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THE AMERICAN RECOVERY AND REINVESTMENT ACT: Will More Public Spending Pave the Way to a Better Infrastructure?

By Eileen Norcross and Frederic Sautet

Mercatus Center
George Mason University

Congress and the new Administration are considering an $825 billion stimulus package that would in part grant the states $550 billion in new spending, much of which will be dedicated to infrastructure. Proponents claim this money will not only create government-funded jobs but will increase consumer spending and thereby increase incomes, while also improving America's infrastructure—ensuring safety and economic productivity.[1]

While America's infrastructure may indeed need improvement, public spending is not the best way to fix it. Our infrastructure needs more than just a physical overhaul. It needs to move from an outmoded model of government provision to a system that permits and encourages innovation and flexibility.

GOVERNMENT SPENDING ON INFRASTRUCTURE

Calls for increased infrastructure spending are not new. For several years experts and governments have warned of the dangers of deferred improvements. According to the Federal Highway Administration, (FHWA) 33 percent of roads are in bad shape. The American Society of Civil Engineers finds 27 percent of America's bridges are obsolete or deficient.[2] And the Environmental Protection Agency states $155 billion is needed to upgrade 55,000 drinking water systems.

Why haven't these systems been maintained or modernized? It is not for lack of spending. According to the Congressional Budget Office (CBO), from 1956 to 2004, public spending on infrastructure grew in real terms by 1.7 percent annually. Since 1987, it has grown by 2.7 percent a year, on par with average U.S. GDP growth.[3] In 2004, the federal government spent three times less on infrastructure ($73 billion) than state and local governments did ($238.7 billion).

WHY IS THE INFRASTRUCTURE SYSTEM IN CRISIS?

There are two issues at the heart of infrastructure provision. First, no satisfying definition of infrastructure exists. How government defines infrastructure is largely arbitrary. Infrastructure ranges from roads to telecommunications to school buildings. Second, infrastructure remains mostly in the public sector because government does not view infrastructure as it does other economic assets since it considers infrastructure as a pre-condition for growth.

But infrastructure is a product of economic growth and innovation. Steel bridge construction became possible in the 19th century due to developments in engineering and metal physics, itself the result of entrepreneurial activity.[4] Entrepreneurship enabled capital accumulation and technological advances, freeing up resources that could be allocated to building bridges.[5]

More federal money may not fix current problems. In fact, it may only deepen and extend them as recipients will have little reason to innovate, correct mistakes, or respond to changing conditions in how consumers use infrastructure.

Infrastructure development is not the cause of economic growth, but rather a consequence.[6] Infrastructure is composed of economic assets. It is built as economies grow, providing the architecture demanded by increased commerce, trade, and individual mobility. Infrastructure is an integral part of the web of economic assets that constitute the capital that form an economy.

Infrastructure needs are dynamic, changing with individual preferences and innovations. To be useful, infrastructure projects must fulfill a consumer demand, including the desire of many consumers to take into account environmental impacts. Markets are the best vehicle to communicate that demand to suppliers.

WILL MORE OF THE SAME POLICIES SOLVE INFRASTRUCTURE PROBLEMS?

Government planning, financing, and maintaining of infrastructure suppress competition—hiding vital information about costs and performance. For this reason knowing the impact of public infrastructure development on the economy is difficult. CBO finds spending estimates on mass transit and water transportation are flawed.[7]

Thus, more federal money may not fix current problems. In fact, it may only deepen and extend them as recipients will have little reason to innovate, correct mistakes, or respond to changing conditions in how consumers use infrastructure.[8] Current government infrastructure investment is seldom effective or well-targeted.[9] Future investment is unlikely to differ.

WAYS OF FUNDING INFRASTRUCTURE

The argument in favor of public finance of infrastructure is that many of the things that comprise infrastructure—highways, airports, utilities, railways, bridges, telecommunication networks, and public buildings (schools, libraries, etc.)—are "public goods."[10] When a good is truly public, government funding is often viewed as the best way to provide it.

But is that true? First, a public good does not imply public provision. Radio fits the definition of a public good, and in the U.S., private entities have provided it for decades.[11]

Second, highways, airports, and many other types of infrastructure are not public goods. They are normal economic goods, all of which can—and frequently are—provided privately in other countries and parts of the United States.[12]

Third, government has used the notion of "public goods" or "public utilities" as an economic rationale for involving itself in the production of goods and services that could be left to private entities.[13] This has politicized the provision of certain goods such as roads and utilities.

