MERCATUS CENTER
George Mason University

POLICY BRIEF

Fixing American Infrastructure: Unleash Market Forces and Promote Devolution

Veronique de Rugy

July 2018

In February 2018, the Trump administration submitted to Congress a plan involving $1.5 trillion worth of infrastructure investment over 10 years. Of that amount, $200 billion would be direct federal spending.[1] I argue in this brief that to improve its infrastructure, the United States does not need to increase federal spending. In fact, the surest way to have world-class infrastructure is through market-based reforms to privatize asset management, increase competition, and dramatically reduce government subsidies and regulations.[2]

THE DON'TS OF INFRASTRUCTURE SPENDING

Don't Pursue Stimulus Through Infrastructure Spending

President Trump seems to believe that large infrastructure investment boosts economic activity. Hillary Clinton, Bernie Sanders, Presidents Barack Obama and George W. Bush, and many before them have paid that idea lip service. Economists, of course, recognize that roads, bridges, airports, and canals are the conduits through which goods are exchanged, and as such infrastructure plays an important role in economic growth.

But not all infrastructure spending is equal when it comes to affecting growth. As my colleague Matthew Mitchell and I have documented, there is ample literature to show that infrastructure spending is a particularly bad vehicle for stimulus and does not boost short-term jobs and economic growth.[3] For infrastructure spending to work, government would have to deploy it quickly to put previously unemployed workers in shovel-ready jobs.

But as President Obama discovered in 2009 when he tried to spend $47 billion of stimulus money on infrastructure, there are not many shovel ready projects awaiting funding. And job seekers rarely have the required skills to start building a highway or a bridge, so employers are forced to poach workers from their existing jobs.

Don't Use Federal General Fund Revenue to Pay for Transportation Infrastructure

A substantial share of federal transportation funding comes from user fees and earmarked taxes, such as fuel taxes and airfare taxes. The Federal-Aid Highway Act of 1956 specified that federal highways were to be paid for with fuel taxes. Since 1983, transit funding has also been supplemented by a portion of the revenues from fuel taxes. This supplement was only 24 percent of total transit spending in 1986 but rose to 80 percent in 2000 and has remained at that level since. Still, the portion funded by the general fund is not at all insignificant: from 2008 to 2016, $144 billion in general fund revenue was appropriated for use on highways and mass transit systems.[4]

Transportation infrastructure is likely to be more productive if it is funded by state and local governments, and it is likely to be managed more efficiently by private firms.[5] Apart from the interstate highway system and highways on federal lands, air traffic control, and ports of entry, it is not clear why the federal government should have any role in funding transportation infrastructure. But to the extent that it does, instead of using general fund revenue, it is better for the federal government to fund its share of spending with user taxes earmarked for transportation. Such taxes link how much people are required to pay to how much they use that infrastructure, giving everyone an incentive to make their travel decisions in light of the costs that result from their use of the infrastructure.

Don't Use Earmarks for Infrastructure Spending

Infrastructure earmarks have long been a favorite item in the "pork barrel," and while the US Congress has banned all earmarks since 2011, members of congress have come up with creative ways to get their infrastructure pet projects funded.[6] Still, the ban has stigmatized the politics of pork and increased the cost of such a practice.

In an influential essay, Ed Glaeser noted that the "most pressing problem with federal infrastructure spending is that it is hard to keep it from going to the wrong places."[7] Unfortunately, the political incentives involved in earmarking decisions are not conducive to choosing projects that are expected to generate the most benefits relative to costs. Decisions about how to spend on infrastructure are likely to better serve the public interest if state departments of transportation and local governments use objective criteria to decide how to allocate all the federal transportation funds they receive and if those entities are accountable to the taxpayers in their state.

THE DOS OF INFRASTRUCTURE REFORM

Devolve Authority to the States

Infrastructure spending does not have a significant effect on jobs and economic growth in the short term. What's more, government-funded infrastructure projects are not good investments in the long term either. In fact, my colleague Robert Krol has shown that most infrastructure spending orchestrated by the federal government is shot through with perverse incentives.[8] As a result, projects either do not generate enough benefits to justify their costs, they suffer from cost overrun or fraud, waste, and abuse, and they ultimately do not foster economic growth.

For instance, infrastructure investment produces the highest returns when it supports already-expanding cities and regions.[9] But federal funds are not allocated according to efficiency; rather they are allocated according to the relative political power of congressional representatives and state governors. Infrastructure funding is regularly allocated to regions with declining economies.

