FISCAL POLICY: THE TRIUMPH OF HOPE OVER EXPERIENCE

“If only our politicians could get their act together, we’d do the obvious: rebuild bridges, airports, and roads with public funds.” So goes the battle cry of investors and citizens around the world, frustrated with years of slow global economic growth and low interest rates. We are all for better roads and airports, but spending money and creating wealth are not the same thing.
If you believe President-elect Donald Trump’s infrastructure plan is the key to revitalizing US economic growth, would you be interested in a bridge we have for sale?

Ok, ok. Maybe we are too harsh. At the heart of the matter is our deep skepticism about the efficacy of infrastructure spending as a means of boosting economic output. It isn’t a political problem with Republicans or Donald Trump. We feel the same about President Obama’s large fiscal stimulus program during the 2007-2009 recession. It’s an “economics” thing.

Rather than argue with the many critics who say $X trillion worth of infrastructure spending is too much or too little, rather than get into late-night disputes with academic colleagues about whether the fiscal multiplier1 is 0.5x or 1.5x, we set ourselves two tasks.

The first task is to set the record straight with a little infrastructure myth-busting.

Our second task is to detail two simple rules for policymakers to follow when they conduct infrastructure spending. We will build each rule by evidence of where current infrastructure practices fail. We don’t pretend these rules are final, but they are a starting point. Who knows, you might even think of them the next time you curse your dilapidated local airport.

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INFRASTRUCTURE MYTH-BUSTING

Our myth-busting exercise below demonstrates that contrary to popular opinion, the United States does not suffer from dramatic under-investment in public infrastructure, nor does it suffer from extreme lack of quality in the services such public capital provides.

**Myth 1:** “We used to build beautiful dams, roads, and highways, but the US government doesn’t spend money on infrastructure anymore.”

**Reality 1:** Even in the last year the federal government has dedicated significant resources to improving infrastructure. In December 2015, President Obama signed a $306 billion infrastructure bill—the Fixing America’s Surface Transportation (ahem, FAST) Act. What is more, total public investment in water and transportation infrastructure has remained fairly constant as a share of gross domestic product (GDP) since 1980 (see Figure 1 below). Real GDP has increased by 2.5x since 1980. Accordingly, public spending on infrastructure has increased from roughly $165 billion in 1980 to $416 billion in 2014.

**Myth 2:** “Federal government spending on infrastructure is the way to boost growth.”

**Reality 2:** The federal government accounts for only a small share of overall public spending on infrastructure. Since 1956, state and lo-

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**Fiscal Policy:**

*The Triumph of Hope Over Experience*

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fig. 1  MARGINAL UTILITY? PUBLIC INVESTMENT IN WATER AND TRANSPORT INFRASTRUCTURE HAS BEEN FAIRLY CONSTANT AS A % OF GDP SINCE 1980

![Graph showing public investment in water and transport infrastructure as a % of GDP since 1980.](source: Congressional Budget Office)
lical government spending on public infrastructure averaged 72% of all infrastructure investment. The only category where federal government investment approaches state and local investment is in aviation infrastructure, contributing $0.44 of every $1 invested. Compare that with water utilities for which state and local governments spend $0.96 of every $1 invested. If the federal government contributes to spending, we might expect that contribution to come mostly in the form of subsidized infrastructure borrowing packages for state and local governments to deploy.

**Myth 3:** “The US has the worst infrastructure in the developed world.”

**Reality 3:** The World Economic Forum releases annual rankings of the quality of infrastructure. On a scale of 1-7, with seven as the best rating, the United States’ infrastructure in 2015 was ranked 5.8, better than the G-7 average score of 5.5. Quit complaining about potholes: the US and Germany both ranked 5.7 for their road quality, bested only by Japan (6.0) and France (6.1). It is worth noting, however, that across the board, G-7 nations’ infrastructure quality has declined overall in the last decade, falling from a ranking of 5.8 in 2006 to 5.5 in 2015.

**Myth 4:** “Driving over bridges becomes more dangerous for Americans each year that passes. Remember the tragedy that befell the I-35W Mississippi River Bridge in Minnesota.”

