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MANUFACTURING IN THE USA: PAVING THE ROAD TO JOB CREATION

HEARING

BEFORE THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

ONE HUNDRED TWELFTH CONGRESS

FIRST SESSION

NOVEMBER 16, 2011

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MANUFACTURING IN THE USA: PAVING THE ROAD TO JOB CREATION

WEDNESDAY, NOVEMBER 16, 2011

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to call, at 2:07 p.m. in Room 216 of the Hart Senate Office Building, the Honorable Robert P. Casey, Jr., Chairman, presiding.

Senators present: Casey and Klobuchar.

Representatives present: Brady, Burgess, Campbell, Mulvaney, and Hinchey.

Staff present: Gail Cohen, Will Hansen, Colleen Healy, Jesse Hervitz, Dan Neumann, Brian Phillips, Christina Forsberg, and Jeff Schlagenhauf.

OPENING STATEMENT OF HON. ROBERT P. CASEY, JR., CHAIRMAN, A U.S. SENATOR FROM PENNSYLVANIA

Chairman Casey. We will get started. The hearing will come to order. I want to thank our witnesses. First, let me say an apology for being late. We have House Members who are here. They had a longer distance to travel and they were here on time, so our Vice Chairman was leading that team.

I will present an opening statement, and then our Vice Chairman Brady will as well, and then we will get to our witnesses. But I am grateful to our witnesses for being here, for your presence, your testimony and the experience and scholarship that you bring to these issues.

Today's hearing is the fourth in a series by the Joint Economic Committee that we have been holding, to determine the best strategies for revitalizing manufacturing in the United States of America. Previously, we looked at how trade policies affect manufacturing, and the need for a comprehensive national manufacturing strategy. We also looked at the importance of job training and preparing our workers to compete in a global economy.

With today's hearing, we will examine the positive impact that infrastructure investment would have on economic growth and job creation in the manufacturing sector. When the economy is operating below full capacity, investing in infrastructure boosts aggregate demand and paves the way for long-term economic growth.

In the immediate term, I should say, rebuilding roads and bridges and improving and modernizing our ports and airports will create needed construction and manufacturing jobs. These sectors,

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which were hardest-hit in the Great Recession, are also the ones that most positively are impacted by an infrastructure investment.

In the longer term, improving our infrastructure will help strengthen our Nation's competitiveness, by enabling producers to move their products to market more quickly and at less cost. Since manufacturers rely upon roads, rails and ports to transport their goods domestically, and to export abroad, infrastructure improvements will have a significant, positive impact on U.S. manufacturers.

The U.S. has underinvested in infrastructure. That's an understatement. I'm not sure many people would contest that. The United States spends just two percent, just two percent of gross domestic product on infrastructure, half of what we spent in the year 1960. We also invest far less than our international competitors. China spends nine percent of GDP, not two percent, nine percent of GDP on infrastructure, and Europe is at five percent.

The quality of U.S. infrastructure is poor, ranking 23rd in the world behind countries such as Spain and Chile. In fact, the American Society of Civil Engineers has identified up to $2 trillion, that's with a 'T', $2 trillion of infrastructure investments needed to get back on equal footing with competitors abroad. I don't think there is anyone on this Committee who would say we can afford $2 trillion today. But I would also assert that we cannot afford not to begin to invest in infrastructure, and we certainly cannot afford to do nothing.

While private sector funding on infrastructure projects is across the board, there have been many worthy projects that simply won't deliver the financial return required by the private sector, but will deliver enormous benefits to the public and should go forward.

The role for the Federal Government is even greater today than is typically the case. Normally, state and local governments shoulder about three-quarters of the cost of infrastructure projects. But state and local governments are continuing to feel the effects of the Great Recession, contending with reduced revenues and increased spending on other services.

There is a great deal of research showing that infrastructure investments are highly efficient in the use of federal funding. The Congressional Budget Office cites infrastructure spending as one of the most effective policies for boosting both growth and employment. Moody's Analytics estimates that every dollar of infrastructure spending leads to $1.44 of increases in GDP, the usual bang for the buck analysis. You spend a buck, what do you get in return? Infrastructure. Spend a buck, you get a buck-44 in return.

The Treasury Department and the Council of Economic Advisers analysis found that 61 percent of jobs created by infrastructure investment would be in construction, and 12 percent would be in manufacturing. So more infrastructure investments are needed to boost demand, put skilled construction and manufacturing workers back to work, and ensure that U.S. companies have the physical infrastructure needed to compete against international competitors.

Just by way of example, in my home State of Pennsylvania, the Delaware River Deepening Project is the kind of infrastructure project that we should fund. By deepening the main channel of the Delaware River, providing access to the Port of Philadelphia for

larger vessels, we can bring down transportation costs for business, increase productivity, boost exports and increase jobs in the region.

In addition to making U.S. products more competitive around the globe, this project would create thousands of construction jobs immediately, and lead to more than 1,000 long term jobs through the increased activity at the Port of Philadelphia. I'm sure other members could cite projects in their own states and their own districts.

Other traditional infrastructure repairs are also badly needed. More than a quarter of the bridges in Pennsylvania are structurally deficient, with a staggering 23 million vehicles passing over a deficient bridge in a state like ours each and every day.

Nationwide, there are more than 69,000 bridges in need of repair—69,000. To delay rebuilding our rails, roads and bridges would be short-sighted, costing our economy jobs in the short run and eroding our competitive position in the long term. Unfortunately, that is precisely what the Senate did earlier this month, when on party lines it voted down legislation that would have invested in our Nation's infrastructure, by creating an Infrastructure Bank, in addition to other provisions in the bill.

We must figure out a bipartisan path forward in the months ahead on infrastructure, not to mention so many other priorities. Today, we are fortunate to have a distinguished panel of experts who have deep knowledge of infrastructure investments, thoughtful ideas on where the U.S. should invest, and useful analysis of how the U.S. competes and how we compare to our competitors across the globe.

So I want to thank our witnesses. We are going to get to you in a moment, I look forward to your testimony, but I would turn the microphone now to Vice Chairman Brady.

OPENING STATEMENT OF HON. KEVIN BRADY, VICE CHAIRMAN, A U.S. REPRESENTATIVE FROM TEXAS

Vice Chairman Brady. Thank you, Chairman Casey, for convening this important hearing. I want to welcome our witnesses as well. A good infrastructure is vitally important to the U.S. economy, providing Americans with millions of miles of roads, hundreds of thousands of bridges, tens of thousands of airports, dams, waterways and transit lines, and hundreds of train stations and ports.

Pro-growth policies such as low taxes, balanced regulation and free market innovations drive the need for additional infrastructure in America. As a former local Chamber of Commerce executive, I can attest to the need for infrastructure, as a critical precursor to spark economic development and attract businesses in communities large and small across America.

Though America's infrastructure remains among the most advanced in the world, the American Society of Civil Engineers gave our infrastructure a letter grade D, highlighting we have a long way to go until we can meet the current and future infrastructure needs of our growing country.

The manufacturing sector is a critical input in infrastructure, with the provision of raw materials, industrial equipment, and the manufacturing sector is the beneficiary. It relies on the Nation's infrastructure to transport goods to compete in the global economy.

In fact, the manufacturing sectors open up the prospect for major energy infrastructure development.

An excellent opportunity for long-term economic growth exists today in the form of the Keystone XL pipeline, from Alberta to Texas, which would result in at least 20,000 new jobs affiliated with the pipeline. Long-term investment in infrastructure will help American manufacturing, including energy manufacturing, remain internationally competitive. Mr. President, I hope you would stop delaying these needed 20,000 American jobs.

No one disputes the value of good infrastructure. However, planning and building infrastructure takes years, sometimes decades. Higher infrastructure spending cannot create a significant number of jobs in the near term. President Obama himself remarked months ago, "shovel-ready was not as shovel ready as we expected."

According to the Federal Highway Administration, the federal project delivery process can take up to 15 years, from planning through construction. Environmental regulations and constraints on federal funding can extend this time line even farther, resulting in costly delays and routine cost overruns.

The current system of federal infrastructure spending is inefficient. U.S. taxpayers are not getting good value for their dollars that they are currently spending on infrastructure. Research over the past decade indicates that the growth benefits from federal infrastructure spending have been extremely low. The current system of federal infrastructure spending is broken, and must be fixed to make smart investments in good infrastructure projects.

As an example, the GAO reviewed the Department of Transportation's system of 6,000 employees administering over 100 separate surface transportation programs, with separate funding streams for highway, transit, rail and safety functions. The GAO determined this system was extremely fragmented, and lacked accountability, impeding effective decision-making and limiting the ability to provide solutions to complex challenges.

Analysis by the National Surface Transportation Policy and Revenue Committee found the project that should cost $500 million would actually take 14 years to complete and cost twice as much, due to the impact of delays and inflation. Examples already abound at the state level of diverted funds originally allocated to infrastructure, going to other budget items suspended or altogether forfeited.

All too frequently infrastructure funding fails to reach high-priority projects, diverted instead to projects with little or no real benefit. Federal regulations, such as project labor agreements, high road contracting, Buy American provisions and the Davis-Bacon Act have unnecessarily increased the cost and lengthened the completion time of infrastructure projects.

For example, the Davis-Bacon Act's prevailing wage requirements have led contractors to pay an average of 22 percent above the market wage rates, and have bogged down contractors with extra paperwork. An environmental impact statement alone can take up to two years to complete. Major infrastructure projects often require the approval of other federal agencies, such as the U.S. Fish and Wildlife Service, the Advisory Council on Historic Preservation and the U.S. Army Corps of Engineers.

For the good of manufacturing, infrastructure, and American workers, federal regulators must consider how both proposed new rules and the cumulative burden of existing rules, affect the ability of American businesses to create jobs at home by selling in global markets. Federal regulators must also begin to perform retrospective analysis, to determine if existing regulations are meeting their goals in cost-effective ways.

Congress should make it easier for the private sector to invest in transportation infrastructure, reducing the stress on already cash-strapped federal resources. Major economies worldwide have demonstrated success in partially and fully privatized roads, water and sewage systems, seaports and airports. America is behind the times when it comes to involving private capital in infrastructure development.

The United States is capable of keeping up with other countries and excelling as the leader in infrastructure development. We strive to achieve an "A" in infrastructure, by addressing the systemic problems with our current means of funding infrastructure, in conjunction with reform of burdensome regulations that impede the ability, both public and private provisions of infrastructure.

Mr. Chairman, thank you and I look forward to the witness' testimony.

[The prepared statement of Representative Brady appears in the Submissions for the Record on page 30.]

Chairman Casey. Thank you, Vice Chairman Brady. I will provide a brief introduction of our witnesses, and then we will get right to their testimony. We do have a distinguished panel. First of all, I would like to introduce Mr. Andrew Herrmann, a principal with Hardesty and Hanover, LLP and president of the American Society of Civil Engineers. Mr. Herrmann's experience includes design, inspection, rehabilitation, and construction, along with managing some of the firm's major bridge projects. He is a registered professional engineer in 29 states and Ontario, and is a resident of Pittsburgh, Pennsylvania. That, of course, is a good helper for you here today. We are grateful you are here. Thank you so much. The Vice Chairman knows that we invite Pennsylvanians once in a while. We get some Texans too.

Next, we have Dr. Veronica de Rugy, and she is the senior research fellow at the Mercatus Center at George Mason University. She was previously a resident fellow at the American Enterprise Institute, a policy analyst at the Cato Institute, and a research fellow at the Atlas Economic Research Foundation.

Her primary research interests include the federal budget, homeland security, taxation, tax competition and financial privacy issues. Doctor, thank you for being here. That is quite a lineup of tough issues. Thank you.

Next, Mr. Chris Edwards is the Director of Tax Policy Studies at Cato. He is an expert on federal and state tax and budget issues. Before joining Cato, Mr. Edwards was a senior economist on the Congressional Joint Economic Committee, a manager with PriceWaterhouseCoopers, and an economist with the Tax Foundation. Thank you very much, Mr. Edwards, for being here, and I guess I should say welcome back.

Mr. Robert Puentes is a fellow with the Brookings Institution, Metropolitan Policy Program, where he also directs the program's Metropolitan Infrastructure Initiative. His work focus is on the broad array of policies and issues related to metropolitan growth and development.

He is an expert on transportation and infrastructure, urban planning, growth management, suburban issues and housing. He is also an affiliated professor with the Georgetown University's Public Policy Institute. Mr. Puentes, thank you for being here.

So we will start with Mr. Herrmann and we will go from my left to right. Thank you very much. Oh, and I should say before you start, if you have a longer statement, it will be made part of the record, and if you could try to keep the summary of your remarks or any comments you make to within a five minute time period. Thank you.

STATEMENT OF MR. ANDREW HERRMANN, PRESIDENT, AMERICAN SOCIETY OF CIVIL ENGINEERS, WASHINGTON, DC

Mr. Herrmann. Thank you. Mr. Chairman, Members of the Committee, my name is Andrew Herrmann, and I am the president of the American Society of Civil Engineers. It is an honor for me to appear before this Committee to discuss the critical link between our Nation's infrastructure and the Nation's economic competitiveness, specifically as it relates to the vital American manufacturing sector.

ASCE's 2009 report card for America's infrastructure gave an overall grade of D for 15 of the Nation's essential infrastructure categories, and estimated that a total of $2.2 trillion would be needed to bring these categories into a state of good repair. More specifically, the report card assessed that the Nation's roads should receive a grade of D minus, its bridges a C, and transit a D.

If the Nation continues to underinvest in infrastructure and ignores this backlog until systems fail, we'll incur even greater costs and risk public safety. Money invested in essential public works can create jobs, provide for economic growth and ensure public safety through a modern, well-engineered national infrastructure.

