Cato Handbook *for* Policymakers

8TH EDITION

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52. Surface Transportation Policy

Congress should

- eliminate federal highway, transit, and other surface transportation programs; and
- devolve to the states and local areas full responsibility for highways and transit.

Failing that, Congress should

- fund state highways in block grants based on each state's land area, population, and road mileage;
- fund regional transit in block grants based on each metropolitan area's population and transit fare revenues;
- eliminate any conditions on the use of those funds, such as air pollution mandates or requirements for long-range planning;
- eliminate discretionary funds such as TIGER and New Starts;
- eliminate "flexible funds," that is, funds that can be spent on either highways or transit;
- eliminate requirements that states and metropolitan areas do long-range planning;
- encourage states and local areas to rely more heavily on user fees to fund all forms of transportation;
- ensure that any efforts to save energy or reduce greenhouse gas emissions are cost effective, that is, that state and local governments only invest in projects that can be shown to reduce energy consumption or greenhouse gas emissions at a lower cost than alternative projects; and
- reject proposals for mandatory vehicle-to-vehicle communications systems on all new cars.

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State legislatures should

- encourage experimentation with and licensing of self-driving cars, platooning, and other autonomous technologies;
- transition from gas taxes to mileage-based user fees; and
- ensure that all transportation is funded through user-pay systems.

Americans are the most mobile people on earth. The average American travels more than 14,000 miles per year by automobile, 1,900 miles by plane, nearly 200 miles by private bus, 170 miles by public transit, and 20 miles by Amtrak. The average European is less than half as mobile. Though average residents of the European Union may travel three times as many miles by bus and rail as Americans, they travel only about 40 percent as many miles by car and air.

Mobility drives the economy, giving Americans access to more productive jobs, better housing, lower-cost consumer goods, and greater social and recreational opportunities. Once considered the best in the world, America's transportation system was successful because, whether public or private, it was for the most part paid for out of user fees. That arrangement made transportation managers responsive to the needs of transportation users rather than to special interest groups.

Today, almost every transportation sector is distorted by government subsidies, and the cost of congestion has nearly quadrupled in the past 30 years. Rather than fix congestion, metropolitan planning organizations promote functionally useless projects—such as streetcars, light rail, and intercity rail—many of which actually make congestion worse. Rather than fix crumbling infrastructure, politicians prefer to spend money on new construction instead of maintaining existing systems. Rather than enabling mobility, political control enables social engineering, as government officials decide it is their job to nudge travelers toward some modes of transport over others for specious environmental, social, or other reasons.

Setting Priorities

Funding public or private transportation projects out of user fees forces a discipline: a project won't be built unless it has a good chance of paying for itself. The Interstate Highway System was successful because Congress

insisted that it be built out of user fees on a pay-as-you-go basis, which meant that if people didn't drive their cars, there would be no funds for construction.

Once the decision is made to subsidize transportation, no matter how justified it seems, the discipline that limits spending disappears. Projects that would be totally absurd under a user-fee system are funded despite increasing costs. For example, streetcars were a wonderful technology in the preautomobile world, and more than 1,000 American cities saw the construction of streetcar lines. But streetcars were rendered obsolete by more-flexible and lower-cost buses. By 1966, all but eight cities had replaced streetcars with buses. Yet, in recent years, we have seen a streetcar revival: cities are spending hundreds of millions of dollars on a slow, inflexible technology that can't move more than a tiny fraction of the number of people per hour as buses.

Light rail is another example. Its value was questionable in 1981 when San Diego replaced a profitable bus line with a money-losing rail line at a cost of around $10 million per mile (in today's dollars). By 2016, the average cost of light-rail lines being planned or constructed had grown to $160 million per mile, yet those lines can carry no more people than the San Diego line. Contrary to claims, neither light rail nor streetcars promote economic development; if anything, cities that build them tend to grow more slowly than cities that don't.

High-speed rail may have made sense in a society, such as Japan in the 1960s, where most travel was by low-speed rail. But the door-to-door convenience of autos outweighs the speed advantage of high-speed rail for short trips, while commercial aircraft are far faster than high-speed trains for long trips. In 1998, when California estimated that a Los Angeles–to–San Francisco high-speed rail line would cost less than $10 billion, University of California, Berkeley, economists calculated that it would cost more to move travelers by train than by air or auto. Today, the projected cost of that line exceeds $100 billion, yet the state still wants to build it.

