



The Takeaway

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Bumpy Road Ahead

Bracing for Insolvency in the Highway Trust Fund

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The Congress passed last minute legislation in July 2014 to transfer \$11 billion in funding to the nearly insolvent Highway Trust Fund (HTF), thereby ensuring that public infrastructure projects and some 800,000 jobs across the country would be funded through end of May 2015. Unfortunately, the legislation relied on budget gimmicks like pension smoothing, customs fees, and one-time transfers.¹ A more permanent solution is desperately needed.

Transportation spending in the United States is financed by a mix of federal, state, and local resources. The primary source of federal funds is the HTF. The HTF was established in 1956 to finance the construction of the interstate highway system. Today, it accounts for over 28% of US

spending on highways and bridges, and 23% of US spending on mass transit.²

The HTF is in dire financial straits. As figure 1 shows, since 2001 HTF outlays have exceeded revenues almost every year. As a result of these accumulated deficits—



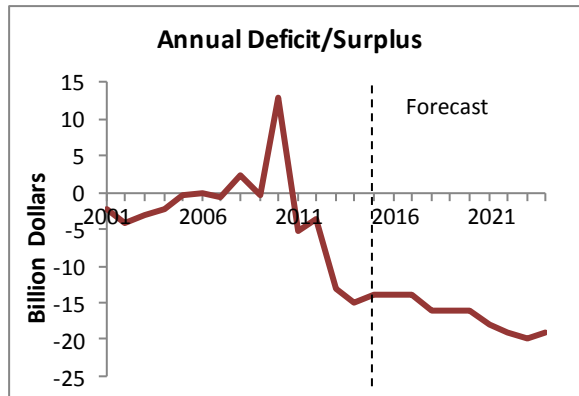
WHAT'S THE TAKEAWAY?

Transportation infrastructure in the United States is in a dire state of disrepair.

Federal funding for highway repairs and maintenance is not keeping pace with rising costs.

A permanent solution is needed to keep the Highway Trust Fund from insolvency, not a series of one-time fixes.

A congestion-adjusted vehicle mileage tax is an economically efficient means of tackling infrastructure funding issues.

Figure 1: Highway Trust Fund Projected Deficits

Source: Federal Highway Administration and Congressional Budget Office

and a series of expected future deficits—the Congressional Budget Office, estimates that the HTF faces a shortfall of \$167 billion over the next 10 years.³

The problems with the HTF stem from three factors—falling revenues, growing road use, and decades of deferred maintenance.

Falling Revenues

The primary source of funding for the HTF is the federal gas tax, which has been set at 18.4 cents per gallon on gasoline and 24.4 cents per gallon on diesel fuel since 1993. Not only has the gas tax failed to keep up with inflation, but increases in the fuel efficiency of vehicles have increased the average number of miles per gallon of fuel. As a result, gas tax revenues per mile traveled have fallen. We estimate that returning to 1993's effective tax rate per vehicle mile traveled would require a doubling of the federal tax on both gasoline and diesel fuel.⁴

Growing Road Use

The problem of falling revenues is compounded because of accelerated highway usage. Since 1993, the number of vehicle miles trav-

eled has increased by more than 30%, but the number of lane miles (a measure of road capacity) has only increased by 6%.⁵ Increased highway usage has clogged the roads and escalated wear and tear of public highways. The American Society of Civil Engineers (ASCE) calculates that 42% of America's major urban highways are congested, causing an estimated \$101 billion in wasted time and fuel annually.⁶

Deferred Maintenance

Transportation infrastructure in the United States is currently in a state of disrepair. The ASCE reports that the condition of 32% of America's major roads is poor or mediocre. They estimate the cost in additional repairs and operating costs to motorists traveling on those deficient pavements to be \$67 billion a year. Furthermore, one in nine of the nation's bridges are rated as structurally deficient.⁷

Solutions

Research suggests that the best strategy for funding roads and bridges would be a combination of road-wear charges and congestion taxes.⁸ Road-wear charges reflect the damage vehicles do to the road surface, and are based on the weight of the vehicle (per axle) and the distances traveled. Congestion taxes reflect the time costs that drivers impose on each other, and are based on the expected traffic delays for specific locations and times of day.

If properly calibrated, a gas tax can be a rough proxy for a road wear charge. The more miles a driver travels and the heavier the vehicle, the more gas taxes he or she would pay. Furthermore, returning the federal gas tax to 1993 effective levels, and then tying it to inflation, would largely eliminate the shortfall in the HTF. So updating the gas tax is an attractive policy option.