For example, the Nation's transportation infrastructure systems have an annual output of $120 billion in construction work, while also contributing $244 billion in total economic activity to the Nation's gross domestic product.

These economic benefits translate into real jobs as well. The Federal Highway Administration estimates that every $1 billion invested in the Nation's highways supports almost 28,000 jobs, including over 9,000 onsite construction jobs, over 4,000 jobs in supplier industries, and nearly 14,000 jobs throughout the rest of the economy.

Equally as important as infrastructure's job creation potential are the economic benefits to a region's long-term growth and productivity. This past July, ASCE released the first in a series of economic studies, which measured the impacts to the economy in 2020 and 2040, if the Nation maintains just current levels of surface transportation investments.

Other pending studies, which will be coming out as the year progresses, will address water and waste water, energy transmission

and air and marine ports. The present study, entitled Failure to Act found that if investments in transportation are not made in conjunction with significant policy reforms, families will have a lower standard of living, businesses will be paying more and producing less, and our Nation will continue to lose ground in the global economy.

The results show that the Nation's deteriorating surface transportation will cost the American economy more than 876,000 jobs, and suppress the growth of the Nation's GDP by almost $900 billion in 2020. The study results also estimate that more than 100,000 manufacturing jobs will be lost by 2020.

Failure to Act also assesses how a failing infrastructure will drive up the cost for businesses by adding $430 billion to transportation costs in the next decade. It will cost firms more to ship finished goods and needed raw materials will cost more due to increased transportation costs.

Lastly, the report shows that productivity will fall, with businesses underperforming by $240 billion over the next decade. As a result, U.S. exports will fall by $28 billion in key sectors. In particular, 10 sectors of the U.S. economy will account for more than half of this unprecedented loss in export value—among them, key manufacturing sectors, including communications equipment, medical devices, and machinery.

In contrast, the study from the Alliance for American Manufacturing shows that roughly 18,000 new manufacturing jobs are created for every $1 billion in new infrastructure spending. These jobs will be created in fabricated metals, concrete, cement, glass, rubber, plastic, steel and wood product industries.

Furthermore, that same study shows that using American-made materials for these infrastructure products yields a total of 77,000 additional jobs, based on investment of $148 billion a year. By making infrastructure investments now, the Nation can grow the economy. Failure to Act estimates that in order to bring the Nation's surface transportation up to a grade of B from its D, policy makers would need to invest approximately $1.7 trillion between now and 2020 in the Nation's highways and transit systems.

The U.S. is currently on track to only spend a portion of that, a projected $877 billion during the same time frame. However, by making these investments in infrastructure at this critical time, the Nation could protect nearly 1.1 million jobs, relieve congestion and grow the economy.

ASCE looks forward to working with Congress as it develops legislation which brings the Nation's infrastructure into the 21st century. For instance, by updating, maintaining and building our roads, bridges and transit systems, the Nation can create jobs in both the public and private sector, while fostering and growing manufacturing in the United States.

Therefore, the first step towards a modernized transportation system must include passing a multi-year surface transportation authorization at or above the current levels of investment, followed by legislation funding other critical infrastructure needs.

Thank you. I would be happy to answer any questions.

[The prepared statement of Mr. Andrew Herrmann appears in the Submissions for the Record on page 32.]

Chairman Casey. Thanks very much. Dr. de Rugy.

STATEMENT OF DR. VERONIQUE de RUGY, SENIOR RESEARCH FELLOW, MERCATUS CENTER AT GEORGE MASON UNIVERSITY, ARLINGTON, VA

Dr. de Rugy. Good afternoon, Chairman Casey, Vice Chairman Brady and members of the Committee. It is a privilege to be here today to discuss the important topic of government-funded infrastructure spending and economic growth. My name is Veronique de Rugy. I am a senior research fellow at the Mercatus Center at George Mason University, where I study budget and tax issue.

In my written testimony, I make three points. First, infrastructure spending is a particularly bad way to stimulate the economy. Second, while no one disputes the value of good infrastructure, public work projects typically suffer from massive cost overruns, and hence rarely make for good investments.

Third, the Federal Government shouldn't be in the business of overseeing the construction of infrastructure. Privatization and state government public-private partnership are better alternative. In my oral testimony, however, I would like to focus on the misconception that infrastructure spending can create jobs. This morning on NPR, Jerry Bernstein, a former economist at the Council of Economic Advisers, explained that Keynesian economics amounts to the government doing all it can to foster job creation.

Bernstein then described the President's America Jobs Act, which includes $60 billion for infrastructure spending, as precisely the right way to help grow the economy and create jobs. Unfortunately, the evidence suggests otherwise. My colleague Matt Mitchell and I just finished a research project that looks specifically at this question, and here is what we find.

First, there is no consensus among economists about the ability of stimulus to boost the economy, and there's no consensus that this is actually the number. Moreover, the studies that find that such spending is effective assume conditions that are not found in the U.S. right now, such as low debt level. We don't have this right now. Fixed exchange rates, we certainly don't have this right now, and lower levels of government spending. We don't have this right now.

Second, the greatest problem with infrastructure spending as stimulus is the way it's implemented. In a perfect Keynesian world, stimulus spending needs to be timely, targeted and temporary. Infrastructure spending fails to satisfy these criteria. Infrastructure spending is not timely. Even when the money is available, it can be months, if not years before it is spent. It is because infrastructure projects involving planning, bidding, contracting, construction and evaluation.

Second, the only thing harder than getting the money out the door promptly is properly targeting spending for stimulative effect. The idea is to give the money a jolt, the economy a jolt by employing idle resources, firm and equipment, while data from recovery dug up showed that the stimulus money in the most recent bill, in general, and infrastructure funds in particular, wasn't targeted to those areas with the highest rate of unemployment.

However, there is also evidence that even properly targeted infrastructure spending would fail to stimulate the economy. Many of the areas hardest hit by the recession are in decline, because they have been producing goods and services that are not and may never be in great demand. Building or improving the roads and other infrastructure in these areas won't change the structural factors behind their decline.

Finally, infrastructure spending isn't temporary. Even in Keynesian models, stimulus is only effective as a short-run measure. In fact, Keynesians also call for surpluses during an upswing. In reality, however, the political process prefers to implement the first Keynesian prescription, deficit, but not the second one, surpluses to pay off the debt.

The inevitable result is a persistent deficit that year-in and year-out, adds to the National debt. This is important because as former Presidential economic advisor Lawrence Summers has argued, fiscal stimulus "can be counterproductive if it is not timely targeted and temporary." As I've explained, infrastructure spending simply does not meet those criteria.

Now even if we could somehow do a better job at implementing the spending, other factor would get in the way of job creation, things like the prevailing wage requirements, because they often impose financial costs through increased wage for construction project.

According to economists Garrett Jones and Dan Rothschild, in the case of the last stimulus, this increasing cost may have prevented the creation of 55,000 jobs. In their words, the difference between the market wage and the required Davis-Bacon wage represent, from a Keynesian perspective, a lost opportunity for job creation.

So basically, if you are a Keynesian economist, you really want to do away with prevailing wage requirement. To conclude, economists have long-recognized the value of infrastructure, roads, bridges, airports or waterways are the conduit through which goods are exchanged. In many circumstances, private firms should be the one providing this infrastructure. In other cases, there may be a role for public provision at the local level.

But whatever its merits, infrastructure spending won't provide much of a stimulus, particularly not the sustainable job the Nation needs. In fact, it may even make it worse. Thank you.

[The prepared statement of Dr. Veronique de Rugy appears in the Submissions for the Record on page 38.]

Chairman Casey. Thank you, Doctor. Mr. Edwards.

STATEMENT OF MR. CHRIS EDWARDS, DIRECTOR OF TAX POLICY STUDIES, CATO INSTITUTE, WASHINGTON, DC

Mr. Edwards. Thank you very much, Chairman Casey, for having me testify today. In the description of today's hearing, the Committee asked how infrastructure can help promote jobs growth in manufacturing. The short answer to that is that we can spur growth in jobs and manufacturing by making infrastructure spending as efficient as possible.

Infrastructure spending should go to the highest value projects, and it should be constructed and maintained in the most efficient

manner. In my view, we can do that by reducing the federal role in infrastructure, to increase the efficiency of our investment.

Let's take a look at the overall data. Most infrastructure spending in the United States is by the private sector. Department of Commerce data shows that private sector infrastructure spending is more than four times greater than government infrastructure spending by all levels of government in the United States, about $1.7 trillion a year, to about $400 billion in the government sector. So my takeaway from that is the first thing we should do is remove hurdles to private sector infrastructure investment.

The second point I would make, and unfortunately it contradicts something you said, Senator Casey. If you look at OECD data, they've got a new report out on infrastructure. It shows that U.S. government infrastructure spending is about the same share of the economy as the average in the OECD, about 3.5 percent of GDP. So I'm happy to compare notes with your staff on that. But I don't think we're underinvesting compared to other countries.

Most of looking just at the Federal Government, most federal infrastructure spending, in my view, is really properly state, local and private sort of activities. Our urban transit systems, highways, community development and that sort of stuff. The biggest problem I see with federal involvement in infrastructure spending is that the Federal Government makes mistakes, and it replicates those mistakes across the country.

So you can look historically at something like the huge federal involvement in public housing construction during the mid-20th century. It was a disaster. The Federal Government built these massive high-rise public housing structures in dozens of cities across the country. Everyone agrees now it was a disaster.

The problem is that because of federal involvement, every city made that same mistake. You can see the same sort of thing going on now with high speed rail. If California, in my view, wants to spend its own money, its own taxpayer money to finance its own high speed rail system, great. I think it's a bit of an economic boondoggle. But the problem with federal involvement is it takes money and induces states to make that same mistake over and over.

The states, in my view, should be laboratories of democracy and laboratories of innovation and infrastructure, and a big exciting thing in the area of infrastructure, as Veronique mentioned, is public-private partnerships and privatization. This has swept the world. Unfortunately, the United States is a laggard in this, but there's all kinds of exciting projects being done even in the United States.

I'll point to one, which I think is very interesting. Down in Chesapeake, Virginia, an engineering company, FIGG engineering, is building a $100 million bridge across the Elizabeth River down there. The old bridge had run out of its useful life. This private company came to the city and said, you know, we want to build a new bridge. It's completely owned and financed, $100 million project, and looking on the Web site it's really a beautiful project.

So it's complete privatization. It seems to me we ought to be doing that sort of thing where we can. The OECD notes that the United States lags far behind Australia, Canada and other countries on privatization and PPPs for roads and bridges and that sort

of stuff. There's an infrastructure magazine called Public Works Financing that looks at these PPP and privatization projects.

Of the 40 biggest companies in the world doing this sort of privatization for infrastructure, only two of the 40 are American, which I think is really unfortunate, and the United States has less of these sort of privatized infrastructure projects even than Canada, which has a population only one-tenth of ours.

One big advantage, it seems to me, of privatizing the infrastructure is that infrastructure will get a more stable financing source. If you look at our air traffic control system in this country, it's really—it has a very unstable financing. Congress keeps fighting over the level of financing for air traffic control, which is of course a crucial thing.

I would suggest Canada as a model here. Canada privatized its air traffic control system 15 years ago. It's a self-funded, non-profit corporation. It's got government and labor on the board of directors. It works extremely well. It's won international awards, and the funding source is stable, because they don't rely on government subsidies.

The Brookings Institution actually has a very good new report out on PPP, privatization of infrastructure, which I would recommend your staff take a look at. So to conclude, the Committee asked how can infrastructure help U.S. manufacturing, and how can it help us be competitive in the global economy?

That is a crucial question. You know, I am very concerned when our manufacturing is getting hit from around the world, when there are things we could be doing to make our manufacturing more competitive. I think privatizing infrastructure is one way to go here. You mentioned the World Economic Forum rankings on U.S. competitiveness.

To give you one example, the World Economic Forum puts U.S. and American seaports 23rd in the world, which is about right. The Maritime Administration, MARAD, has the same sort of assessment of U.S. seaports. Well U.S. seaports are almost all owned by state and local governments. There are, by contrast, privatized seaports around the world, which do very well in Britain and Hong Kong and other places, and indeed, the two highest, the first and third highest-ranked seaports in the world, according to the World Economic Forum, are in Singapore and Hong Kong, and those seaports are completely private.

So I think we can get quality infrastructure in the private sector. Governments can't afford infrastructure much anymore because of the giant deficits they're running.

So let's look at these experiments going on around the world, and see what we can adopt here in the United States. Thank you.

[The prepared statement of Mr. Chris Edwards appears in the Submissions for the Record on page 44.]

Chairman Casey. Thanks, Mr. Edwards. Mr. Puentes.

STATEMENT OF MR. ROBERT PUENTES, SENIOR FELLOW, METROPOLITAN POLICY PROGRAM, BROOKINGS INSTITUTION, WASHINGTON, DC

Mr. Puentes. Thank you very much, Chairman Casey, Vice Chairman Brady and Members of the Committee. I am pleased to be here today. I very much appreciate the invitation.

Throughout most of our Nation's history, I think we have always had a clear understanding of the role of strategic investments in our physical infrastructure in advancing the American economy.

But the conversation, I think, has new meaning today, because the understanding now seems to be that we are too broke, both financially and in spirit, to make similar investments in our Nation's economic future, or to beset by various political, regulatory or institutional barriers, to get anything really important done.

I don't think we should let this be the case. Today, we really need targeted and smart ways to drive economic growth, create jobs, restore fiscal health and regain our lead in manufacturing, innovation and productivity.

One critical economic imperative is to boost exports and manufacturing, as we talked about, and to fully connect American firms and metropolitan areas to the global marketplace, particularly with nations that are rapidly urbanizing and industrializing.

