CENTER
for
LARGE LANDSCAPE
CONSERVATION

Lessons Learned from America's Last Great Investment in Infrastructure:

The Value of the American Recovery and Reinvestment Act of 2009 for the Economy, Jobs, Roads and other Transportation Infrastructure

By Abigail Breuer

November 2019

The Center for Large Landscape Conservation
P.O. Box 1587, Bozeman, MT 59771 • 406.586.8082
www.largelandscapes.org

Introduction

As the U.S. Congress and the Trump Administration consider new transportation infrastructure legislation in 2019 and 2020, a review of recent information from previous investments might inform the future use of public funds to improve and repair the nation's highways, railways, seaports and airports. Other benefits include accelerated economic growth, the provision of above average wages and the creation of additional skilled and unskilled jobs.

Analyses of the American Recovery and Reinvestment Act of 2009 (Recovery Act) show that public investment in the transport sector results in multiple dividends. Improving the quality and expanding the capacity of highways, airports, railways, and bus systems increases the efficiency of commerce, connects new areas to markets, reduces congestion for commuters, and creates jobs that reach far beyond the construction industry.

The U.S. Congress enacted the Recovery Act, "[i]n response to what is generally believed to be the country's worst economic downturn since the Great Depression."[1] In order to create jobs, promote economic recovery, and invest in transportation and other infrastructure to provide long-term economic benefit, the Act provided more than $48 billion for transportation investment in early 2009.[1]

> *"The empirical success of the Recovery Act is a testament to both the need for, and promise of, additional federal spending in America's transportation infrastructure. The Recovery Act shows the tangible results of a significant, quantifiable investment portfolio, and the ways that different types of programs can deliver results."*[2]

Below, this summary highlights the economic, infrastructure and jobs impacts of the Recovery Act.

Impact on the Economy

The 2009 Recovery Act was geared to inject money into the economy quickly, favoring 'shovel ready' transportation projects among other types of spending. States were required to obligate one-half of highway and transit funds within the law's first 120 days, and the remainder during the first year. Projects that could be completed within three years and located in economically-distressed areas were given priority in order to maximize impact.[1]

While projections of potential impacts were heavily disputed at the time, follow up reports by the nonpartisan Congressional Budget Office (CBO), the White House, and independent economists describe overwhelmingly positive results, with variation in degree. Analyses by each of these entities follow below.

According to the final analysis of the CBO, under the Recovery Act from 2009-2015:[3]

- GDP increased at least 0.1% each year, and by up to 4.1% (2010) and 2.3% (2011) when spending was greatest;
- Unemployment was reduced each year by at least 0.1 percentage point and as much as 1.8 and 1.4 percentage points in 2010 and 2011, respectively;
- Employment grew by at least 600,000 job-years (years of full-time equivalent employment) in 2010 and 2011, and between 2.1 and 11.6 million job-years over the full period.

According to the White House (2016):[4]

- *"[T]he Recovery Act raised U.S. GDP by over 3 percent—or roughly $500 billion—in 2010 alone, lowering the unemployment rate by 1.4 percentage points that year. From 2009 to 2014, this raised employment by almost 6 million job-years (years of full-time equivalent employment)."*
- *"Each dollar of the Recovery Act increased total economic output cumulatively by more than $1.30 between 2009 and 2013, reflecting ripple effects as the recovery measures passed through to—and helped stabilize—the broader economy."*

According to Mark Zandi of Moody's Analytics and Alan Blinder of Princeton University (2010):[5]

- *"[T]he effects of the fiscal stimulus alone appear very substantial, raising 2010 real GDP by about 3.4%, holding the unemployment rate about 1.5 percentage points lower, and adding almost 2.7 million jobs to U.S. payrolls."*

Impact on Transportation Infrastructure

The Recovery Act is notable for improving ride quality on highways, with mileage traveled on roads in good condition 2 percentage points higher in 2014 than in 2008. Bridge quality—measured by the reduction in structurally deficient bridge area—improved twice as much from 2008-2014 as it had during the prior 6-year period.[6]

Recovery Act funds:

> *"…supported immediate-term investments, such as repairing roads and bridges and upgrading runways in need of maintenance, ultimately reducing a substantial backlog of transportation maintenance projects, and provided a significant down payment toward our nation's transportation infrastructure deficit. Recovery Act funds also supported longer-term investments designed to spur transformative projects like intermodal hubs to connect metropolitan regions, solutions to freight bottlenecks, and high-speed rail corridors to connect key markets."*[6]

Under its provisions, the Act:[6]

- Improved over 42,000 miles of road through resurfacing, widening or other rehabilitation, and improved or replaced more than 2700 bridges.
- Expanded or rehabilitated 850 transit facilities, and purchased 11,500 buses and 665 rail cars.
- Supported over 800 airport projects to improve runways and air traffic control towers and systems.

- Provided the largest investment in high-speed rail funding in the nation's history, leading to the construction or improvement of 6,000 miles of high-performance passenger rail corridors and procurement of 120 next-generation rail cars or locomotives.