While government statistics show that our infrastructure is not crumbling, it could certainly use an upgrade.[10] In a recent debate at the Aspen Ideas Festival between economists Lawrence Summers and Robert Barro, Barro noted that he was "glad that Larry and I can agree that fixing potholes is the most productive activity in government." Unfortunately, the political process creates a bias against dull but valuable projects—like road maintenance—in favor of more grandiose and flashy projects such as high-speed rail, the "Big Dig," and the "Bridge to Nowhere."

Governments also systematically overestimate the benefit and underestimate the cost of infrastructure projects.[11] In other words, it is not the best projects that get implemented, but rather the ones that look the best on paper or attract the support of powerful interest groups.[12]

The president should end the centralized, tax-funded federal responsibility in infrastructure. The practice has done a great deal to remove the discipline that comes when projects need to pay for themselves. With very few exceptions, most roads, bridges and even highways are local projects (state projects at most), and it is better to pay for them with state and local money rather than federal money.[13]

Currently, infrastructure funding comes from a fuel tax and is allocated to the states according to a fixed formula. Instead, state policymakers should make the case to their constituents that state taxes should be increased to fund such endeavors. Pennsylvania, for example, recently did just that and it's now "flush with cash."[14] And if the fuel tax was eliminated, similar moves in other states might be an easier sell to constituents.

State and local governments can better manage and fund some highways with user fees. Tolls have the additional benefit of reducing traffic congestion. This practice has proven successful in many urban areas and could be an even more effective solution if state and local governments were allowed to impose similar tolls on existing interstate highways. Policymakers with equity concerns over such a reform could use toll revenues to improve nontolled roads and public transit or could offset tolls by reducing regressive gasoline and sales taxes.[15]

When Possible, Privatize and Fund Infrastructure with User Fees

User fees should become our preferred option for funding infrastructure.[16] This would advance two goals: get the federal government out of infrastructure financing and place incentives for the private sector to invest in maintenance. As Columbia University Joel Moser recently explained in Forbes, "No one will invest in the replacement of defective bridges that have no tolls . . . unless a revenue stream is attached to those assets."[17] Innovations are and will continue to provide "many creative ways to link revenue streams to currently non-tolled assets," he adds.[18] Among these are onboard devices that could be used to record mileage and calculate how much drivers must pay as a function of when and where they drive.[19] Mileage-based user fees could eventually replace fuel taxes as the source of highway funding.

Greater reliance on user fees would also make it easier to privatize transportation infrastructure.

Many studies have shown how a transparent and well-structured agreement in which the government sells off assets to the private sector can improve performance and financing of highways, airports, air traffic, train operation, track maintenance and many other facilities and services.[20]

The private sector has demonstrated its ability to improve transportation performance and automobile safety through technologies like electronic stability control, warning and emergency braking systems, speed alerts, and mirrors with blind spot warnings. Market competition has driven innovation in automobiles which, at once, it has made cars more affordable and safer.

These same market forces can be deployed to improve infrastructure.[21] If permitted to retain a share of the profits generated by new technologies, private sector partners are more likely to develop innovations and deploy technologies—like GPS devices, Bluetooth signals, mobile software applications, weigh-in-motion capabilities, and technologies like heated runways at airports—to make infrastructure more cost effective.

There are still some important and unanswered questions about how to most efficiently transfer public infrastructure to the private sector, how to set the price for the transfer and what role, if any, the government should play in infrastructure financing.[22] One possible answer is an increase in the use of public-private partnerships (PPPs). In a forthcoming Mercatus working paper, transportation expert Tracy C. Miller explores how PPPs can improve social welfare by achieving a balance between the level of tolls, the share of costs borne by taxpayers, and the impact pricing has on the rest of the highway network.[23] Best PPP practices include setting tolls high enough to limit congestion but low enough to attract enough traffic to fully use extant highway capacity, as well as transferring some risk to the private partners while limiting their downside.

Forthcoming research by economist Robert Krol expands on this by examining the economic issues and evidence surrounding the role of the private sector in providing highway infrastructure.[24] Shifting infrastructure construction to the private sector may result in more efficient provision of projects and transfer risk from taxpayers to investors, but this largely depends on the appropriate design of contracts. To get the incentives right, PPPs should involve competitive bidding, no contract renegotiation, and the potential for bankruptcy for participating private firms who overestimate the revenues that can be generated or underestimate the costs in their initial bids.

Deregulate

Whether infrastructure spending is devolved to the states or to private sector, the Trump administration should reduce red tape and delays in permitting and the environmental review process.[25] The administration's current plan would link spending to reforms that "streamline permitting and approvals, improve the project delivery system, and cut wasteful spending on boondoggles."[26] I welcome this step.