Today, exports in the U.S. make up only 13 percent of our GDP, compared to 30 percent in China and in Canada, and higher levels in India and Japan. We need to reorient our economy to take advantage of this new, rising global demand. But doing so not only means opening up foreign markets to American goods and services; we also need to build and retool the next generation of advanced production facilities, and the underlying infrastructure to move goods, services and ideas quickly and efficiently by air, land and sea.

But to do that, we need systemic reform. That means fixing the infrastructure and the institutional partnerships that exist today, as well as the process for choosing those infrastructure projects. We need to address a range of overlapping financial, regulatory and institutional hurdles that currently stand in the way of these investments, and understanding these barriers and where reform can really be achieved should help us craft policy solutions, to streamline processes and invest in transformative projects that truly can catalyze economic growth.

There are several critical areas that demand attention. First, in collaboration with states and metropolitan areas, the Federal Government should develop a comprehensive policy for national goods movement. This process should build off the bill that was just passed by the Environment and Public Works Committee, to conceive a national freight program, and prioritize corridors and projects on a cost-benefit analysis that includes all of these modes: air, rail, sea and road.

Today, we are one of the only industrialized countries on the planet that takes a compartmentalized rather than holistic approach to goods movement. Programs like the Department of Transportation's TIGER Program have been helpful in this regard, but there is clearly much more to do.

Another idea is for the Federal Government to help states reform their own state infrastructure banks. The problem is that rather than bringing a tough, merit-based approach to funding and project selection, many state infrastructure banks are simply used to pay for projects selected through a state's wish list of infrastructure improvements, without filtering these projects through a competitive application process.

A better approach, we think, would be for states to use their infrastructure banks more strategically, such as to directly support exports, manufacturing and the things we're talking about today.

On a national level, the creation of an infrastructure bank would leverage federal dollars for large projects whose impact is of national significance, like border crossings and ports that are integral to our National trade strategy. This is especially crucial for projects that cross multiple state borders, and require funding and coordination across a number of public agencies, and from the private sector in particular.

Recent polling shows strong willingness for public sector agencies to consider private investments, rather than increasing taxes, cutting budgets or taking on more debt. It's not a silver bullet, but while half of the states have enacted enabling statutes for public-private partnerships, the wide differences between them makes it time-consuming and costly for private partners wishing to engage in PPPs in multiple states to handle the different procurement and management processes.

For this reason, we think the Federal Government should play a helpful role with states and metropolitan partners, by helping them think through the potential costs and tradeoff of these deals, as well as assessing true significant national interests. Over 25 countries have been implementing specialized units throughout various government agencies to assist with the expanding opportunities for public-private partnerships.

These units fulfill different functions such as quality control, policy coordination, and project promotion. We think that in the U.S., the primary purpose would be to provide technical non-binding information, assistance and advice to states and metropolitan governments.

Entities like PPP units or an infrastructure bank would ideally help infrastructure investments, by leveraging existing funding and finance sources. These approaches epitomize a new 21st century style self-help that the National government should fully recognize and embrace. Mr. Chairman, we know that our global competitors in both mature and emerging markets alike are in the process of making these kinds of investments, and in doing so, they're supporting their national economies.

These investments at their core are the physical means to an economy shaping end, rather than the ends in and of themselves. Thank you again for the invitation to appear before you today.

[The prepared statement of Mr. Robert Puentes appears in the Submissions for the Record on page 54.]

Chairman Casey. Thank you very much. We will start our round of questions. I will start with Mr. Herrmann, and this is obviously a Pennsylvania-specific question, which is okay once in a while, right?

We have talked a little bit today about the Port of Philadelphia. We have in Pittsburgh, as you know better than I, I think, based upon your expertise, we have an inland port in Pittsburgh, and it's the reason or the source of a lot of jobs in Pittsburgh.

We are told that 38 million tons of cargo go through that port every year. It has an $800 million benefit to the region, and as I said, a huge job impact, 45,000 jobs in the southwestern corner of our state.

One of the problems they have is in the lock and dam system, they have some basic, fundamental infrastructure needs or deficiencies that we're all trying to work on together. Some of the Recovery Act money was helpful, but I mean right now, it has come down to the Army Corps, and everyone here knows what good work that they do, but the Army Corps of Engineers, we are trying to construct, and have used some of the Recovery Act dollars to do this, river and guard walls, something that fundamental, just guard walls for the lock and dam system.

I wanted to get your assessment of that, of that kind of investment, and then in a larger sense, the impact of that kind of an infrastructure investment, not only in a community like southwestern Pennsylvania, but more broadly. Can you speak to that?

Mr. Herrmann. Sure, yes. It's funny. If we had waited a couple of months, we would have had another economic study on water ports coming out, probably the beginning of next year. But just to talk to that right now, the number of ports on the East Coast have to be dredged, they have to get wider, they have to, in some instances, raise bridges. Because of the improvements to the Panama Canal, there are going to be larger vessels coming through the Canal and the Northeast on this side is going to be at an economic disadvantage if we don't improve our ports.

So to stay competitive in the world market, and to be able to take that shipping and not have that shipping go to other countries, we're going to have to improve our ports. The rails, the side walls, that's all part of improving the ports, the levies, the dams. That is just part of it. So yes, we're going to have to do that improvements, so that we can stay competitive, so that the shipping actually comes to the U.S. and doesn't go to other countries.

Chairman Casey. I wanted to pick up on some of the discussion here. Obviously we have, based upon testimony from here and by our witnesses, there is a debate about how to do this. I think there's a recognition that we need to figure out some way forward on investing in infrastructure, that it is a priority, no matter how you arrive at the solution, that government can play a role, obviously, the private sector as well.

We have a number of parts of our economy that are fortified by and strengthened by public-private partnerships. We see that all the time in economic development. Infrastructure is another example of that. But how do we do that? In other words, if we agree on the goal, how do we get there in this kind of an economy, where there are limitations on what the Federal Government can do? State governments have very little in the way of resources to dedicate to this. How do you get there?

One of the reasons why I was so, not just supportive of, but encouraged by the bipartisan agreement in the Senate to form an in-

frastructure bank—a $10 billion investment which would leverage many, many multiples of that initial investment.

We had a Democrat from Massachusetts, Senator Kerry and Senator Hutchison from the State of Texas. So you had Democrats and Republicans from different parts of the country agreeing on at least one idea, the infrastructure bank. It didn't pass. So I guess I'd ask, and I know it's a tough question. We're low on time, but you can amplify it later. How do we move forward on this priority that we all agree is important? How do we move forward, not only philosophically, but how do we move forward within the limitations of our fiscal constraints, our political gridlock that we often see here in Washington, as well as the limitations at the state and federal level?

I am at zero (time) now, so why don't you hold that answer in abeyance, as they might say, and I want to turn to our Vice Chairman, because I don't want to cut off your answer. But thank you for your testimony.

Vice Chairman Brady. Chairman, thank you, and again, thank you to the witnesses. There are clearly some different viewpoints on how to move forward best in infrastructure, but we need to hear the whole, full range of options. Clearly, you know, this economy is our number one concern. Clearly, the President inherited a very poor economy. But now after three years, many of his policies, in my mind, have made things worse.

Certainly, the stimulus failed to jumpstart the economy or restore consumer confidence. We were predicted to have a 6–1/2 percent unemployment rate today. Clearly, we missed it by a highway mile. The stimulus, after all that money spent, we actually have 2.1 million fewer Americans working today than when the stimulus began. We actually have fewer Americans working than when we began to spend all that borrowed money.

The infrastructure was a significant part of the first stimulus, and it was predicted that manufacturing and construction would see the greatest job growth as a result of it. But the opposite proved to be true, that construction jobs were predicted and projected at the end of last year, to be a gain of 678,000 jobs in construction.

In truth, we still today have lost 903,000 construction jobs, not gained but lost 900,000 jobs. In manufacturing, in the last quarter of 2010 we were predicted to have gained 408,000 jobs from the stimulus. Again, we've actually lost more than 600,000 jobs in manufacturing. Clearly, the infrastructure in the first stimulus has not stimulated the economy.

Today, we face a second round of stimulus and infrastructure again. In this case, the President has proposed a $50 billion infrastructure bank, to stimulate job creation. My question is, and I'll start with Dr. de Rugy, today a pretty compelling case has been made that our infrastructure system is a leaky bucket, and before we pour more funding in it, we probably ought to fix those leaks, if we want to get the best bang for the buck.

I look at your study that was done this year, reading through it that estimated, because of paper work, permits, labor laws, environmental assessments, that drive out and delay projects, that that

drives cost overruns in infrastructure. On average, unit cost overruns have reached $55 billion annually.

So here we have a $50 billion proposed stimulus, second round. First, is the prospect that a concerted effort to reduce those delays and that paper work and the permitting, could actually give us bang for the buck equal or, over time, larger than the expenditure today? Dr. de Rugy, could you tell us about how you formulated those cost overruns, and is it possible for Congress, in a concerted effort, to lower that number considerably?

Dr. de Rugy. So the study was—there are two studies that you are talking about, and neither of them were mine. I was just reporting on them. The cost overrun was a pretty broad study that was done by a Danish economist, and they're specialized in planning, in infrastructure planning. They found that overall, nine out of ten federal public jobs are cost overruns.

The other one is for my colleague Garrett Jones and Dan Rothschild, who looked at the impact on this round of stimulus of the prevailing wage. They did two separate ways. They did the theory and then they went and looked and interviewed people who had received stimulus money. What they found is in fact that people think they would have been able to hire more people if they weren't subjected to these laws.

That being said, I mean while I'm entirely in favor, and even if you're a Keynesian economist, as I said, of getting rid of these prevailing wages law and all the other things that actually artificially increase the cost of infrastructure spending, we really need to remember that it's not going to create jobs. It just can't, and it is because even in the context of Keynesian theories, infrastructure spending takes a lot of time to put in place. It can't be timely.

As such, I think your question is a good one, but even if we get rid of all the inefficiency in the system, it would still not be a good idea. Let the private sector do it.

Vice Chairman Brady. Thank you. Mr. Edwards, comments?

Mr. Edwards. I'd say two bullets on sort of different issues. One is the whole issue of jobs. I direct your attention, and I can send it to your staff, there's a new report out by Wells Fargo a couple of weeks ago, which was kind of surprising. It was about U.S. manufacturing, and it actually gave a very glowing sort of look at U.S. manufacturing, which kind of surprised me.

Their argument is is that U.S. manufacturing has gone extremely capital-intensive and high tech. They've cut jobs, jobs, jobs. We know that, but because of that, the end of fact is the remaining U.S. manufacturing companies are very productive actually in world markets, and they see looking ahead that U.S. manufacturing companies are going to be doing better and better, because labor costs in places like China and Brazil keep rising, and U.S. companies have already made this transition to a very high tech mode of production.

On infrastructure, I would add that the new Brookings study on infrastructure is very interesting. They point out some of the advantages that private infrastructure has over government infrastructure. One of them is in these PPP deals, where you get a lot of private finance and management, the same private sector com-

pany both constructs and then maintains and manages the piece of infrastructure, like a bridge, over the long term.

By doing that, they can be a lot more efficient from sort of a life cycle point of view. The current system, you've got one company, you know, building it. The government manages——

Vice Chairman Brady. I'm sorry, Mr. Edwards. You're running out of time. I apologize. But I appreciate both points. I wish they were somewhat close to the question I asked. But still, I think those were important points to make. Thanks, Chris.

Chairman Casey. Congressman Hinchey.

Representative Hinchey. Thank you very much, Mr. Chairman, and thank you very much. It was very interesting so far, and I'm sure it's going to continue to be very interesting. We're dealing with a very serious situation here in the United States. We have an unemployment rate now that is nine percent. That's the official rate, but the real unemployment rate is much higher than that. Many more people are unemployed and not working.

This is something that really needs to be addressed. You have basic operations in this country that are very, very essential—roads and bridges, for example—that are beginning to decline. Infrastructure in this country is being neglected. All of that needs to be adressed; it needs to be invested in and upgraded.

When you upgrade it, you generate very substantial numbers of jobs. All of these things and a lot more really needs to be done. This is something that really has to happen over now. We're looking at this Congress here, right now. It's almost been a year, and nothing has been done to stimulate the economy.

So this has to happen. There are a number of things that are being talked about now. For example, one of them is the National Infrastructure Bank which is something that I think would stimulate the economy, generate jobs and overall would be very, very important.

So I would like to ask Mr. Puentes and Mr. Herrmann, if you would please talk about that. What do you think about the National infrastructure bank, and what do you think should be done and what could be done in the context of that, to generate growth and stimulate this economy which would make these economic circumstances here in the United States much more effective?

Mr. Puentes. Thank you. I think that, and it builds off the conversation we've already had here today. I think the first round of stimulus that we saw from the recovery package was about speed, was about putting people back to work in the immediate term. It was helping local governments, it was helping state governments through the tremendous fiscal challenges they were facing.

When we talked about the infrastructure bank though, particularly in this current context, we're really talking about something much different. We're talking about making longer-term type investments that aren't things that are going to be done in the short term necessarily. This isn't about pothole refilling and the repaving and the things that we certainly need to do. But this is about connecting infrastructure investments to the next American economy.

We're at a point now where we need to move away from this consumption-based economy that predated the recession, focused on the real estate markets and financial shenanigans, to something

that's really more about getting Americans back to work, in a productive manufacturing-based society, so making those infrastructure investments that are going to support that.

So we have to get away from just infrastructure or transportation for its own sake, and connecting it directly to things like exports, for example. If we believe that doubling exports in five years is the right kind of national goal that we need to have, great. What kind of infrastructure investments do we need to make then, to achieve that goal?