The political emphasis on passenger travel also ignores the importance of freight, some 40 percent of which is shipped over highways. The diversion of billions of dollars of highway user fees to transit each year does little for passenger travel and nothing for freight, while the huge increase in highway congestion since transportation became politicized has been a nightmare for both shippers and commuters.

The only way to stop this waste is for Congress and the states to return to a user-pays system of transportation funding. Among other things, that means ending such discretionary funds as New Starts and Transportation Investment Generating Economic Recovery (TIGER) grants. Research by the Cato Institute and the Reason Foundation has shown that these funds are allocated politically, with a Democratic administration sending disproportionate shares to states and congressional districts represented by Democratic members of the House Transportation and Infrastructure Committee. Any federal transportation funds should be distributed using formulas based on factors such as population, land area, and the amount of user fees collected by local governments—not on political criteria.

Crumbling Infrastructure

Contrary to popular belief, not all infrastructure is crumbling. State highways, which are mainly funded out of gas taxes and tolls, are generally in good repair: the number of bridges rated "structurally deficient" and the average roughness of pavement are both steadily declining. City and county roads, which get more funding from general funds, tend to be in poorer condition.

Worst of all is transit infrastructure, which suffers from an $86 billion (and growing) maintenance backlog, mainly due to the poor condition of older rail transit lines. The Washington Metrorail system is a prime example. It is falling apart, and recent maintenance efforts will only temporarily relieve the problem. Metro's board knew as early as 2002 that the system would need billions of dollars' worth of maintenance upgrades, yet local and regional politicians decided instead to spend those billions building two additional lines. This is a predictable result of political control of the transportation system because politicians prefer to fund "ribbons, not brooms," that is, to fund new projects rather than maintain existing projects.

No transit agency that has built rail transit in the past 30 years has planned or budgeted for the inevitable rise in maintenance costs as rail infrastructure ages. A return to funding transportation out of user fees will give transport managers incentives to keep systems in a state of good repair so as not to lose revenues.

Transportation and the Environment

Automobiles and highways have been unfairly demonized as a source of almost every social ill imaginable. Some of these charges may have

made sense in 1970, when most cars were gas-guzzlers, air pollution darkened American skies, and highway deaths peaked at 55,000 per year.

Since then, cars have become far more energy efficient, while urban transit has become less energy efficient. In most urban areas, cars now use less energy per passenger mile than transit. In 2014, the only major transit systems more energy efficient than the average auto were in New York, Chicago, Washington, San Francisco–Oakland, Atlanta, Portland, and Honolulu.

Similarly, since 1970, total automotive air pollution has declined 85 percent despite a 175 percent increase in driving (which means pollution from the average car declined 95 percent). Further, highway fatalities per billion vehicle miles have declined by more than 75 percent. Today, light rail kills roughly twice as many people per billion passenger miles as cars do on urban highways and streets.

While technology has reduced the costs of driving, efforts to attract people out of their cars have failed. Since 1992, federal, state, and local governments have spent more than $350 billion (in 2015 dollars) on transit capital improvements—more than three-fourths of the inflation-adjusted cost of the entire Interstate Highway System. Two-thirds of those transit capital funds were spent on rail transit.

Despite that huge investment in rail, per capita transit usage declined by 5 percent while per capita urban driving grew by 15 percent. Transit carried less than 60 billion passenger miles of travel in 2014, while urban interstates alone carried more than 850 billion passenger miles. Transit's share of urban travel declined from 2 percent in 1990 to 1.7 percent in 2015. The biggest declines in transit's share of travel were in urban areas with rail transit, partly because rail transit is so costly that transit agencies often cannibalize the bus systems that carry most of their transit patrons.

Nor have land-use policies aimed at creating more compact urban areas proved successful. San Jose, for example, adopted an urban-growth boundary in 1974. The result has been to increase the San Jose urbanized area from fewer than 3,800 people per square mile in 1974 to more than 6,000 today. The city also built a 40-mile light-rail system. Yet transit's share of travel declined from 1.2 percent of passenger miles in 1982 (the earliest year for which data are available) to 0.8 percent in 2014.

These examples show that the solution to problems with the automobile is to make better automobiles, not to try to persuade people out of their cars. Yet President Barack Obama's first secretary of transportation openly

admitted that the administration's goal was to "coerce people out of their cars." Cato's review of long-range transportation plans for the nation's 70 largest metropolitan areas found that half relied on behavioral tools to solve transportation problems, even though some admitted those tools hadn't worked in the past. Many of these regions spend half or more of their transportation funds on transit systems that often carry as little as 1 or 2 percent of motorized passenger travel (and no freight).