Progress on backlogs of shovel-ready projects took place across the country, from 1154 ($6,971.51M) projects in California to 47 ($139.45M) in Delaware.[6] *"California funded its entire list of shovel-ready projects and began new construction projects. Other states reported being able to complete projects that had been planned but lacked sufficient funding."*[1] Examples include highway interchange and expansion projects in Virginia, Texas, Florida and Washington, and a pedestrian and bike footbridge in Massachusetts. Priorities included reducing congestion, improving freight and cargo movement, and connecting economically disadvantaged communities. Further, forward-thinking investment in high-speed rail improvements reached across 24 states and the District of Columbia.[6]

Impact on Jobs

The Recovery Act enabled states to invest in infrastructure at a time of historically high unemployment in the construction industry, and while the transportation sector was also hard hit.[1] Construction jobs accounted for one-third of the jobs lost under the Great Recession and remained 1.5 million below their pre-recession level in 2012. Yet, they increased during each year of the Recovery Act.[7] Recovery Act transportation projects supported between 31,460 and 65,110 full time equivalents (FTEs) each quarter from October 1, 2009, through March 31, 2011. These figures reflect jobs funded directly by the Act, and leave out the considerable impact on suppliers (indirect jobs) and communities (induced jobs).[1] As described earlier (see *Impact on the Economy*), the Recovery Act added between 2.1 and 11.6 million job-years (years of full-time equivalent employment) from 2009-2014.[3]

Research suggests trade and logistics jobs should be considered an integral part of infrastructure investment: "*Truck drivers, electricians, and civil engineers are among the occupations employing the most [infrastructure] workers overall, the broad majority of whom (77 percent) focus on operating infrastructure rather than its construction (15 percent), design (6 percent), or governance (2 percent)."*[7] For this reason, it is quite likely that infrastructure investment has a wider impact than most policymakers realize due to effects beyond the construction industry.

In 2012, 14.2 million workers were employed in infrastructure jobs, which made up 11% of U.S. employment. The top four infrastructure jobs employed 5.1 million workers: hand laborers, freight, stock and material movers (2.14M), heavy truck drivers (1.56M), light truck drivers (0.76M), and hand packers and packagers (0.66M). Compared to other occupations, infrastructure jobs pay as much as 30% more to lower income workers, who earn significantly more at the 10th and 25th percentiles in infrastructure jobs than in other occupations. Further, infrastructure jobs frequently pay higher wages than the national median. Only 12% of workers in infrastructure hold a bachelor's degree or above, reducing a common barrier to higher-waged employment.[7]

Summary

In sum, the 2009 Recovery Act led to considerable improvement in the economy, jobs and the quality of transportation infrastructure from 2009-2014. By nonpartisan estimates:

- GDP increased at least 0.1% each year, and by a high of 4.1% and 2.3% in 2010 and 2011, respectively;[3]
- Unemployment was reduced each year by at least 0.1 percentage point and as much as 1.8 and 1.4 percentage points in 2010 and 2011, respectively;[3]
- Employment grew by at least 600,000 job-years (years of full-time equivalent employment) in 2010 and 2011, and between 2.1 and 11.6 million job-years over the full period.[3]
- Bridge quality improved twice as much from 2008-2014 as it had during the prior 6-year period.[6]
- Highway ride quality was more than 2 percentage points higher in 2014 than in 2008.[6]

Public investment in transportation infrastructure not only supports commerce and improves the daily lives of Americans, but also resonates throughout the economy through job creation. As much as 77% of infrastructure jobs are in occupations related to operations, rather than in construction. Since documentation and reporting was an integral part of the 2009 Recovery Act, it provides excellent information to assist lawmakers as they contemplate America's Transportation Infrastructure Act and other infrastructure-focused legislation.

References

1. U.S. Government Accountability Office. 2011. Report to Congress. No. 11-600. Recovery Act: Funding Used for Transportation Infrastructure Projects, but Some Requirements Proved Challenging. Washington, D.C.

2. S. Lew and J. Porcari. Feb 22, 2017. Eight Years Later: What the Recovery Act Taught Us about Investing in Transportation. The Avenue. Brookings Institution. https://www.brookings.edu/blog/the-avenue/2017/02/22/eight-years-later-what-the-recovery-act-taught-us/

3. Congressional Budget Office. 2015. Estimated Impact of the American Recovery and Reinvestment Act on Employment and Economic Output in 2014. Washington, D.C.

4. The White House. Feb 25, 2016. Fact Sheet: Seven Years Ago, the American Recovery and Reinvestment Act Helped Bring Our Economy Back from the Brink of a Second Great Depression. Office of the Press Secretary. https://obamawhitehouse.archives.gov/the-press-office/2016/02/25/fact-sheet-seven-years-ago-american-recovery-and-reinvestment-act-helped

5. A. Blindi and M. Zanders. 2010. White Paper. How the Great Recession Was Brought to an End.

6. U.S. Department of Transportation. 2017. Shovel Worthy: The Lasting Impacts of the American Recovery and Reinvestment Act on America’s Transportation Infrastructure. Washington, D.C.

7. J. Kane and R. Puentes. 2014. Beyond Shovel-Ready: The Extent and Impact of U.S. Infrastructure Jobs. Metropolitan Policy Program. Brookings Institution: Washington, D.C.

The Center for Large Landscape Conservation
P.O. Box 1587, Bozeman, MT 59771 • 406.586.8082
www.largelandscapes.org