It's about ports, it's about trade corridors. It's about the things we're talking about here today. If we're going to move to more of a low carbon-based economy, not just as an environmental imperative, but as a market imperative, what kind of infrastructure do we need to put in place? Where is it going to go? What's the federal role in that?

Those are the kind of questions we need to ask. It's got to come through an economic lens, rather than through an infrastructure lens, and I think we'll have a very, very different conversation. That's what an infrastructure bank really should be doing, choosing projects, setting the framework and making sure that those investments are made to advance the American economy, not just for infrastructure for its own sake.

Representative Hinchey. Thank you very much. Mr. Herrmann.

Mr. Herrmann. Yes. The first stimulus bill, I think there is a little confusion. They said a significant part of it actually went to infrastructure, when out of the $787 billion originally obligated, less than $100 billion went to actually infrastructure. So a very small portion, less than ten percent. So it really didn't have that much of a chance at that point.

The other thing, the infrastructure banks that you mentioned. The way they're proposed, they would actually act as a bank. They would look at a project, prioritize it, make sure there would be a return on investment. So that an infrastructure bank could be self-sufficient. It could actually get repaid.

Representative Hinchey. And what else do you think about it? What kind of strong stimulus would it create?

Mr. Herrmann. It would provide not only a stimulus to start projects, but also make a judgment on which projects are the best, which projects have the basis of repaying to be successful. So I think that's a very strong part of the infrastructure bank concept.

Representative Hinchey. But actually put them into play then?

Mr. Herrmann. Yes.

Representative Hinchey. Not just speculate, but actually put them into operation?

Mr. Herrmann. Oh definitely, because they would be truly acting as a bank. So they would have to make the judgments that these projects are critical for hopefully the region, the state, the local area, and then also make sure there's a stream of revenue to pay them back.

Representative Hinchey. Thank you very much.

Chairman Casey. Congressman Mulvaney, I want to note that for the record, my staff tells me that you arrived at 1:45. There's

no prize for that, but maybe an extra minute. But thank you very much.

Representative Mulvaney. Thank you, Mr. Chairman. Mr. Herrmann, I enjoyed your testimony. I enjoyed all the testimony, had a chance to read through some of yours before the hearing. You do a pretty good job of presenting some of the numbers. I always find it a little bit helpful around here to actually dig down into the numbers, and when you look at your testimony, there's some statistics from the Federal Highway Administration that would suggest that a billion dollars invested in the Nation's highways supports about 28,000 jobs.

You're absolutely correct, your last comment about somewhere under $100 billion of the last stimulus program going to infrastructure, and I think the number for actual roads was closer to $48 or $50 billion dollars. We take the number 50, because I don't have my calculator and I'm doing this the old fashioned way up here.

That if you assume that that is correct, and that that $50 billion should have created $28,000 per billion spent, that's 1.4 million jobs that would have been created from just that part of the stimulus bill, just the part spent on roads. Clearly, that cannot be the case. The very largest number that I have seen anybody try and lay claim to from the stimulus is three million jobs. That's from the Obama administration, and that was jobs saved or created.

So on the very best day, the very best argument I've seen is that the stimulus created three million jobs, yet the FHA would have us believe that 1.4 million of those came from roads, leaving 1.6 million jobs to have been created from the other $800 billion. That's 16 times larger than the amount of money we spent on roads, supposedly created only 1.6, and that's on the very best day.

By the way, as you dig down into it a little bit and you look at the weaknesses of numbers, while the Federal Highway Administration says a billion dollars in spending creates 28,000 jobs, the Alliance for American Manufacturing says it only creates 18,000 jobs. So almost 40 percent less.

Clearly, it didn't work. Clearly, it didn't work. The definition of insanity to me is doing the same thing again and again, and expecting a different outcome. So as we sit here today and hear calls for new and expanded stimulus, why should we expect that the next time it would be any different than last time?

So Dr. de Rugy, I'll ask you this question. You mentioned Dr. Summers' line about if it's not done correctly, if it's not targeted, if it's not timely and not temporary, that it could actually be counterproductive. Is that what we saw here, and if so, why is that?

Dr. de Rugy. Well so the Keynesian theory, at least as it goes, is that you need to inject money quickly into the economy, and then you will have this multiplier effect. So not only do you need to do it quickly and timely, but you also needed to do it in a very targeted manner, which means the assumption is that you're going to be picking up people from the unemployment line and putting them back to work.

Representative Mulvaney. Is your experience—sorry to cut you off, but again, we're on a time clock. Is it your experience that the Federal Government is able to do that on a $50 billion project?

Dr. de Rugy. No, and that's one of the things that happened with the stimulus bill, is that rather than actually thinking of how to spend the money productively, they basically went through the common and already-existing channels. But more importantly, when it comes to infrastructure and targeting the spending, I mean people have to understand that the people who are unemployed right now, people who were usually before the recession building houses, are not the ones who have the skill sets to go and start building bridges and roads.

So this idea that you're able to actually get people from the unemployment lines, who were doing different type of construction and make them and train them and get them prepared to have the skills to actually build roads, is completely a misconception of how the way it's done.

The study by Garrett Jones and Dan Rothschild showed that half of the jobs that were supposedly created or saved, were actually jobs that were poached from other existing jobs, other companies, and that it is very likely that these other companies didn't hire behind, because they actually used these poaching to shrink the size of their labor force as they were struggling. So it can't work.

Representative Mulvaney. Thank you, Doctor. Mr. Puentes, I heard both you and Mr. Herrmann talk about the relative small size of the first stimulus. It was only $50 billion, or I think the total infrastructure spending was about $100 billion, after you add things like the electrical grid, and that there's a lot of folks, I take it you're one of them, claiming or calling for a larger stimulus next time.

Have you ever seen gentlemen, I'll put it to you, Mr. Puentes first, any academic studies whatsoever that suggest there's any economies of scale when it comes to infrastructure spending, that if $50 billion didn't work, $50 billion didn't get us the 1.4 million jobs that it was supposed to, that $100 billion will. Have you ever seen any academic studies that show that?

Mr. Puentes. Well, I'm not sure I understand. The concept, I think that we're talking about something now that is very different from what we were talking about just three years ago, and this idea of using this money to capitalize an infrastructure bank, gets back to this larger point about what we want—again, what we want the American economy to do, and how do we make those investments strategically, right, in projects that it's not—this is not just a general grant program. The idea is for the money not just to go out to the states, and to hope that the money is spent in ways that are——

Representative Mulvaney. I'm going to cut you off, because we're out of time and I'm trying to be respectful. I'll save my extra minute for another time. What you're really saying is that next time we're going to do it better than we did last time?

Mr. Puentes. It has to be fundamentally different. I think the idea is to do it very differently.

Representative Mulvaney. Thank you, sir. Thank you, Mr. Chairman.

Chairman Casey. Thank you, Congressman. Congressman Campbell.

Representative Campbell. Thank you, Mr. Chairman. I wanted to start out, before I get to a question by amplifying something that was pointed out. A lot of the reason we don't have some of the infrastructure going on is not actually financial or fiscal, but it's regulatory.

In my district in Orange County, California, there is a toll road that we are ready to build. It has been ready to build for years. It is ready to build right now, and it is a toll road. It is entirely privately funded. It is being stopped and has continued to be stopped by eco-extremists, abusing the California Environmental Quality Act, and the federal Endangered Species Act, in order to stop all growth and kill jobs.

There are a couple of schools in San Diego, the same thing. They're ready to build but the Endangered Species Act is being used by eco-extremists to stop those jobs and kill those projects. So let us remember, as we're looking at this, that a lot of the problem before us is regulatory, and if we just sweep that out of the way, there's a lot of projects, some publicly-funded, a lot privately funded, that are ready to go and will go if we get the regulatory problems out of the way.

But that being said, financing this in the future is a problem, so I wanted to run by you an idea I've had and have been kicking around for a couple of years here now, which is a public-private partnership type idea, which is to form a new class of master limited partnership for infrastructure, specifically for building public infrastructure using private funds.

That this master limited partnership would have greatly accelerated depreciation, so the investors in it get a very rapid return. If it's for public infrastructure, there would need to be a tax increment or a fee increment or something that went to that master limited partnership to fund that.

But that I am aware of a number of investors and a lot of people that would be very interested in having private money go into fund public infrastructure under this kind of a structure, if it existed. So I open that up for anyone on the panel to comment, as to it's a good idea, a lousy idea, an interesting idea, whatever.

Mr. Puentes. Just very quickly, I think that it actually gets to your initial point about the barriers that are facing some of these projects. As we work with state and local partners all across the country, particularly in private sector folks, the barriers that they're facing to getting projects done are regulatory. But it's not just the environmental kind of regulations, which are frequent target.

But there are many states that actually prevent these kind of public-private partnerships from happening. There's only a handful of states that have the legislation in place. There are certain states that require each project to go through a legislative conversation. So the private sector is not looking at states where there are a tremendous amount of regulatory hurdles for them to enter the game. They're looking for those states that have the legislation in place, and where they know they're going to get a fair shake when it comes to negotiating these things.

Representative Campbell. So those sorts of things would prevent this kind of activity, is what you're saying?

Mr. Puentes. Indeed. There are many states where you just couldn't get to the table to do those.

Mr. Edwards. Right. Virginia is probably the most advanced in PPP. It's because they passed the 1988 law on PPP, and they're going gangbusters on it. I would say that of these international global firms, mainly four of them that do this PPP stuff, I've read a number of quotes from the leaders of these companies. They say there's more money ready to invest in these projects, but they don't see the projects in the United States.

So it's got to come—the states have to throw up the projects, and then there will be more than enough money going after them. You hear that from Wall Street people too, that you know, a lot of them don't want to compete on these projects, because they're all competing on them. So there's more money there than——

Mr. Herrmann. One of the things that's interesting, I've been traveling around the country, talking about infrastructure, talking about ASCE's report card. When I came to Orange County, they had a local report card, and it had better grades than the National. So I asked them why, and they said they had an educated public. They increased their sales tax to improve their infrastructure. So I think we just have to educate the public that we have to make these investments.

Dr. de Rugy. But we could also educate, if I may——

Representative Campbell. Please.

Dr. de Rugy. Educate the public that, you know, the private sector, it doesn't have to be funded through taxes. It can actually—there is a lot of money on the, private money, who is willing to be invested in these roads. They may have toll roads, but that means that basically the people who use these roads are going to be the ones paying for them.

Representative Campbell. Right, and of course in Orange County, we have three different toll roads now, and this is—the one that's being blocked now is just the completion of one of those. So there's a number of this sort of thing being done, trying to be done, where people are trying to respond to some of the roadblocks that are out there, and create their own solutions. My time is up, so I thank you very much.

Chairman Casey. We were about to move to a second round, but Senator Klobuchar has just joined us. The second round will be the lightening round, three minutes. Senator Klobuchar is still in the first round, so she will have her five minutes.

Senator Klobuchar. So I'll just take my time then, Senator Casey.

Chairman Casey. Do whatever you'd like.

Senator Klobuchar. Thank you very much. Thank all of you for being here. Obviously, the transportation issues for our country came to everyone's attention when that bridge fell down in the middle of a day in Minneapolis, six blocks from my house, actually an eight-lane highway road that I drive over all the time with my family, and there it went down. I said that do a bridge just shouldn't fall down in the middle of America, but it did.

Since then, I've been very involved in these infrastructure issues. We obviously rebuilt that bridge in record time, an example, I think, for everyone of how we can get things done. But the second

thing is that I carried the infrastructure bill that we just nearly passed in the Senate. We had 51 votes. In any other body, that would be a majority, which it is. But it was blocked by the filibuster.

So I'm very focused on trying to get this done again, with the infrastructure bank and other things that we'd like to get done. As you pointed out in your testimony, Mr. Herrmann, inefficiencies in infrastructure are expected to drive up the cost of doing business by an estimated $430 billion in the next decade, and I think most Americans think about this in terms of delays in traffic and the billions of hours people sit in traffic.

But it's also a drag, because we have a deteriorating system. If the future of our country, which I believe it is, is building through exports, we need to get our goods to market. We need to get them on barges and on GPS system that works for our airplanes, on the roads and the bridges, on the trains. So could you talk a little bit more about how this is interrelated with our business, and the effect if we just put our heads in the ground and don't do anything?

Mr. Herrmann. Our economic study did show that transportation costs for businesses would increase by $430 billion by 2020, and that's due to the inefficiencies. It's going to take longer to deliver finished products to market, and also to get the raw materials to the factories, the manufacturing areas where they're going to put it together.

So our bad infrastructure is slowing down our economy, but it's also adding to costs because we're damaging our vehicles, due to the bad roads. I mean there's studies that come out that show, you know, we're wasting how many billions of hours in traffic every day. But there's also numbers in terms of dollars of another, I believe it's $70 billion, due to damages to our vehicles. So it's costing us several ways, due to bad infrastructure, not only just the delays to get our goods to market.

Senator Klobuchar. Very good. Could you talk a little bit, and anyone can join here, about the infrastructure bank and how that could work? You're familiar with Senator Kerry—Senator Hutchison's proposal, which was incorporated in this bill, but how that would provide an incentive for the creation of public-private partnerships? Anyone want to——

Mr. Herrmann. Sure. We talked a little bit about the infrastructure banks earlier. If they can truly act as a bank, that they can look at projects and look at them from an economic basis, a standpoint, to see if they will be successful, if they will affect regional areas, if they're coordinating regional areas, state and local, they should be successful.

They also should have a stream of income to pay back the bank, so it can truly act as a bank. So this is what is, can be enacted, this will be very—should be very successful for the country.

Senator Klobuchar. Ms. de Rugy.

