

The Progress Report

Why Do We Subsidize Driving So Heavily?

THE ROADS AREN'T FREE: ESTIMATING THE FULL SOCIAL COSTS OF DRIVING AND THE EFFECTS OF ACCURATE PRICING

by Clifford W. Cobb

Publisher's note -- this is the executive summary of a recently-completed research study. For information on obtaining the full study, see the foot of this page.

Since the Second World War, automobile traffic has increased enormously, and per capita ridership on public transit has declined. While this change in local transportation patterns has given households much greater mobility and freedom than in the past, the rise of the car culture has also caused environmental, social, economic, and political damage because private vehicles have not had to pay their own way

A revenue-neutral tax shift that raised the price of driving and other socially damaging behavior while lowering taxes on productive effort would have important impacts on these problems. Such a policy would likely influence how much people drive and the kinds of cars they use, where people choose to live in relation to their jobs, and their willingness to use public transit. The purpose of this paper is to explore these effects.

This paper estimates the full social cost of driving above and beyond the amount motorists pay today. Specifically, it estimates the amount of a gasoline tax that would be needed to compensate society for the social costs associated with driving and projects the effects of this higher price on vehicle use, fuel efficiency, urban form, transit, carpooling, telecommuting, and more. Because significantly higher gas prices would have a far-reaching impact that cannot be entirely foreseen, this report is not intended as a specific policy proposal, and it does not attempt to determine the magnitude of tax increase that would be politically possible. Of course, any increase in the gasoline tax of the magnitude considered in the paper would need to be phased in over time and adjusted as information about driver response became available.

The Hidden Costs of Automobile Use

Raising the price of driving as part of a resource-based tax shift would offset, or internalize, some of the costs driving imposes on society. These "costs" include both common perceptions of cost -- time, energy, material, health, and so on -- as well as other subsidies which artificially reduce the price of driving. (When drivers do not bear the full costs of driving, they are receiving a subsidy -- even if the government is not "paying" them anything.) Since these effects significantly reduce the price of driving below its true cost, people are encouraged to

"consume" driving more than they otherwise would -- the same as for any other product or service that is artificially priced below its true market price.

The social costs, however, do not "disappear" just because drivers do not pay them; rather, they are borne by society at large. Theoretically, if the actual cost of driving could be determined by quantifying the subsidies, then prices could be increased to reflect true costs, which would in turn affect transportation choices through market forces. This paper attempts to quantify all of the explicit and implicit subsidies to driving in order to approximate the true cost of driving. The theory behind this analysis is that if these costs became "visible," in the form of taxes or other mechanisms that raised the price of driving -- such as auctioned permits, for greenhouse gas emissions or removal of existing subsidies to driving -- a variety of consequences could follow, such as more livable cities and a reduction in the emission of air pollutants such as the greenhouse gases linked to climate change.

Summary of Findings

There are essentially two types of subsidies to driving: (1) private services that are paid for with public funds, and (2) social costs that do not involve an exchange of money. A private cost is one that involves only those directly involved in a transaction, such as the costs of operating a vehicle or access to roads, while social costs include the costs of pollution and congestion. This paper estimates that the unrecognized private costs of driving amount to \$59 billion annually (top cost: \$40 billion for the costs of streets and highways not covered by fees and tolls) while social costs total \$125 billion (top cost: \$56 for health damage due to air pollution). (The social cost estimates in the paper rely on conservative or mid-point estimates from sources with wide ranges of values.)

The basic finding of this report is that the social costs of driving amount to at least \$184 billion per year -- not including the \$50 to \$100 billion subsidy in free parking and or the cross-subsidy caused by congestion. These costs could be recouped by gradually raising the price of driving by \$1.60 per gallon of gasoline -- although a gasoline tax only imperfectly captures the social costs.

The paper finds that the predominant effect of phasing in such a price increase would be to induce drivers to buy vehicles that are about three times as efficient as today's. However, for those who imagine that offsetting some of the social costs of driving through a gasoline tax would automatically reduce the quantity of driving, the results would likely be disappointing. Higher priced gasoline would slightly reduce the number of miles driven in the short run; but in the long run, families would buy more fuel-efficient vehicles, incomes would rise, and the income effect would likely outweigh the effect of higher fuel prices.

Other likely effects include a minor shift to carpooling and an even smaller shift to transit ridership. On the issues of urban form and housing location choice, the evidence regarding the effects of higher fuel prices on urban form is mixed, but barring other changes in public policy most suburban residents will not relocate to cities due to a gasoline price increase. (Another paper in Redefining Progress's series, scheduled for publication in early 1999, will look more closely at the effects of an environmental tax shift on urban form.)

Of course, no single policy measure would be able to recoup the full social costs of driving. Some costs -- noise pollution, disruption of urban life, and sheer physical space devoted to vehicles in cities -- would remain unaccounted for by raising gasoline prices. Since those costs are largely local in nature, it would make sense to adopt local policies to manage them.

The final section of the paper explores state and local policy options which would complement the effects of a gas tax increase, whether or not the increase was offset by other tax reductions. For example, to encourage drivers to shift to mass transit, local transit agencies could institute flexible forms of transit and pricing systems that reflect time-of-day costs. When the technology becomes available, they could implement congestion charges in tandem with higher parking fees. States could institute "pay-at-the-pump" auto insurance, so that those who drive more would pay more. Finally, if increasing the density of cities is seen as a method of reducing total driving, measures such as location-efficient mortgages, incentives for brown field development, and new methods of financing transit development could be of use.

Clifford W. Cobb is a researcher, scientist and thinker in California. His "The Roads Aren't Free" project was conducted for Redefining Progress, a public policy organization. For the full 70-page report, contact Redefining Progress at 1-510-444-3041, extension 300.

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