Private infrastructure provision is best suited to meet consumer preferences. Absent private markets, the benefits principle should apply: those who benefit directly should pay (e.g. user's fees for utilities consumption).[14] But when taxpayers at the federal level fund lower level infrastructure development, it fractures the link between beneficiaries and providers, which produces a "disconnect of accountability." Consumers don't obtain what they need and don't pay for what they consume.

Federal funds change the cost and incentives of providing different goods to state and local governments. This leads to fiscal illusion. The Government Accountability Office (GAO) finds that when states receive increases in federal highway funds, they reduce their own spending on highways, rather than using federal funds as a supplement.[15] Thus, increases

in federal highway grants have not led to increased overall investment in highways. States use the money they would have allocated for highway improvements for other purposes.[16]

POLICY SUGGESTIONS FOR CONGRESS AND THE NEW ADMINISTRATION

1. Consider infrastructure an economic asset like any other. Privatize when possible.

Market mechanisms are far more likely to reveal consumer's infrastructure needs, and preferences. If infrastructure needs are dire, the market will reveal this to investors, who will commit capital to providing it in a way that satisfies users. Investors have the incentives to monitor performance, and shift capital to where it is most needed

Consider two examples where the federal government is currently most involved.

Highways and roads

In 2004, government provided $66.7 billion in highway funds. The federal government contributed $30.2 billion of that total, and states and localities provided the remaining $36.5 billion. Highways are financed via the Highway Trust Fund—a "pay-as-you-go" system that relies on excise taxes on motor fuels and trucking related goods.[17]

Excise taxation, however, veils the true costs of road-use to consumers and does not gauge individual use accurately. Advances in tolling technology, however, such as the EZ pass and GPS systems, make it possible to charge for individual road use.[18] Moreover, there's evidence that people are willing to pay for roads and adjust their consumption based on price.[19] By revealing what people are willing to pay to drive at peak hours, congestion pricing, if done right, might lead some to travel in off-peak hours, thereby lessening congestion's effects.

The FHWA estimates widespread implementation of congestion pricing would reduce the investment needed to maintain highways by more than one-fourth.[20] Coupled with private motorway maintenance, congestion pricing would lead to better allocation of public roads funds and might even reduce environmental impacts.

Airports and seaports

After highways, aviation is the largest recipient of U.S. federal infrastructure funding. Yet, there is no economic justification for publicly funded airports. Over the last twenty years, countries throughout the world have privatized countless airports, alleviating taxpayer burdens and improving systems.

Seaports can also be privatized. In New Zealand, the privatization of seaports led to increases in cargo-handling productivity. Privatized in 1989, Port of Napier Ltd. for example constantly aims to improve operations—integrating rail, road, and sea transport systems and investing in state-of-the-art cranes and wharves to better handle cargo— so it can compete with other seaports—all at no cost to taxpayers.[21]

2. Where privatization is not possible, introduce market incentives and competition to improve resource allocation.

In cases where outright privatization may be politically impossible, contracting out management would lead to savings and improved services.[22] In 2006, rather than raise taxes or debt to address a gap in its roads budget, Indiana leased its toll road to a private consortium for $3.8 billion.[23]

As in New Zealand, government procurement should be designed around the "value for money criterion," which stipulates that government contracting should be based on economic rather than political criteria. This would enable the selection of companies to manage roads or wastewater treatment plants with greater benefits to consumers.

CONCLUSION

Congress is poised to pass a massive stimulus plan that will include a big push for infrastructure spending. There is ample reason to doubt that such spending will achieve its aims.

Many parts of the U.S. are in need of infrastructure investment and maintenance. Poorly maintained infrastructure leads to catastrophes—such as the collapse of the I-35 Bridge in Minneapolis and levee failure in New Orleans. But decades of reliance on government planning has put infrastructure in its current state and left many needs under-addressed. If Congress wants to establish effective, economically viable long-term infrastructure, it needs to enable people rather than policy makers to make the resource allocation decisions to build it.

ENDNOTES

1. We analyze whether such spending will lift incomes across the country in "The Main Street Economic Recovery Proposal: Will It Bring Us Out of Recession?" Mercatus on Policy No. 33, (Arlington, VA: Mercatus Center, December 2008).