Dr. de Rugy. If I can add, I mean the infrastructure bank, while it looks good on paper, and I'm assuming that a lot of economists would kind of welcome this idea of incentivizing the private sector to invest in infrastructure, my worry is that it may, it has the potential to become the public work version of Freddie Mac and Fannie Mae, and that we know is not a good thing.

The other thing is like with all of these projects that are guaranteed by the Federal Government, there is also a risk of the project being hijacked for political reasons, and basically instead of having this project, you know, focused on building roads and picking the right project, it will be focused on hiring, you know, unemployed people, of hiring the right type of people, imposing some social goals to the process, which then would make it extremely inefficient.

Senator Klobuchar. I don't think Senator Hutchison would want to make it inefficient, is what I'm thinking.

Dr. de Rugy. I mean there's a political process, right, which makes it risky.

Senator Klobuchar. And how else would you fund these other, all these projects that we need to get done?

Mr. Edwards. I would say, you know, there is—you know, one of the problems with getting a lot of these private projects done is that the private finance is at a disadvantage to public finance. So in Northern Virginia 15 years ago, the private investors built the Dulles Greenway, which is a 15-mile private toll road, completely privately financed. But you know, they are against competition from nearby free government highways.

So the drivers on private toll roads pay the gas tax, and also the funders of private toll roads have to raise monies through taxable bonds. So there is a problem there, and if Congress could, you know, should consider ways to even the playing field here, so that private sector projects aren't put at a disadvantage to the public sector projects. We may get more private sector, you know, money coming in to fund projects.

Mr. Puentes. I just wanted to pull us back a bit from the public-private partnerships. I'm very much in favor of the National Infrastructure Bank. We think that this is a critical entity that needs to be established in the U.S. We've seen it work in other countries. We know that we don't have this kind of decision-making kind of process now to make decisions for projects that are truly of national significance.

We have 50 states operating pretty much independently. When we have projects that are related to things like doubling exports, for example, those are national projects. They have national significance and we don't really have the mechanism for making decisions based on that kind of level.

So we think that there's definitely a need for this. But we have to understand that this is really just a niche, and there are certainly projects that are going to be filled through an infrastructure bank. But this doesn't obviate the need to continue to raise revenues, to continue to pay for those kinds of projects that is just, I mean, the mundane kind of stuff that we need every day.

I mean there's still trucks that are driving over roads that are in bad condition. You mentioned the bridge as a great example of projects that probably aren't ripe necessarily for a infrastructure bank. It may or may not be. But we have to understand this not a silver bullet that's going to solve all of our problems. It's obviously something we need to do, but it's just one arrow in the quiver. It's just one thing that we need to do with a whole menu of things.

Senator Klobuchar. I agree. I'm going to over the Secretary with it right now, but another bridge that I'm working on with Representative Bachman, between Minnesota and Wisconsin, in which people are deciding whether or not we should allow an 80-year-old lift bridge to exist, that's falling into the river. Hopefully, they will decide the right thing.

Chairman Casey. Thanks, Senator Klobuchar. I think what I'll do is I'll cede my time, just to make one quick statement, because I think we need a lot more time on this topic. I hope that folks listening to this don't think that somehow there's a choice here, that in order to meet this challenge, we've got to have all private sector. That is, it's all the responsibility of the private sector or it's all the responsibility of the public sector.

It has to be both. There's no other way it's going to work. But I hope that the conclusion here, the path we don't go down is that we do nothing, because I think if there's one thing we can agree on, we cannot allow this problem to persist, even if it means just getting a start on it. So I'm going to give my time up to Vice Chairman Brady or anyone else, but we need more work on this obviously. We don't have all the time today. Thank you.

Vice Chairman Brady. Chairman, thank you very much. I'll be brief as well. I think Senator Klobuchar made a key point about the quick response in rebuilding the Minneapolis bridge, which collapsed because of a design flaw, of undersized steel gusset plates that eventually factored and generated the collapse. It points out what we're capable of doing when we want to cut through the red tape, and move projects to completion.

Mr. Herrmann, when you talk to state highway officials, do they clamor for an infrastructure bank, or for Congress to finally fix the Highway Trust Fund?

Mr. Herrmann. I think the Highway DOT people are looking for long-term funding. They need that for their planning.

Vice Chairman Brady. Yes.

Mr. Herrmann. They need to reauthorize the Surface Transportation Act.

Vice Chairman Brady. When you talk to ports, do they seek an infrastructure bank or do they want the Harbor Maintenance Fund fixed and distributed?

Mr. Herrmann. I think they probably want both.

Vice Chairman Brady. I'll bet you that's not the case. Do you talk to airport managers? Are they asking for an infrastructure bank or for Congress to finally fix the Aviation Trust Fund long term?

Mr. Herrmann. The FAA, they want to fix that.

Vice Chairman Brady. I think so. In every case, they're talking about local officials making those decisions. They want the long-term certainty. One of the points Mr. Edwards makes that I found intriguing, is that at one point in America's history, it was public sector funding of the infrastructure. Then it moved to more private sector funding, and now we've sort of reverse course and moved back into a great deal of public sector funding.

But other countries have moved the other direction in order to finance. Can you, really quickly; I only have about 30 seconds left,

can you tell us why they're doing that, and why we ought to look at that model?

Mr. Edwards. Well, I think a lot of European airports, for example, are private. London's Heathrow, of course, and Gatwick are private. Sydney and Melbourne, Australia are private airports, and as I said, seaports have been privatized all over the place. In 1983, Thatcher privatized most British seaports. Seaport dredging in Britain is private. There's a company called UK Dredging that basically goes around. They contract with the private ports if they want dredging.

I think in a lot of countries it's not an ideological thing. They just, you know, the government sector doesn't have the money anymore, so the same problem we have. Deficits are high, and so they're going to the private sector. So again, I don't think it's an ideological thing. I think they're getting good results, and as I said, you know, because of that, these companies that are at the forefront of this privatization, they're virtually all foreign these days, Australian, Canadian, Spanish.

These companies are going around the world and building infrastructure, and you know, these should be American companies. I would love American companies to become the infrastructure experts, and then go around the world exporting this knowledge. But unfortunately, it's the other way around.

Vice Chairman Brady. Again, thank you to all the witnesses today.

Chairman Casey. I have to run out the door, but I want to make sure that Congressman Hinchey and then Congressman Mulvaney have the last words. Thank you.

Representative Hinchey. Well, thank you very much. The Congressional Budget Office, as you know, which is objective and independent, estimates that infrastructure spending is one of the most effective fiscal policies for increasing economic growth and employment over the short term. Moody's Analytics determined that every dollar of infrastructure spending as a multiplier of a $1.44 out of every dollar.

We made significant investments in manufacturing, in infrastructure here when we passed the American Recovery and Reinvestment Act. So Mr. Herrmann, Mr. Puentes, in your opinion, what would our current economy look like if we had not passed the American Recovery and Reinvestment Act, and what will it take for our Nation's roads to be upgraded from its current rating, which is D? Please.

Mr. Herrmann. I think, as stated a little bit earlier, we needed $1.7 trillion over a period of years, to upgrade our roads from that D. I think it's a D minus for the roads, up to a B level. That also includes bridges and transit. We've been neglecting our infrastructure for years. I mean the last time we really put money into it was the interstate highway system, and that was back to the 1950s, maybe the early 1960s.

So we really haven't been investing in our surface transportation, and it's starting to show. Our bridges have an average age of 43 years. The life span when they were designed probably was 50 years. Now bridges can be maintained; they can be—their lives can

be extended by repairs, rehabilitations. But we have to invest, and we just haven't been doing that in the last couple of decades.

So to answer your question, how do we move forward? We have to invest in our transportation infrastructure and all our infrastructure, to make sure it lasts for our children, because right now, we're living on our grandparents' investments.

Representative Hinchey. Thank you. Mr. Puentes.

Mr. Puentes. Thank you. I think we know that things would be much worse. The states were in particular financial distress. Transportation spending makes up eight, nine percent, something like that, of most states' budgets. So it's a big share, and this is really a helpful shot in the arm to them. But that money is now gone, and so they're facing some challenges again.

But in order to make sure that we don't continue to fall behind, and that the condition of the infrastructure is maintained, I think we need to look at what was just passed by the bipartisan Environment and Public Works Committee. I think MAP 21 is the acronym.

This is starting to make sure that the money that is spent is done so on more of a performance-based kind of level. So to monitor the conditions of the roadways today, and to frankly hold states and metropolitan areas accountable for how that money is spent. Make sure that we're not just pouring money into a black hole, that we're not just getting the short-term injections that we need, but that we're actually getting long-term value out of this enormous investment.

This is how we've done it in the past. We had the Federal Government has been kind of absent, right, and this has just been a block grant that's gone to the states, with no real accountability or transparency for how that money is spent. The legislation that's moving through now and is being discussed is trying to change that. I think it's a really good example of how we can have the Federal Government be present where they've been absent.

Representative Hinchey. Thank you very much.

Vice Chairman Brady. Mr. Mulvaney.

Representative Mulvaney. Thank you. Dr. de Rugy, before I move on to my last question for Mr. Edwards, I wanted—it occurred to me, as we were having that discussion about timely and targeted, we actually had a circumstance in my district where a road was deemed to be too shovel-ready to participate in the stimulus program.

It had actually—part of a phase had started and was partially funded, and for that reason, additional phases were not allowed to be funded with stimulus money. So it goes back to my point originally about the difficulty of the government operating efficiently.

Mr. Edwards, earlier today, the Chairman mentioned and several folks from the panel up here have talked about the states lacking the fiscal ability, the financial ability right now to sort of get involved heavily in infrastructure. I think we've failed to take it to the next step of the analysis, and admit that we don't have the money either, and that what you've described today, which is something more along the lines of a privatized system, holds some appeal.

It sounds like maybe the European and Asian countries have been driven to that type of model out of a similar type of necessity, and as a result, they have a system that seems to be beating us at various different levels.

So I ask you sir, if we wanted to explore that possibility in this country, of moving towards more private funding of infrastructure, getting down to brass tacks, what would this Federal Government need to do, and how much would it cost?

Mr. Edwards. It's mainly the states are, I think as was mentioned, are in substantially different positions to bring more private sector funding in. I think something like about 30 of the 50 states have PPP laws on the books. Again, Virginia, the most advanced. I'd encourage the states to look, you know, at what Virginia has done.

I think with the passage of federal transportation bills, we need to sort of look at evening the playing field between public and private. You know, one of the big advantages of public infrastructure is that it's tax-free finance, municipal bonds are federally tax free. That puts the private sector at a disadvantage automatically.

Congress partly takes a response to that with so-called private activity bonds. These are, there's a certain amount of bonds that can be used, that states can use for private projects which are tax-free. I'd look into, you know, that in expanding or extending that. That seems reasonable to me.

I mean ultimately, I would eliminate the tax-free nature of muni bonds, because I think it does unfairly favor the public over private sector. So for example, when Intel Corporation builds a new factory, they've got to use taxable finance. When a local government builds, you know, a new courthouse, they use tax free. That seems unfair to me.

So I think that the Federal Government can do a lot to encourage the PPP movement in the state governments, but it's mainly the state governments.

Representative Mulvaney. Thank you, Mr. Edwards. Thank you, Mr. Chairman.

Vice Chairman Brady. Our witnesses, on behalf of Chairman Casey and myself, thank you again for bringing insight into an awfully complex issue, and I appreciate the members being here as well. With that, the hearing is adjourned. Thank you all very much.

[Whereupon, at 3:32 p.m., Wednesday, November 16, 2011, the hearing was adjourned.]

SUBMISSIONS FOR THE RECORD

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PREPARED STATEMENT OF REPRESENTATIVE KEVIN BRADY, VICE CHAIRMAN, JOINT ECONOMIC COMMITTEE

Thank you, Chairman Casey, for convening this important hearing.

A good infrastructure is vitally important to the U.S. economy, providing Americans with millions of miles of roads; hundreds of thousands of bridges; tens of thousands of airports, dams, waterways, and transit lines; and hundreds of train stations and ports. Pro-growth policies such as low taxes, balanced regulation, and free market innovations drive the need for additional infrastructure in America. As a former local Chamber of Commerce executive, I can attest to the need for infrastructure as a critical precursor to spark economic development and attract businesses in communities large and small across America.

Though America's infrastructure remains among the most advanced in the world, the American Society of Civil Engineers gave our infrastructure a letter grade of "D," highlighting that we have a long way to go until we can meet the current and future infrastructure needs of Americans.

The manufacturing sector is a critical input in infrastructure with the provision of raw materials and industrial equipment, and the manufacturing sector is a beneficiary that relies on the nation's infrastructure to transport goods to compete in the global economy.

In fact, the manufacturing sector has opened up the prospect for major energy infrastructure development. An excellent opportunity for long-term economic growth exists today in the form of the Keystone XL pipeline from Alberta to Texas, which would result in at least 20,000 new jobs affiliated with the pipeline. Long-term investment in infrastructure will help American manufacturing remain internationally competitive.

No one disputes the value of good infrastructure. However, planning and building infrastructure takes years, often decades. Higher infrastructure spending cannot create a significant number of jobs in the near term. As President Obama remarked months ago, "shovel ready was not as shovel-ready as we expected."

According to the Federal Highway Administration, the federal project delivery process can take up to 15 years from planning through construction. Environmental regulations and constraints on federal funding can extend this timeline even farther, resulting in costly delays and routine cost overruns.

The current system of federal infrastructure spending is inefficient. U.S. taxpayers are not getting a good value for their dollars that are currently spending on infrastructure.

Research over the past decade indicates that the growth benefits from federal infrastructure spending have been extremely low. The current system of federal infrastructure spending is broken, and must be fixed to make smart investments in good infrastructure projects.