Redefining User Fees

Most state highways are paid for out of gasoline tax revenues, but the gas tax has several defects: it does not adjust for inflation or for fuel-efficient cars, and—unlike a real user fee—it does not do anything to relieve congestion. Most cities and counties rely on general funds to pay for their roads. Oregon is experimenting with mileage-based user fees, which can potentially solve all of these problems. Other states should follow suit.

The Next Transportation Revolution

Since the republic was founded, the United States has been transformed by successive transportation revolutions, including steamboats, canals, steam trains, streetcars, and automobiles. We are on the verge of another such revolution: self-driving cars are likely to have at least as great an impact on American living and working patterns as Henry Ford's mass-produced automobile.

Many cars today have "advanced driver assistance systems," which help drivers control the speed and, in some cases, steering. Despite media reports of a fatal accident involving a Tesla with such systems, these aren't self-driving cars. True self-driving cars, which will be on the market by around 2020, will use extremely precise maps to define where the car can go and numerous sensors to give the car a 360-degree view of pedestrians, other vehicles, and other potential obstacles.

Self-driving cars will change how people view travel, allowing people to commute longer distances. They will also reduce congestion, allowing more people to live in urban centers. No one can predict all the implications of autonomous vehicles. So long-range planning makes no sense, and Congress should eliminate requirements for such planning. Major investments in transit infrastructure are also unwise, as shared, self-driving cars are likely to replace transit in all but a few major cities.

The National Highway Traffic Safety Administration has proposed mandating that all new cars incorporate vehicle-to-vehicle communications systems. Such a mandate (which is mainly favored by the manufacturers of such systems) would leave cars susceptible to hacking and would quash innovation in the development of new technologies. People who consult their smart phones or GPS for traffic reports are already using vehicle-to-vehicle communications. There is no need to mandate a single standard for such systems.

Conclusion

Because transportation is so vital to American life, it is important to make transportation investments where they will do the most to enhance mobility. The best way to ensure that result is to rely on user-pay systems.

There is little reason why a true user-pay system should require federal involvement. But to the extent that Congress remains involved in transportation issues, it should promote user-pay systems at the state and local level and take steps to ensure that state and local use of federal transportation funds is cost effective. That means, among other things, distributing funds based on performance standards, eliminating earmarks, and streamlining transportation planning.

Suggested Readings

Feigenbaum, Baruch. "Evaluating and Improving TIGER Grants." Reason Foundation Policy Brief no. 99, April 2012.

O'Toole, Randal. "A Desire Named Streetcar: How Federal Subsidies Encourage Wasteful Local Transit Systems." Cato Institute Policy Analysis no. 559, January 5, 2006.

———. "Does Rail Transit Save Energy or Reduce Greenhouse Gas Emissions?" Cato Institute Policy Analysis no. 615, April 14, 2008.

———. "The Great Streetcar Conspiracy." Cato Institute Policy Analysis no. 699, June 14, 2012.

———. *Gridlock: Why We're Stuck in Traffic and What to Do about It.* Washington: Cato Institute, 2010.

———. "Paint Is Cheaper Than Rails: Why Congress Should Abolish New Starts." Cato Institute Policy Analysis no. 727, June 19, 2013.

———. "Policy Implications of Autonomous Vehicles." Cato Institute Policy Analysis no. 758, September 18, 2014.

———. "Rails Won't Save America." Cato Institute Briefing Paper no. 107, October 7, 2008.

———. "Rapid Bus: A Low-Cost, High-Capacity Transit System for Major Urban Areas." Cato Institute Policy Analysis no. 752, July 30, 2014.

———. "Roadmap to Gridlock: The Failure of Long-Range Metropolitan Transportation Planning." Cato Institute Policy Analysis no. 617, May 27, 2008.

———. "Stopping the Runaway Train: The Case for Privatizing Amtrak." Cato Institute Policy Analysis no. 712, November 13, 2012.

———. "The Worst of Both: The Rise of High-Cost, Low-Capacity Rail Transit." Cato Institute Policy Analysis no. 750, June 3, 2014.

O'Toole, Randal, and Michaelangelo Landgrave. "Rails and Reauthorization: The Inequity of Federal Transit Funding." Cato Institute Policy Analysis no. 772, April 21, 2015.
Taylor, Jerry, and Peter Van Doren. "Don't Increase Federal Gasoline Taxes—Abolish Them." Cato Institute Policy Analysis no. 598, August 7, 2007.

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