2. American Society of Civil Engineers (ASCE), *Report Card for America's Infrastructure*, 2005, 2. http://www.asce.org/files/pdf/reportcard/2005_Report_Card-Full_Report.pdf.

3. Based on Bureau of Economic Analysis statistics available at http://www.bea.gov/national/index.htm#gdp

4. Bridges in the 19th century were generally built by private entrepreneurs, especially in the railroad industry. See David Nasaw's account of the role of Andrew Carnegie in the development of steel bridges in *Andrew Carnegie* (New York: Penguin Books, 2006).

5. For a detailed presentation of the role of entrepreneurship in society, see for instance Israel Kirzner and Frederic Sautet, *The Nature and Role of Entrepreneurship in Markets*, Mercatus Policy Series, Policy Primer 4 (Arlington, VA: Mercatus Center at George Mason University, 2006).

6. See P.T. Bauer, *Dissent on Development* (London: Cox & Wyman, Ltd. 1971)

7. Congressional Budget Office, "Issues and Options in Infrastructure Investment," (Washington, DC:GPO, 2008) http://www.cbo.gov/ftpdocs/91xx/doc9135/05-16-Infrastructure.pdf

8. Ibid. According to CBO, "efforts at maintenance are inefficient...that is, they cost more than is necessary."

9. Ibid, 10.

10. A public good is defined as being non-rival (one person's consumption doesn't prevent someone else from consuming it) and non-excludable (Once provided, it is either impossible or too costly to exclude someone from consuming it.).

11. The work of reference on the subject is by Ronald Coase (1974) "The Lighthouse in Economics," *The Journal of Law and Economics*, 17(2): 357-76.

12. The US has a long history of privately providing infrastructure including roads, railways, and electricity networks. See for instance Albro Martin, Railroad Triumphant: *The Growth, Rejection, and Rebirth of a Vital American Force* (Oxford: Oxford University Press, 1992), Gabriel Roth, Roads in a Market Economy (Brookfi eld: Avebury Technical, 2006), and Walter J. Primeaux, Jr, "An End to Natural Monopoly", *Economic Affairs* 5, 2 (London: Institute of Economic Affairs, 1985): 14–15.

13. Telecommunication was a case in point until the industry's poor performance provided the rationale for its deregulation and return to the market in the 1980s.

14. How much consumers are willing to pay for given resources reveals the consumers' demand. As prices rise, consumers may choose to reduce their uses of the products, which has the added benefit of conserving a valuable resource, e.g. limiting water usage in a drought. Government subsidies mask consumer demand by preventing prices from revealing accurate information.

15. See Government Accountability Office, *Federal-Aid Highways: Trends, Effects on State Spending, and Options for Future Program Designs*, (Washington, DC:GPO, 2004), 1, http://freight.transportation.org/doc/freight/gao_802.pdf

16. Ibid. Moreover, using grant matching requirements does not work either because it forces localities to make spending choices that don't necessarily correspond to their needs.

17. These are excise taxes on tires, trailers, heavy-vehicle, etc. See GAO-06-572T, 3.

18. This is especially true for motorways and highways, but satellite-based technology makes it now possible to charge individuals for any road usage.

19. The New York Transit Authority's use of congestion-pricing provides evidence of people's willingness both to pay for a product and to reduce consumption at certain times of day based on cost.

20. See CBO, "Issues and Options in Infrastructure Investment," 10. While congestion pricing is a step in the right direction, it is not equivalent to a market price, as it is the result of an arbitrary formula policy makers select in their planning. As a result, it can fail. For example, congestion pricing has had rather disappointing results in managing traffic in London.

21. For more information on Port of Napier Ltd, see: http://www.portofnapier.co.nz/.

22. Examples in the U.S. include Indianapolis which privatized the management of its wastewater treatment facilities in 1993.

23. Called "Major Moves," the 75 year lease allow the private consortium, Cintra-Maquarie, to collect tolls that are used to finance highway improvements.

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Eileen Norcross is a senior research fellow with the Social Change Project at the Mercatus Center at George Mason University. Her research areas include the U.S. budget, the use of performance budgeting in the federal government, tax and fiscal policy, and community and economic development.

Frederic Sautet is a senior research fellow and senior editor of the Mercatus Policy Series at the Mercatus Center at George Mason University. He is a member of the graduate faculty at George Mason University. Dr. Sautet's current work focuses, among other things, on entrepreneurship, institutions, and social change.