In addition to reducing government red tape to speed up investment, the administration should limit regulation on emerging technologies and, when possible, repeal harmful rules—at all levels—that drive up the price of taxpayer-funded projects.[27]

Indeed, innovations in infrastructure can be hindered by costly regulations at all levels of government. For instance, states are often faced with prevailing wage laws preventing them from hiring less skilled workers or awarding contracts to out-of-state firms even when those contracts are cheaper. Regulations like the requirement that federal contractors use Project Labor Agreements—introduced by the Obama administration—discriminate against nonunion workers and raise the cost of projects to taxpayers.[28] The Davis-Bacon Act of 1931, which requires federal contractors to pay locally prevailing wages and fringe benefits, may also inflate the costs of federal contracts when the government tables overestimate prevailing wages—one study found on average a 22 percent inflation factor.[29]

Policymakers still anxious about what deregulation looks like for infrastructure can look to the freight railroad industry as an example. Following its deregulation in the 1980s, railroad productivity soared, allowing most railroads to become profitable while reducing shipping rates for most commodities.[30] Most of these gains occurred because regulation removed rigidities that prevented railroads from reducing costs. Matching payment with use as directly as possible and allowing prices to vary with demand are two other lessons that can be learned from the railroad industry's success.

CONCLUSION

US infrastructure can be improved by combining greater reliance on market forces, private management (or ownership, where permitted by law), reduced regulation, and reduced government subsidies. Where government continues to be involved in transportation policy, it should be the smallest unit of government with jurisdiction over the infrastructure project. In addition to the above list of don'ts, heeding any proposal for establishing a federal infrastructure bank risks excessively politicizing transportation funding decisions.[31] It may take a long time for the institutional and policy changes described above to come about, but as growing debt and unfunded liabilities makes it harder for the government to pay for infrastructure with general fund revenue, the benefits of a decentralized market-oriented approach should become evident in time.

ABOUT THE AUTHOR

Veronique de Rugy is a senior research fellow at the Mercatus Center and a nationally syndicated columnist. Her primary research interests include the US economy, the federal budget, homeland security, taxation, tax competition, and financial privacy. She received her MA in economics from the Paris Dauphine University and her PhD in economics from the Pantheon-Sorbonne University.

NOTES

1. White House, *Legislative Outline for Rebuilding Infrastructure in America*, February 2018.
2. Veronique de Rugy and Tracy C. Miller, "Improving Funding and Management of Surface Transportation Infrastructure" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2017).
3. Veronique de Rugy and Matthew D. Mitchell, "Would More Infrastructure Spending Stimulate the Economy in 2017?" (Mercatus Policy Primer, Mercatus Center at George Mason University, Arlington, VA, 2017).
4. Robert S. Kirk and William J. Mallett, *Funding and Financing Highways and Public Transportation* (Washington, DC: Congressional Research Service, January 11, 2018); *APTA Primer on Transit Funding: The Fixing America's Surface Transportation Act and Other Related Laws, FY 2016 through FY 2020* (Washington, DC: American Public Transportation Association, April 2016), 22, table 4(c).
5. Congressional Budget Office, *The Macroeconomic and Budgetary Effects of Federal Investments*, June 2016; Tracy C. Miller and Brian M. Deignan, "Why the DOT's Role in Funding and Regulating Transportation Should be Reduced" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2013); Robert Krol, "Political Incentives and Transportation Funding" (Mercatus Research, Mercatus Center at George Mason University, Arlington, VA, 2015); De Rugy and Miller, "Improving Funding and Management of Surface Transportation Infrastructure."
6. Ron Nixon, "Lawmakers Finance Pet projects Without Earmarks," *New York Times*, December 27, 2010; Michael Sargent, "Keep Earmarking out of Infrastructure," *Detroit News*, February 5, 2018.
7. Edwards L. Glaeser, "If You Build it . . . : Myths and Realities about America's Infrastructure Spending," *City Journal*, Summer 2016.
8. Krol, "Political Incentives and Transportation Funding."

9. Glaeser, "If You Build It . . . ."

10. Robert Krol, "America's Infrastructure Isn't Crumbling: Some Facts on Highway, Road, and Bridge Construction in the United States" (Mercatus on Policy, Mercatus Center at George Mason University, Arlington, VA, May 2017).

11. De Rugy and Mitchell, "Would More Infrastructure Spending Stimulate the Economy in 2017?"; Chris Edwards and Nicole Kaeding, "Federal Government Cost Overruns," *Downsizing the Federal Government*, September 1, 2015.