However, drivers with highly fuel-efficient vehicles pay little or no gas tax despite causing just as much wear and tear and congestion as other drivers. Therefore, some experts propose replacing the federal gas tax with a vehicle miles traveled (VMT) tax. A number of states including Washington, Oregon, and California are experimenting with a VMT tax. The idea is fairly simple; drivers will be charged a per-mile toll for distances they travel, with distances being tracked using GPS systems or devices installed in the odometer. A VMT tax is more efficient than a gas tax not only because the taxes paid more accurately reflect road use, but also because a VMT tax can be customized to collect higher taxes from heavier vehicles. It is more equitable because drivers of newer, more fuel-efficient vehicles pay just as much as drivers of older vehicles. It is more sustainable in the long run, since mileage-fees are not impacted by the increasing fuel-efficiency of vehicles.

A VMT tax can also be used to collect congestion taxes, by varying the amount of the tax based on the time of day or the driver's location. Thus, a congestion-adjusted VMT tax would be highest during rush hour and lowest in the middle of the night (or the middle of nowhere). By discouraging drivers from un-

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necessarily taking to the road during peak travel times, the congestion-adjusted VMT tax can help reduce the thousands of hours Americans waste each year stuck in traffic, while simultaneously generating the revenue needed to finance road construction projects.

The congestion-adjusted VMT tax is not a political slam dunk. There are serious privacy concerns associated with accurately tracking road utilization. Privacy advocates argue that in a time where credit card breaches and data-mining is prevalent, tracking technology presents a threat to the welfare of drivers because of its inherent abuse potential.

Given these concerns, it may be more politically viable to update the gas tax for private cars, and apply a congestion-adjusted VMT tax to commercial vehicles only. The drivers of delivery trucks, taxis, and 18-wheelers have few expectations of privacy—many of their employers are already monitoring their routes—so the privacy risks are much lower. Targeting commercial vehicles with a VMT tax also make sense since they are disproportionately responsible for the costs highway users impose on others, including almost all of the costs associated with pavement damage.⁹ Of course, to avoid double taxation, firms that paid the federal VMT tax would need to be exempt from federal gas taxes.

The Obama Administration has not proposed either updating the federal gas tax or introducing a VMT tax. Instead, the Administration's 2016 budget includes a plan to replenish the HTF with a one-time, 14% tax on nearly \$2 trillion in profits accumulated by US companies overseas.¹⁰ Such an approach would not address the HTF's long-term problems, since it relies on yet another one-time fix. Furthermore, the proposed tax on over-

seas profits would harm the competitiveness of US corporations, which already face one of the world's highest statutory tax rates. Finally, this approach would introduce a distortionary and economically undesirable mismatch between those who benefit from the highway program and those who pay for it.

Conclusions

No one likes higher taxes. The political opposition to raising the federal gas tax or introducing a VMT tax is fierce. However, the deteriorating condition of America's roads and bridges cannot be ignored. If road repairs are worth having, they are worth paying for.

A lasting and efficient solution must not only address the immediate funding needs, but also resolve the core causes of accelerated infrastructure deterioration and congestion. A congestion-adjusted VMT would achieve these goals. Concerns about privacy must be addressed, but those barriers are not insurmountable.

Congressional inaction has already cost taxpayers billions in lost productivity and fuel costs. Congress must stop kicking the can down the road, and provide a permanent solution before the HTF goes bankrupt in May 2015.

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Notes:

¹ Highway and Transportation Funding Act of 2014, Pub. L. No. 113-159, 128 Stat. 1839 (2014).

² Congressional Budget Office, *Public Spending on Transportation and Water Infrastructure, 1956 to 2014*. (CBO Pub. No. 49910, March 2015).

³ Congressional Budget Office, *The Highway Trust Fund and the Treatment of Surface Transportation Programs in the Federal Budget*. (CBO Pub. No. 45416, June 2014).

⁴ Estimates based on calculations of inflation adjusted mileage tax using CAFÉ fuel-efficiency standards.

⁵ US Dept. of Transportation, "Estimated U.S. Roadway Lane-Miles by Functional System." http://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/national_transportation_statistics/html/table_01_06.html (accessed March 16, 2015).

⁶ American Society of Civil Engineers, "2013 Report Card for America's Infrastructure," 49. <http://www.infrastructurereportcard.org/a/documents/2013-Report-Card.pdf> (accessed March 16, 2015).

⁷ Ibid, 6, 48. Also <http://www.infrastructurereportcard.org/>.

⁸ Winston, Clifford. "Efficient Transportation Infrastructure Policy," *The Journal of Economic Perspectives* (1991): 113-127.

⁹ Congressional Budget Office, *Alternative Approaches to Funding Highways, IX*. (CBO Pub. No. 4090, March 2011).

¹⁰ Office of Management and Budget, *The President's Budget for Fiscal Year 2016* (2015).

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The Mosbacher Institute was founded in 2009 to honor Robert A. Mosbacher, Secretary of Commerce from 1989-1992 and key architect of the North American Free Trade Agreement. Through our three core programs—Integration of Global Markets, Energy in a Global Economy, and Governance and Public Services—our objective is to advance the design of policies for tomorrow's challenges.

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