for the sake of their personal finances, comfort, and health. Before public transportation can be successful, we have to see that private transportation is not the smartest way.

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