12. Bent Flyvbjerg, "Survival of the Unfittest: Why the Worst Infrastructure Gets Built—and What We Can Do about It," *Oxford Review of Economic Policy* 25, no. 3 (2009): 362; Bent Flyvbjerg, "Design by Deception: The Politics of Megaproject Approval," *Harvard Design Magazine* no. 22 (Spring/Summer 2005): 50–59; Bent Flyvbjerg, "Machiavellian Megaprojects," *Antipode* 37, no. 1 (2005): 18–22; Bent Flyvbjerg, *Megaprojects and Risk: An Anatomy of Ambition*, (Cambridge: Cambridge University Press, 2003), 50–55; Bent Flyvbjerg, Mette K. Skamris Holm, and Søren L. Buhl, "What Causes Cost Overrun in Transport Infrastructure Projects?," *Transport Reviews* 24, no. 1 (2004): 3–18; Bent Flyvbjerg, Mette K. Skamris Holm, and Søren L. Buhl, "Cost Underestimation in Public Works Projects: Error or Lie?," *Journal of the American Planning Association* 68, no. 3 (2002): 279–95.

13. Robert Krol, "Feds Consider Reducing Highway Funding to States," *Fredericksburg.com*, October 3, 2017.

14. Peter Mucha, Pa. Gas Tax To Rise Jan. 1, Again in 2015 and '17, *Philly.com*, December 31, 2013; Peter Jackson, "Pennsylvania Flush with Cash for Transportation Projects," *PennLive*, February 21, 2015.

15. Robert Krol, "How Congestion Pricing Influences Equity" (Mercatus on Policy, Mercatus Center at George Mason University, Arlington, VA, December 2017); Tracy C. Miller, Michael Wilt, and Thomas Savidge, "Addressing Concerns with Congestion Pricing," Economic Perspectives, Mercatus Center at George Mason University, May 16, 2017.

16. Glaeser, "If You Build It . . . ."

17. Joel Moser, "How to Fix the Trump Infrastructure Plan," *Forbes*, November 27, 2016.

18. Moser, "How to Fix the Trump Infrastructure Plan."

19. For more on mileage-based user fees, see Tracy C. Miller, "Improving the Efficiency and Equity of Highway Funding and Management: The Role of VMT Charges" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2014).

20. Robert Poole and Chris Edwards, "Privatizing U.S. Airports" (Tax and Budget Bulletin No. 76, Cato Institute, Washington, DC, November 21, 2016); Chris Edwards, "Options for Federal Privatization and Reform Lessons from Abroad" (Policy Analysis No. 794, Cato Institute, Washington, DC, June 28, 2016).

21. Tracy C. Miller and Michael Wilt, "Infrastructure Needs Innovation," *U.S. News & World Report*, March 27, 2017.

22. Edwards, "Options for Federal Privatization and Reform Lessons from Abroad"; Clifford Winston, "How the Private Sector Can Improve Public Transportation Infrastructure" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2014).

23. Tracy C. Miller, "Role of the Private Sector in the Management of Highways: A Primer on Public-Private Partnerships" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, forthcoming).

24. Robert Krol, "Highway Infrastructure: Issues Concerning Private-Sector Participation" (Mercatus Research, Mercatus Center at George Mason University, Arlington, VA, forthcoming).

25. Veronique de Rugy, "Reduce the Hurdles to Private Investment in Infrastructure," *Creators*, January 23, 2016.

26. Thomas M. Abercrombie, Trump's Infrastructure Vision," *eWaste Disposal, Hazardous Waste, Metro/DVBE Contractor California*, November 29, 2016, http://ewastedisposal.blogspot.com/2016/11/trumps-infrastructure-vision.html.

27. Robert Krol, "Do Governments Impede Transportation Innovation?" (Mercatus Research, Mercatus Center at George Mason University, Arlington, VA, 2015).

28. Michael Sargent, "Building on Victory: An Infrastructure Agenda for the New Administration" (Issue Brief No. 4629,

Heritage Foundation, Washington, DC, November 21, 2016).

29. Sarah Glassman et al., *The Federal Davis-Bacon Act: The Prevailing Mismeasure of Wages* (Boston, MA: Beacon Hill Institute at Suffolk University, 2008).

30. Jerry Ellig, "Infrastructure Policy: Four Lessons from Freight Rail Deregulation," Mercatus Center at George Mason University, May 16, 2017.

31. Robert Krol, "Can a Federal Public Infrastructure Bank Improve Highway Funding?" (Mercatus on Policy, Mercatus Center at George Mason University, Arlington, VA, January 2017).