As an example, the Government Accountability Office reviewed the Department of Transportation's system of 6,000 employees administering over 100 separate surface transportation programs with separate funding streams for highways, transit, rail, and safety functions. The GAO determined this system was extremely fragmented and lacked accountability, impeding effective decision-making and limiting the ability to provide solutions to complex challenges. Analysis by the National Surface Transportation Policy and Revenue Committee found a project that should cost $500 million would actually take 14 years to complete and cost twice as much due to the impact of delays and inflation.

Examples already abound at the state level of diverted funds, originally allocated to infrastructure, going to other budget items, suspended, or altogether forfeited. All too frequently, infrastructure funding fails to reach high-priority projects, diverted instead to projects with little or no real benefit.

Federal regulations—such as project labor agreements, high-road contracting, "Buy American" provisions, and the Davis-Bacon Act—have unnecessarily increased the cost and lengthened the completion time of infrastructure projects. For example, the Davis-Bacon Act's prevailing wage requirements have led contractors to pay an average of 22 percent above market wage rates and have bogged down contractors with extra paperwork.

An Environment Impact Statement alone can take up to 2 years to complete. Major infrastructure projects often require the approval of other federal agencies such as the U.S. Fish and Wildlife Service, the Advisory Council on Historic Preservation, and the U.S. Army Corps of Engineers.

For the good of manufacturing, infrastructure, and American workers, federal regulators must consider how both proposed new rules and the cumulative burdens of existing rules affect the ability of American businesses to create jobs at home by selling in global markets. Federal regulators must also begin to perform retrospec-

tive analysis to determine if existing regulations are meeting their goals in cost effective ways.

Congress should make it easier for the private sector to invest in transportation infrastructure, reducing the stress on already cash-strapped federal resources. Major economies worldwide have demonstrated success in partially and fully privatized roads, water and sewage systems, seaports, and airports. America is behind the times when it comes to involving private capital in infrastructure development.

The United State is capable of keeping up with other countries and excelling as a leader in infrastructure development. We can strive to achieve an "A" in infrastructure by addressing the systemic problems with our current means of funding infrastructure in conjunction with reform of burdensome regulations that impede the ability of both public and private provision of infrastructure.

Thank you, and I look forward to the witnesses' testimonies.

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Statement of

Andrew Herrmann, P.E. SECB, F.ASCE
President

American Society of Civil Engineers

Manufacturing in the USA: Paving the Road to Job Creation

United States Congress

Joint Economic Committee

November 16, 2011

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Mr. Chairman, Congressman Brady, and Members of the Committee:

It is an honor for me to appear before this committee on behalf of the American Society of Civil Engineers (ASCE) [1] to discuss the link between our nation's infrastructure and the strength of its manufacturing sector.

ASCE commends the Joint Economic Committee for holding a hearing today on how surface transportation investment is a key factor for continued economic recovery and job creation. The Society is pleased to present to the Committee our views on investing in the nation's infrastructure and the critical link to U.S manufacturing. An agenda that fosters economic growth and job creation through policies that strengthen U.S. manufacturing and infrastructure will allow the nation to remain competitive in the Twenty-First Century.

Infrastructure Receives a Grade of "D"

ASCE's *2009 Report Card for America's Infrastructure* graded the nation's infrastructure a "D" based on 15 categories (the same overall grade as ASCE's 2005 Report Card). The report also concluded that the nation needs to invest approximately $2.2 trillion from 2009 – 2014 to bring our nation's infrastructure to a state of good repair. This number, adjusted for a three percent rate of inflation, represents capital spending at all levels of government and includes current expenditures. Even with current and planned investments from federal, state, and local governments from 2009 - 2014, the "gap" between the overall need and actual spending will exceed $1 trillion by the end of the five-year period.

In the *Report Card,* the nation's surface transportation system included roads receiving a grade of "D-," bridges receiving a grade of "C," and transit receiving a grade of "D". With nearly one-third of roads in poor or mediocre condition, a quarter of the nation's bridges either structurally deficient or functionally obsolete, and transit use increasing to its highest levels in 50 years, the nation's surface transportation system is in a state of critical decline. Additionally, to bring just these three surface transportation categories up to an acceptable condition would require a five-year investment of $1.2 trillion, according to ASCE estimates. If the nation continues to under-invest in infrastructure and ignores this backlog until systems fail, we will incur even greater costs.

While Congress is in the process of developing a comprehensive multi-year surface transportation authorization bill, and as President Obama emphasizes the infrastructure investment needs for the nation, our roads, bridges, and transit systems continue on in a state of decline. According to the Congressional Budget Office, the total of all federal spending for infrastructure has steadily declined over the past 30 years. The results of years of under investment can be seen in traffic and airport congestion, unsafe bridges and dams, deteriorating roads, and aging drinking water and wastewater infrastructure.

[1] ASCE was founded in 1852 and is the country's oldest national civil engineering organization. It represents more than 140,000 civil engineers individually in private practice, government, industry, and academia who are dedicated to the advancement of the science and profession of civil engineering. ASCE is a non-profit educational and professional society organized under Part 1.501(c) (3) of the Internal Revenue Code.

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Infrastructure Investment = Jobs

Money invested in essential public works can create jobs, provide for economic growth, and ensure public safety through a modern, well-engineered national infrastructure. The nation's transportation infrastructure system has an annual output of $120 billion in construction work and contributes $244 billion in total economic activity to the nation's gross domestic product (GDP).

In addition to the overarching economic benefits, the Federal Highway Administration estimates that every $1 billion invested in the nation's highways supports 27,823 jobs, including 9,537 on-site construction jobs, 4,324 jobs in supplier industries, and 13,962 jobs throughout the rest of the economy.

Standard and Poor's has stated that highway investment has been shown to stimulate the economy more than any other fiscal policy, with each invested dollar in highway construction generating $1.80 toward the gross domestic product in the short term, while Cambridge Systematics estimates that every dollar taxpayers invest in public transportation generates $6 in economic returns.

The transportation industry's experience with the American Recovery and Reinvestment Act of 2009 illustrated the strong job creation impact of dedicated transportation investment, with the $48 billion for transportation improvements in the legislation supporting tens of thousands of jobs in engineering, construction, and supporting industries.

Infrastructure Investment = A Healthy Economy

The job-creation potential of infrastructure investment is only one contributing factor of the interaction between surface transportation and the nation's ability to compete in the global marketplace. Equally important are the benefits to a region's long term growth and productivity. A significant challenge to this economic growth is increased congestion, which contributes to the deterioration of the nation's infrastructure. Therefore, the importance of freight movement and the impact of congestion on the nation's economy must be emphasized.

ASCE is concerned with the increasing deterioration of America's infrastructure, reduced investment for the preservation and enhancement of our quality of life, and the threatened decline of U.S. competitiveness in the global marketplace. In response, ASCE has not only issued multiple *Report Cards* on the condition of infrastructure, but has also sought to advance policy solutions that provide for a clean and safe quality of life, as well as fuel economic growth.

While taken for granted by most Americans, our infrastructure is the foundation on which the national economy depends. As the economy grows, we cannot only think in terms of repairing what we have, but of creating a modernized transportation system that addresses long-term needs. The current system was originally built in the 1950's and 1960's at a time when the country had different transportation needs and a smaller population. With an expanding population and a larger economy, the nation needs a transportation system that can keep pace.

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Unfortunately, due to the rapid growth of the country, highway and freight capacity failed to keep up.

In July 2011, ASCE released an economic study that measures the potential impacts to the economy in 2020 and 2040 if the nation maintains current levels of surface transportation investments. The report is the first in a series of four reports that will focus on the correlation between the nation's infrastructure and the economy. Subsequent reports will detail the economic correlation to the nation's drinking and waste water systems, energy grid, and ports and airports.

The first study, *Failure to Act: the Economic Impact of Current Investment Trends in Surface Transportation Infrastructure*, found that if investments in surface transportation are not made in conjunction with significant policy reforms, families will have a lower standard of living, businesses will be paying more and producing less, and our nation will lose ground in a global economy.

The nation's deteriorating surface transportation will cost the American economy more than 876,000 jobs, and suppress the growth of the country's GDP by $897 billion in 2020.The study results estimate that more than 100,900 manufacturing jobs will be lost by 2020. Ultimately, Americans will also get paid less. While the economy will lose jobs overall, those who are able to find work will find their paychecks cut because of the ripple effects that will occur through the economy. In contrast, a study from the Alliance for American Manufacturing shows that roughly 18,000 new manufacturing jobs are created for every $1 billion in new infrastructure spending. These manufacturing jobs would be created in fabricated metals, concrete and cement, glass-rubber-plastics, steel, and wood product industries. Furthermore, the Alliance for American Manufacturing study shows that using American-made materials for these infrastructure projects yields a total of 77,000 additional jobs, based on a projected investment of $148 billion a year (including $93 billion of public investment).

International Competitiveness

Failure to Act also shows that failing infrastructure will drive the cost of doing business up by adding $430 billion to transportation costs in the next decade. Firms will spend more to ship goods, and the raw materials they buy will cost more due to increased transportation costs. Productivity costs will also fall, with businesses underperforming by $240 billion over the next decade; this in turn will drive up the costs of goods. As a result, U.S. exports will fall by $28 billion, including 79 of 93 tradable commodities. Ten sectors of the U.S. economy account for more than half of this unprecedented loss in export value – among them key manufacturing sectors like machinery, medical devices, and communications equipment. On the contrary, most of America's major economic competitors in Europe and Asia have already invested in and are reaping the benefits of improved competitiveness from their infrastructure systems.

To illustrate further the correlation between transportation and a strong national economy, the U.S. Chamber of Commerce in late 2010 released a transportation performance index that examines the overall contribution to economic growth from a well-performing transportation infrastructure. The index displays a decline in the nation's economic competitiveness due to a continued lack of investment in surface transportation systems on all levels. However, the results

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also indicate that a commitment to raising the performance of transportation infrastructure would provide long-term value for the U.S. economy.

At this juncture, even Treasury Secretary Tim Geithner is underscoring the importance of investing in our nation's infrastructure and the value of export promotion for the competitiveness of U.S. businesses. On a recent trip to a North Carolina manufacturing plant, Secretary Geithner drew parallels between investment in infrastructure, jobs creation, and growth of the domestic manufacturing sector.

While efforts such as the American Recovery and Reinvestment Act of 2009 have provided some short term relief to a struggling engineering and construction sector, a sustained economic recovery, will remain difficult without a new multi-year surface transportation bill.

Five Key Solutions
As part of ASCE's 2009 *Report Card for America's Infrastructure*, ASCE identified five Key Solutions that illustrate an ambitious plan to maintain and improve the nation's infrastructure:

- Increase federal leadership in infrastructure;
- Promote sustainability and resilience;
- Develop federal, regional, and state infrastructure plans;
- Address life cycle costs and ongoing maintenance; and
- Increase and improve infrastructure investment from all stakeholders.

During infrastructure roundtables in both Washington, DC and throughout the country, several themes were identified including the need for a clear national infrastructure vision, the need for a better informed public, and the need for performance-based data that can target investments which reward good performance. By addressing these issues intelligently with smart infrastructure investments, we can develop a safer and more economically competitive nation.

In the transportation sector specifically, ASCE supports the following actions:

- Establish a new process at the federal and state levels that includes performance metrics and implementation strategies for transportation projects to ensure that they achieve national objectives and deliver value to the American public.
- Enact a multi-year surface transportation authorization bill with dedicated and reliable revenue sources upon which long-term public and private sector investment commitments can confidently be made.
- Adopt a sustainable user-fee approach as the financial foundation of our nation's transportation program, and look to innovative financing programs such as Public-Private Partnerships, Build America Bonds, expansion of the Transportation Infrastructure Finance and Innovation Act, and an infrastructure bank to augment the federal investment. ASCE supports a variety of revenue streams including an increase in the motor fuels tax and eventually transitioning to a vehicle miles traveled system.
- Develop strategies to expedite the current regulatory process at the local, state, and federal levels to move critical projects through quickly and filter out ill-conceived projects, to ensure that performance metrics are met.

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Modest Investment Needed

Failure to Act estimates that in order to bring the nation's surface transportation up to good levels, or a grade of B, policymakers must invest approximately $1.7 trillion in the nation's highway systems between now and 2020. The U.S. is currently on track to spend a portion of that, a projected $877 billion, during the same timeframe. This infrastructure funding gap equals $846 billion over 9, years or $94 billion per year, from all levels of government.

Small investments in infrastructure, equal to about 60 percent of what Americans spend on fast food each year would:

- Protect 1.1 million jobs
- Save Americans nearly 2 billion hours in travel time each year
- Deliver an average of $1,068 to each family; and
- Protect $2,600 in GDP for every man, woman, and child in the United States.

Surface transportation infrastructure is a critical engine of the nation's economy. It is the thread which knits the country together. To compete in the global economy, improve our quality of life and raise our standard of living, we must successfully rebuild America's public infrastructure.

ASCE looks forward to working with Congress as it develops legislation which will bring the nation's infrastructure into the Twenty-First Century. As shown in ASCE's surface transportation economic study, the nation's economic health is dependent on a strong infrastructure system. By updating, maintaining, and building our roads, bridges, and transit systems, the nation can create jobs in both the public and private sector, while fostering and growing manufacturing in the United States. Therefore, the first step toward a modernized transportation system must include passing a multi-year surface transportation authorization, at or above current levels of investment. The nation's economic health will continue to be linked to its infrastructure strength, which means the time to act is now.