**Reality 4:** Since the 1990s, the number of structurally deficient or functionally obsolete bridges in the United States has consistently declined. The most recent Economic Report of the President notes that as a group, structurally deficient and functionally obsolete bridges “accounted for just below 24% of all bridges in 2014, the smallest annual percentage on record.” Contrary to received wisdom, American motorists have never been safer crossing bridges than they are today. And the tragic bridge collapse in Minnesota in 2007 wasn’t the fault of under-investment, but rather a design flaw.

**Myth 5:** “President-elect Trump’s infrastructure spending policy is textbook Keynesian stimulus: government hires those workers in those places at those times where the private sector will not.”

**Reality 5:** Keynes advocated for government spending during recessions to boost otherwise lackluster private sector demand. The grandfather of modern economics wrote, “the employment of a given number of [people] on public works will...have a much larger effect on aggregate employment at a time when there is severe unemployment than it will have later on when full employment is approached.”

**NEWSFLASH:** We are not in a recession. The unemployment rate (currently at 4.6%) is below official estimates of normal levels of unemployment (4.8%). The supposed “Keynesian” benefits from Trump’s infrastructure spending are smaller than they would have been during 2009.

Recent research analyzing the efficacy of the 2009 American Recovery and Reinvestment Act shows even more clearly why infrastructure spending in practice does not work as well as it does in Keynesian theory. Economist Andrew Garin shows that highway projects “had zero effect...on road construction employment—or other employment—in the locale of the construction site.” Spending increased employment levels in the home counties of the projects’ contractors, but not in the home counties of the projects built. Also, with political logjam at many levels of government, pushing through a timely stimulus bill to help unemployment is nearly impossible.

**THE RULES OF THE GAME**

The record should now be straight. It is always possible to spend more money on public infrastructure, but the United States suffers neither from dramatic underinvestment nor poor quality. That said, we still think there is room for dramatic improvement in quality without spending unnecessary money.

**RULE 1: PRICES ARE RIGHT**

We invest because we seek a positive return. Because tax dollars finance most infrastructure projects, rather than user fees, it can be difficult to determine a project’s return. To the extent possible, we suggest public officials fund projects with explicit user fees, or prices, which make clear the marginal cost of use across infrastructure projects.

We can look at two examples to show how dramatic the effects of pricing can be on infrastructure. First, think about the pavement on the roads we drive every day. In the United States, the Highway Trust Fund is the federal government’s primary source of funds for spending on roads. The Highway Trust Fund depends on taxes on gasoline and diesel fuel. The $0.184 per gallon for gasoline and $0.244 per gallon for diesel fuel taxes generated $40.8 billion in revenue in 2015. That compares to $51.8 billion in expenses. The shortfall is the result of political gridlock. Rather the problem takes root in problematic pricing (see Figure 2 on next page).

Is the solution raising the gasoline tax? Probably not. First, gasoline taxes are “basically invariant to changes in traffic volume throughout the day.” That means that drivers who decide to drive at peak hours need not pay more than those who would drive at less congested times.

Another reason the gas tax is a sub-optimal arrangement for paying for highways is that the revenues generated from the tax are “inversely related to a truck’s weight per axle.” Trucks with more axles exert less strain on paved surfaces. Thus, a truck with many axles reduces the
cost of road maintenance. However, these kinds of trucks also “get lower fuel economy and pay higher gasoline taxes.” Truck owners have an incentive to use trucks that generate the least amount of revenue (because they are fuel-efficient) and the most amount of harm to the roads (because the trucks have fewer axles).

What might work better than a gas tax? Pricing the cost of travel during peak periods is a start, as well as implementing pavement-wear taxes based on trucks’ weight per axle. With real prices, better incentives produce a better balance between the amount of road wear, the amount of traffic, the impact on the environment, and the amount of revenue available to pay for repairs to our infrastructure.

A second example shows how pricing can work to improve the quality of infrastructure spending. London introduced a congestion charge in 2003 to reduce incentives to drive cars in the heart of the city from

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**Fig. 2** U.S. COMMERIAL DELAYS DUE TO TRAFFIC HAVE STEADILY INCREASED DESPITE MORE SPENDING ON INFRASTRUCTURE. MORE SUPPLY DOES NOT EASE DEMAND!

[Graph showing annual hours of delay by urban area type from 1982 to 2014. The graph includes very large urban areas, large urban areas, medium-sized urban areas, and small urban areas.]