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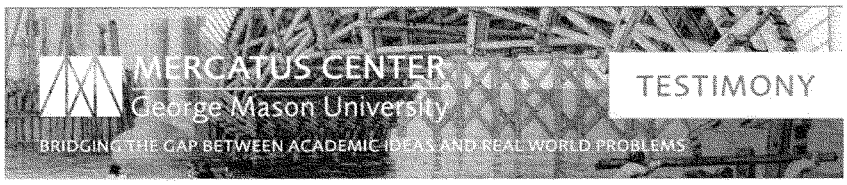

FEDERAL INFRASTRUCTURE SPENDING: NEITHER A GOOD STIMULUS NOR A GOOD INVESTMENT
NOVEMBER 16, 2011

Veronique de Rugy
Senior Research Fellow

Joint Economic Committee
Hearing on the Impact of Infrastructure on the Manufacturing Sector

Good afternoon, Chairman Casey, Vice Chairman Brady, and members of the committee. It is a privilege to be here today to discuss the important topic of government-funded infrastructure spending and economic growth. My name is Veronique de Rugy. I am a senior research fellow at the Mercatus Center at George Mason University where I study tax and budget issues.

Three years into the deepest recession since World War II, the U.S. economy is growing at a slower pace than the population, and per capita output continues to fall.[1]

In response, the President has announced a plan for yet more deficit-financed stimulus spending.[2] Like the two previous stimulus bills, this one focuses on infrastructure spending. The President's plan is rooted in the belief that stimulus spending and deeper deficits will give the economy the lift it needs to create more jobs. The hope is that, eventually, the economy will grow fast enough to allow the government to begin to pay down the national debt.

Today I would like to address three important issues. First, infrastructure spending is a particularly bad vehicle for stimulus. Second, while no one disputes the value of good infrastructure, public work projects typically suffer from massive cost overruns, waste, fraud, and abuse. Finally, some alternatives to a federal investment in infrastructure exist, such as public private partnerships, privatization, or simple devolution to the states.

Section 1. Infrastructure spending can't stimulate the economy

According to Keynesian economic theory, a fall in demand causes a fall in spending. Since one person's spending is someone else's income, a fall in demand makes a nation poorer. When that poorer nation prudently cuts back on spending, it sets off yet another wave of falling income. So, a big shock to consumer spending or business confidence can set off waves of job losses and layoffs.

Can anything stop this cycle? Keynesians say yes: government spending can take the place of private spending during a crisis. If the government increases its own spending, it will create new jobs. These new workers should consume more, and businesses should then buy more machines and equipment to meet the demands of government and the revitalized public.

This increase in gross domestic product is what economists call *the multiplier effect*. It means that one dollar of government spending will end up creating *more* than a dollar of new national income. This spending can

[1] Bureau of Economic Analysis, "News Release," August 26, 2011, http://www.bea.gov/newsreleases/national/gdp/2011/pdf/gdp2q11_2nd.pdf.
[2] Mark Landler and Jackie Calmes, "Obama Stumps for Jobs Plan, Calling for 'Action Now'," *New York Times*, September 9, 2011, http://www.nytimes.com/2011/09/10/us/politics/10obama.html?_r=1&hp.

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take a number of forms: public service employment, cash transfers, state revenue sharing, or infrastructure projects.

As it turns out, as appealing as the Keynesian story sounds, there is little consensus among economists about its accuracy. Moreover, a survey of the economic literature on the impact of infrastructure spending on the economy reveals that economists are far from having reached a consensus about the actual returns on such spending.[3] In this paper, my colleague Matt Mitchell and I discover that some respected economists find large positive multipliers (every dollar in government spending means more than a dollar of economic growth) but others find negative multipliers (every dollar spend hurts the economy).[4] The range is wide, going from 3.7 to -2.88.[5] While this diversity of opinion could be explained in part by the wide range of circumstances in which stimulus might be applied (open or closed economy, fixed or flexible exchange rates, level of countries' indebtedness, the level of interest rates, whether or not the stimulus spending is temporary or permanent, and whether or not it is a large or a small stimulus ...),[6] nonetheless, as a recent International Monetary Fund (IMF) working paper puts it, "Economists have offered an embarrassingly wide range of estimated multipliers."[7]

However, the most important reasons to be skeptical about further stimulus—particularly infrastructure stimulus—have to do with the way it is implemented.[8] As a general rule, the studies that obtain large multipliers do so by assuming that stimulus funds will be distributed just as Keynesian theory says they ought to be. In the words of Keynesian economist and former presidential economic advisor Lawrence Summers, fiscal stimulus "can be counterproductive if it is not timely, targeted, and temporary." [9] Infrastructure spending cannot fulfill these criteria.

Infrastructure spending is not timely

By nature, infrastructure spending is not timely. Even when the money is available, it can be months, if not years, before it is spent. This is because infrastructure projects involve planning, bidding, contracting, construction, and evaluation.[10] According to the GAO, as of June 2011, 95 percent of the $45 billion in Department of Transportation infrastructure stimulus money had been appropriated, but only 62 percent ($28 billion) had actually been spent.[11]

Infrastructure spending is not targeted

Second, the only thing harder than getting the money out the door promptly is properly targeting spending for stimulative effect. Data from Recovery.gov shows that stimulus money in general—and infrastructure funds in particular—were not targeted to those areas with the highest rate in unemployment, something correct application of the Keynesian theory demands as the idea is that stimulus spending gives the economy a jolt by employing idle people, firms, and equipment. [12]

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[3] Veronique de Rugy and Matt Mitchell, "Would More Infrastructure Spending Stimulate the Economy?" (working paper, Mercatus Center at George Mason University, Arlington, VA, 2011), http://mercatus.org/sites/default/files/publication/infrastructure_deRugy_WP_9-12-11.pdf. Most of the first two sections of this testimony flow from this paper.
[4] Ibid.
[5] Ibid.
[6] Ibid.
[7] Eric Leeper, Todd Walker, and Shu-Chum Yang, "Government Investment and Fiscal Stimulus." (working paper, International Monetary Fund, 2010), http://www.imf.org/external/pubs/ft/wp/2010/wp10229.pdf.
[8] Ibid.
[9] Lawrence Summers, "The State of the U.S. Economy," *Brookings Institution Forum*, December 19, 2007.
[10] See Leeper, Walker, and Yang for more details.
[11] Government Accountability Office, "Recovery Act: Funding Used for Transportation Infrastructure Projects, but Some Requirements Proved Challenging," GAO 11-600, June 29, 2011, http://www.gao.gov/new.items/d11600.pdf.
[12] Veronique de Rugy, "Stimulus Facts—Period 2," (working paper, Mercatus Center at George Mason University, Arlington, VA, 2010), http://mercatus.org/sites/default/files/publication/WP1015_Stimulus%20Facts%202.pdf; Jason Reifler and Jeffrey Lazarus, "Partisanship and Policy Priorities in the Distribution of Economic Stimulus Funds," (working paper, September 2010), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1670161; Jennifer LaFleur and Matt Grabell, "Stimulus Infrastructure Funding Short-Changes States with High Unemployment," *Pro Publica*, February 2009, http://www.propublica.org/special/stimulus-

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However, even properly aimed infrastructure spending might have failed to stimulate the economy. Many of the areas hardest hit by the recession are in decline because they have been producing goods and services that are not, and may never be, in great demand. Therefore, the overall value added by improving the roads and other infrastructure in these areas is likely to be lower than if the new infrastructure were located in growing areas that might have relatively low unemployment but greater demand for more roads, schools, and other types of long-term infrastructure.[13]

Perhaps more importantly, unemployment rates among specialists, such as those with the skills to build roads or schools, are often relatively low. And it is unlikely that an employee specialized in residential-area construction can easily update his or her skills to include building highways. As a result, we can expect that firms receiving stimulus funds will hire their workers away from other construction sites where they were employed, rather than plucking the jobless from the unemployment rolls. This is what economists call "crowding out." Except that in this case, labor, not capital, is being crowded out.

New data from Mercatus Center professor Garret Jones and AEI staffer Dan Rothschild confirm that companies and governments used stimulus money to poach a plurality of workers from other organizations rather than hiring them from the unemployment lines. [14] Based on extensive field research—over 1,300 anonymous, voluntary responses from managers and employees—Jones and Rothschild bring to light the fact that less than half of the workers hired with stimulus funds were unemployed at the time they were hired. A majority were hired directly from other organizations, with just a handful coming from school or outside the labor force. In email correspondence, Garrett Jones further explains that during recessions most employers who lose workers to poaching decline to fill the vacant positions—leaving unemployment essentially unchanged.

Infrastructure spending isn't temporary

Finally, even in Keynesian models, stimulus is only effective as a short-run measure. In fact, Keynesians also call for surpluses during an upswing.[15] In reality, however, the political process prefers to implement the first Keynesian prescription (deficit-financed spending) but not the second (surpluses to pay off the debt).[16] The inevitable result is a persistent deficit that, year-in, year-out, adds to the national debt.[17] A review of historical stimulus efforts has shown that temporary stimulus spending tends to linger and that two years after an initial stimulus, 95 percent of the spending surge remains.[18]

To be sure, a certain amount of public spending on public works is necessary to perform essential government functions. But spending on roads, rails, and bridges as a means of providing employment or creating economic growth is unlikely to be effective.

Section 2. Federal infrastructure spending rarely makes for good investments

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unemployment-chart-and-map; and Robert Inman, "States in Fiscal Distress," (working paper, National Bureau of Economic Research, 2010), http://www.nber.org/papers/w16086.

[13] Gary Becker, "Infrastructure in a Stimulus Package," Becker-Posner Blog, January 18th 2009. http://gregmankiw.blogspot.com/2009/01/infrastructure-spending-as-stimulus.html.

[14] Garett Jones and Daniel Rothschild, "Did Stimulus Dollars Hire the Unemployed? Answers to Questions About the American Recovery and Reinvestment Act," (working paper, Mercatus Center at George Mason University, Arlington, VA, 2011), http://mercatus.org/sites/default/files/publication/Did_Stimulus_Dollars_Hire_The_Unemployed_Jones_Rothschild_WP34.pdf.

[15] Paul Krugman, "Hard Keynesianism," The Conscience of a Liberal, *The New York Times*, May 2, 2011, http://krugman.blogs.nytimes.com/2011/05/02/hard-keynesianism/.

[16] John Cullis and Phillip Jones, *Public Finance and Public Choice*, Second Edition (New York: Oxford University Press, 1998), Chapter 14.

[17] Office of Management and Budget, Historical Tables, Table 1.2, http://www.whitehouse.gov/omb/budget/Historicals/. If the federal government followed the full Keynesian prescription, then it would have run a primary deficit during most of the last 40 years. Instead, the federal government ran a primary deficit 66 percent of the time. When interest payments are counted as expenses, the government ran a deficit 95 percent of the time.

[18] Olivier Blanchard and Roberto Perotti," An Empirical Characterization of the Dynamic Effects of Changes in Government Spending and Taxes on Output," *The Quarterly Journal of Economics*, v. 117 no. 4 (2002): 1329–368, http://ideas.repec.org/a/tpr/qjecon/v117y2002i4p1329-1368.html.

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Economists have long recognized the value of building highways, bridges, airports, and canals as they are the conduits through which goods are exchanged and hence a source of economic growth. This explains the general support for federally funded infrastructure on both sides of the political aisle. Unfortunately, government funded infrastructure projects don't often make for good investments either.

First, infrastructure spending by the federal government tends to suffer from massive cost overruns, waste, fraud, and abuse. As a result, many projects that look good on paper turn out to have much lower return on investments than planned.

A comprehensive 2002 study by Danish economists Bent Flyvbjerg, Mette K. Skamris Holm, and Søren L. Buhl examined 20 nations on five continents and found that nine out of ten public works projects come in over budget. [19] For rail, the average cost is 44.7 percent greater than the estimated cost at the time the decision is made. For bridges and tunnels, the equivalent figure is 33.8 percent, and for roads 20.4 percent.[20]

These cost overruns dramatically increase infrastructure spending. On average, U.S. cost-overruns reached $55 billion per year.[21] Even if they lead to localized job growth, these investments are usually inefficient uses of public resources. According to the Danish researchers, American cost overruns reached on average $55 billion per year. This figure includes famous disasters like the Central Artery/Tunnel Project (CA/T), better known as the Boston Big Dig.[22] By the time the Beantown highway project—the most expensive in American history—was completed in 2008, its price tag was a staggering $22 billion. The estimated cost in 1985 was $2.8 billion. The Big Dig also wrapped up 7 years behind schedule.

Unfortunately, studies have shown that project promoters routinely ignore, hide, or otherwise leave out important project costs and risks to make total costs appear lower.[23] Researchers refer to this as the "planning fallacy" or the "optimism bias." Scholars have also found that it can be politically rewarding to lie about the costs and benefits of a project. The data show that the political process is more likely to give funding to managers who underestimate the costs and overestimate the benefits. In other words, it is not the best projects that get implemented but the ones that look the best on paper.[24]

In addition, inaccurate estimates of demand contribute to consistent underestimation of public projects: A study of 208 projects in 14 nations shows that 9 out of 10 rail projects overestimate the actual traffic.[25] Moreover, 84 percent of rail-passenger forecasts are wrong by more than 20 percent. Thus, for rail, passenger traffic averages 51.4 percent less than estimated traffic.[26] This means that there is a systematic tendency to overestimate rail revenues. For roads, actual vehicle traffic is on average 9.5 percent *higher* than forecasted traffic, and 50 percent of road traffic forecasts are wrong by more than 20 percent.[27] In this case, there is a systematic tendency to *underestimate* the financial and congestion costs of roads.