Source: Congressional Budget Office based on data from the Texas Transportation Institute.

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**Fig. 3** MORE FEDERAL DOLLARS WENT TOWARD EXPANDING CAPACITY ON LOW-USE, RURAL HIGHWAYS. WHY FIX THE ROADS THAT MORE PEOPLE USE?

[Graph showing millions of annual vehicle-miles traveled per lane-mile by highway type from 1980 to 2012. The graph includes urban interstate, rural interstate, urban other federal-aid, and rural other federal-aid.]
07:00 to 18:00 during the workweek (the current cost is £11.50 per day). Recent reports suggest, “The introduction of Congestion Charging in 2003 has had a significant impact in shifting people away from using cars, contributing to an overall reduction in vehicle kilometres in London of 11% between 2000 and 2012.” What is more, the fees generated ‘paid for more than $1.7 billion in walking, bicycling and public transportation improvements.’

RULE 2: INVEST IN HIGH GROWTH AREAS

At its best, public infrastructure invigorates private enterprise by providing goods and services upon which new firms can build. Jeff Bezos, reflecting on the early days of Amazon.com, specifically describe public highway and internet infrastructure as essential to the success of his entrepreneurial experiment.10

That is the best case. The worst case for public infrastructure investments occurs when public dollars pour into exciting projects that might not be essential for overall growth. The second rule for infrastructure investment reminds policymakers not to fall for the fallacy that new and shiny is always better.

Take the Detroit People Mover (DPM) as an example. Originally conceived as a demonstration project for the United States Federal Transit Administration, the DPM began operating on July 31, 1987. Two decades after the DPM began operating the Federal Transit Administration retrospectively analyzed the project’s operating efficiency.

The study found, “for the decade 1997-2006, the People Mover’s operational costs exceeded $3 per passenger mile every year and topped $5 per passenger mile for five of those years. In 1999, it spiked to $14.64 [per passenger mile]. Consider that New York City’s famously efficient subways regularly run at around 30 cents per passenger mile and that most of Michigan’s largest city bus systems do the job for around $1 or less— including the Detroit Department of Transportation buses that run within the People Mover’s route.”

Indeed, recent estimates show that “fares from riders contributed just 7 percent of the People Mover’s operating costs.” Much of the explanation behind the DPM’s difficulties lies not with bad intentions or a failure to build a flashy new public transit system, but rather bad demographics. Since the DPM was build, Detroit’s population has shrunk nearly by half, making the economics of the project less desirable.

Investing in infrastructure for growing product areas or geographies makes economic sense. Larger populations can mean lower average and marginal costs. The trouble with directing public investment to those areas with the most promise, of course, is that the gains from such investments are not as widely shared as the lawmakers who enact the policy wish.

WILL MYTHS TRUMP RULES?

The United States appears poised to make important decisions about public infrastructure investment. President-elect Donald Trump would do well to sort out the myths of spending and focus on simple rules to make efficient decisions.

Donald, if you are reading, we hope that you consider attaching prices to public investment. We hope further that you direct those public dollars toward geographies or industries which are growing, not declining. Finally, we hope that you acknowledge that while there is often market failure, there is just as often government failure. Writing infrastructure bills that begin from myth-free premises and contemplate the rules we describe might help us avoid to avoid wasting precious taxpayer dollars.

SOURCES

1 The fiscal multiplier is macroeconomics lingo for the impact of fiscal stimulus on total economic output. For example, if $100 billion in new fiscal stimulus generates $150 billion in net, new gross domestic product, the fiscal multiplier is said to be 1.5. As with most things in macroeconomics, there is widespread disagreement on the size of the fiscal multiplier, with some economists arguing the multiplier is actually negative (implying fiscal spending reduces economic output).
6 Ibid. pg 65
7 Ibid. pg 65
8 Transport for London, Impact Assessment
9 Nelson, Laura (Mar 2015). “MTA’s toll-lane project may be a victim of its own success.” LA Times
10 Jeff Bezos (Oct 2016). “Walter Isaacson sits down with Amazon CEO Jeff Bezos at the Aspen Institute.” youtube.com
12 Gantert, Tim (Feb 2011). “Pricey pensions for Detroit’s roller-coaster for rich people.” Spero News