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[19] Bent Flyvbjerg, Mette K. Skamris Holm, and Søren L. Buhl, "Underestimating Costs in Public Works Projects: Error or Lie?" *Journal of the American Planning Association*, vol. 68, no. 3, (Summer 2002): 279–25.
[20] Ibid.
[21] The Capitol Hill Visitor Center, an ambitious three-floor underground facility originally scheduled to open at the end of 2005, was delayed until 2008. The price tag leapt from an estimated $265 million in 2000 to a final cost of $621 million.
[22] Chris Edwards, "Government Schemes Cost More Than Promised," *Tax and Budget Bulletin* 17 (Washington, DC: Cato Institute, September 2003), http://www.cato.org/pubs/tbb/tbb-0309-17.pdf.
[23] Bent Flyvbjerg, "Design by Deception: The Politics of Megaproject Approval," *Harvard Design Magazine*, no. 22, (Spring/Summer 2005): 50–9. See also, Flyvbjerg, "Machiavellian Megaprojects," *Antipode*, vol. 37, no. 1, (January 2005): 18–22 and Flyvbjerg, "Megaprojects and Risk: An Anatomy of Ambition," *The Sociologist*, vol. 1, no. 1 (Summer 2004): 50–5. See also Bent Flyvbjerg, Mette K. Skamris Holm, and Søren L. Buhl, "What Causes Cost Overrun in Transport Infrastructure Projects?" *Transport Reviews*, vol. 24, no. 1 (January 2004): 3–18.
[24] Bent Flyvbjerg, "Survival of the Unfittest: Why the Worst Infrastructure Gets Built—And What We Can Do about It," *Oxford Review of Economic Policy*, vol. 25, no. 3 (2009): 344–67, http://www.sbs.ox.ac.uk/centres/bt/Documents/UnfittestOXREPHelm3.4PRINT.pdf.
[25] Bent Flyvbjerg, "Measuring Inaccuracy in Travel Demand Forecasting: Methodological Considerations Regarding Ramp Up and Sampling," *Transportation Research A*, vol. 39 no. 6, (2005): 522–30.
[26] Bent Flyvbjerg, Mette Skamris Holm, and Søren L. Buhl, "How (In) accurate are Demand Forecasts in Public Works Projects? The Case of Transportation," *Journal of the American Planning Association*, vol. 71, no. 2 (Spring 2005): 131-46.
[27] Ibid.

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Finally, other factors contribute to increasing the costs of public infrastructure spending and making it harder to be profitable. For instance, federal "prevailing-wage" requirements (such as the ones imposed by the Davis Bacon Act) require that construction workers employed by private contractors on public projects be paid at least the wages and benefits that are "prevailing" for similar work in or near the locality in which the project is located.[28]

To the extent that the prevailing-wage is above the market wage, the laws may impose financial costs both through increased wage bills for construction projects and an inefficient mix of capital and labor and of different types of workers. However, because public construction accounts for between one-fifth and one-quarter of all construction, and because prevailing-wage laws cover a substantial number of private projects undertaken with public financing or assistance, prevailing-wage laws may also affect construction labor markets more broadly.

In a paper called "Prevailing Wage Laws and Construction Labor Markets," economists Daniel Kessler and Lawrence Katz examine the consequences of several states' repeal of their prevailing-wage laws in the 1970s and 1980s.[29] By comparing trends in construction labor markets in "repeal" states to trends in labor markets in states that did not change their laws, they find that the average wages of construction workers (in repeal states) decline slightly after repeal—by about 2 to 4 percent.

However, they also find that the small overall impact of repeal masks substantial differences in outcomes for different groups of construction workers. The negative effects of repeal on wages are more pronounced for unionized workers who tend to benefit the most from the higher compensation provided by the prevailing-wage requirement. Kessler and Katz find, for instance, that repealing prevailing-wage laws leads to a decline of approximately 10 percentage points in the long-run union wage premium earned by construction workers, or almost half of the total union wage premium in construction. They point out, "Since union members account for approximately 25 percent of all construction workers, the 10-percentage-point decrease in the union wage premium explains almost all of the (approximately 2 to 4 percent) decline in construction workers' wages."[30]

This has implications for the most recent stimulus bill, the American Recovery and Reinvestment Act. According to the GAO, $102 billion of ARRA's $787 billion went toward programs covered by Davis-Bacon (40 programs in total, seven of which had never been subject to prevailing-wage laws).[31] According to Rothschild and Jones, suspending Davis-Bacon would have created perhaps 55,000 additional federally funded jobs, funded 6 percent more projects, and hired 6 percent more workers.[32] (The more one pays per worker, the fewer workers one can hire.) If ARRA had suspended Davis-Bacon, more roads could have been repaved, more houses insulated, and more levees repaired.[33]

Rothschild and Jones conclude that if government jobs paid market wages, then a recession would be a great time to build roads and hospitals at a much lower cost than usual. Taxpayers could save money by hiring employees who were waiting for the private sector to improve.

In fact, in their survey they found that among public and private organizations required to pay prevailing-wages, 38.2 percent thought that they could have hired workers at wages below the Davis-Bacon prevailing-

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[28] Davis Bacon applies to any federal contract over $2,000 for the construction, alteration, or repair of public buildings or public works. It sets the minimum wages to be paid to various classes of laborers and mechanics employed under these contracts. Under the provisions of the Act, contractors or their subcontractors are to pay workers employed directly upon the site of the work no less than the locally prevailing wages and fringe benefits paid on projects of a similar character. The Secretary of Labor determines local prevailing wage rates. In general, these wages are comprised of two parts: a per-hour base wage and a per-hour fringe benefit allocation.

[29] Daniel Kessler and Lawrence Katz, "Prevailing Wage Laws and Construction Labor Markets," *Industrial and Labor Relations Review*, Vol. 54, no. 2 (January 2001): 259–274.

[30] Ibid, 273.

[31] Government Accountability Office, Recovery Act: Officials' views vary on impacts of Davis-Bacon Act prevailing wage provision, (Washington, DC: GAO, 2010), 2, http://www.gao.gov/new.items/d10421.pdf.

[32] Daniel Rothschild and Garret Jones, "Did Stimulus Dollars Hire the Unemployed?" (working paper, Mercatus Center at George Mason University, 2011), 7.

[33] Ibid.

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wage while another 17 percent were unsure. The numbers were even higher for the private-sector and non-profit organizations to which Davis-Bacon applied: 52 percent said they could have hired people at lower than the prevailing-wage.[34] Forcing organizations to hire at the prevailing-wage meant higher costs for the federal government and fewer jobs created.[35]

Section 3. Alternatives to federally funded infrastructures

Economic theory suggests that private markets under-provide so called "public goods."[36] As a result, the government is often believed to have a comparative advantage in the provision of public goods. Theory also suggests that private markets have a comparative advantage in providing non-public goods, goods and services that businesses can supply. Thus, having the federal government run businesses—such as Amtrak and the Postal Service—and oversee infrastructure—such as the air traffic control system—is not just inefficient, it also hinders economic growth and costs the taxpayers money while providing low-quality services to customers.[37]

Identically, economists argue it is inefficient to have the federal government oversee roads and highway expansions as state and local governments and the private sector are better suited to oversee roads and highway expansions. In a 2009 *Policy Analysis* paper, Cato Institute urban economist Randall O'Toole explains how, with very few exceptions, most roads, bridges, and even highways are local projects (state projects at most) by nature.[38] In fact, a number of states have started to finance and operate highways privately. In 1995, Virginia opened the Dulles Greenway, a 14-mile highway, paid for by private bond and equity issues. Similar private highway projects have been completed, or are being pursued, in California, Maryland, Minnesota, North Carolina, South Carolina, and Texas. In Indiana, Governor Mitch Daniels leased the highways and made a $4 billion profit for the state's taxpayers. Consumers in Indiana were better off: the deal not only saved money, but the quality of the roads improved as they were run more efficiently.

Experiences in other countries have also shown that privatization leads to innovation and reduced congestion. In France, the A14 in Paris was funded privately and has not only managed to stay in business, but has also helped reduce traffic congestion. Furthermore, while almost all major U.S. airports are owned by state and local governments, with the federal government subsidizing airport renovation and expansion, many countries have privatized or partly privatized their airports, including Athens in Greece, Auckland in New Zealand, Brussels in Belgium, Copenhagen in Denmark, Frankfurt in German, London in the UK, Melbourne and Sydney in Australia, Naples and Rome in Italy, and Vienna in Austria.[39]

Conclusion

Economists have long recognized the value of infrastructure. Roads, bridges, airports, canals, and other projects are the conduits through which goods are exchanged. However, it doesn't mean that the federal government should be funding infrastructure projects. Rather, it should devolve this function to the states or, better yet, leave it to the private sector. Moreover, whatever its merits, because infrastructure spending does not provide much of a stimulus to an economy—especially if that economy needs long-term, sustainable jobs—it should not be used as a jobs program.

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[34] Ibid.
[35] Rothschild and Jones, 2011.
[36] Typically, economists believe that "public goods" will be underprovided by private firms. A public good is one whose benefits are non-excludable and non-rivalrous. This means that private actors who provide such goods have no way of charging users, even though additional users are costless. New technologies such as wireless toll booths, however, are rapidly changing some public goods into private goods.
[37] Dong Fu, Lori L. Taylor, and Mine K. Yücel, "Fiscal Policy and Growth" (Federal Reserve Bank of Dallas. *Working Paper* 0301, January 2003), 10.
[38] Randall O'Toole, *Getting What You Paid for—Paying for What You Get: Proposals for the Next Transportation Reauthorization*, Cato Institute Policy Analysis, September 15, 2009, http://www.cato.org/pubs/pas/pa644.pdf.
[39] Chris Edwards, "Privatization," *Cato Institute Handbook for Policymakers, 7th Edition* (Washington, DC: Cato Institute, 2009).

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Federal Infrastructure Investment

Statement of Chris Edwards, Cato Institute,

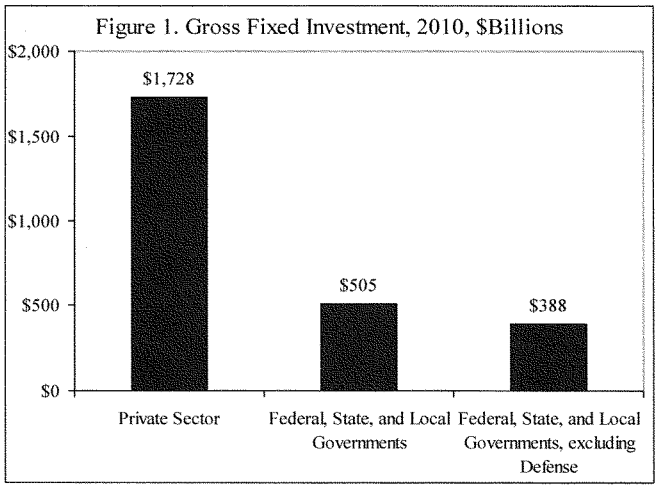
to the Joint Economic Committee

November 16, 2011

Mr. Chairman and members of the committee, thank you for inviting me to testify today. My comments will examine the federal role in the nation's infrastructure.

In the description of today's hearing, the committee asked how infrastructure helps to promote growth, jobs, and manufacturing. The short answer is that we can spur growth by ensuring that America's infrastructure investment is as efficient as possible. Infrastructure funding should be allocated to the highest-value projects, and those projects should be constructed and maintained in the most cost-effective manner. My testimony will discuss why reducing the federal role in infrastructure will help to increase the efficiency of our investment.

The first thing to note about America's infrastructure is that most of it is not provided by the government, but by the private sector. A broad measure of private infrastructure spending—including spending on items such as buildings, factories, freight rail, pipelines, and refineries—is much larger than government infrastructure spending on items such as roads and airports. In Figure 1, Bureau of Economic Analysis data show that private gross fixed investment was $1.7 trillion in 2010, which compared to gross fixed investment by federal, state, and local governments of $505 billion.[1] When defense investment is excluded, government infrastructure spending was just $388 billion, or less than one-quarter of private infrastructure spending.



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One implication of this data is that if Congress wants to boost infrastructure spending, the first priority should be to make reforms to encourage private investment. Tax reforms, such as a corporate tax rate cut, would increase the net returns to a broad range of private infrastructure investments. Regulatory reforms to reduce barriers to investment are also needed, as illustrated by the delays in approving the $7 billion Keystone XL pipeline from Alberta to Texas.

Despite its smaller magnitude, public-sector infrastructure spending is also very important to the U.S. economy. But the usual recommendation to simply spend more federal taxpayer money on infrastructure is misguided. For one thing, the government simply can't afford more spending given its massive ongoing deficits. More importantly, much of the infrastructure spending carried out by Washington would be more efficiently handled by devolving it to state and local governments and the private sector.

Notes on Government Infrastructure

Many types of current government infrastructure used to be owned and financed by the private sector. Before the 20th century, for example, more than 2,000 turnpike companies in America built more than 10,000 miles of toll roads.[2] And up until the mid-20th century, most urban rail and bus services were private.[3] With respect to railroads, the federal government subsidized some of the companies building railroads to the West, but most U.S. rail mileage in the 19th century was in the East, and it was generally unsubsidized. The takeover of private infrastructure activities by governments in the United States and abroad in the 20th century caused many problems. Fortunately, most governments have reversed course in recent decades and have started to hand back infrastructure to the private sector.

Let's look at current data on infrastructure spending. Interest groups complain that governments in the United States aren't spending enough on infrastructure, and we often hear that U.S. roads and other assets are crumbling. However, Figure 2 shows that while federal, state, and local infrastructure spending in the United States has dipped a little in recent decades, U.S. spending has closely tracked trends in other high-income nations. The figure shows gross fixed investment as a share of gross domestic product in the United States compared to the average of countries in the Organization for Economic Cooperation and Development.[4] In 2010, U.S. infrastructure spending by governments was 3.5 percent of GDP, which was a little higher than the OECD average of 3.3 percent.

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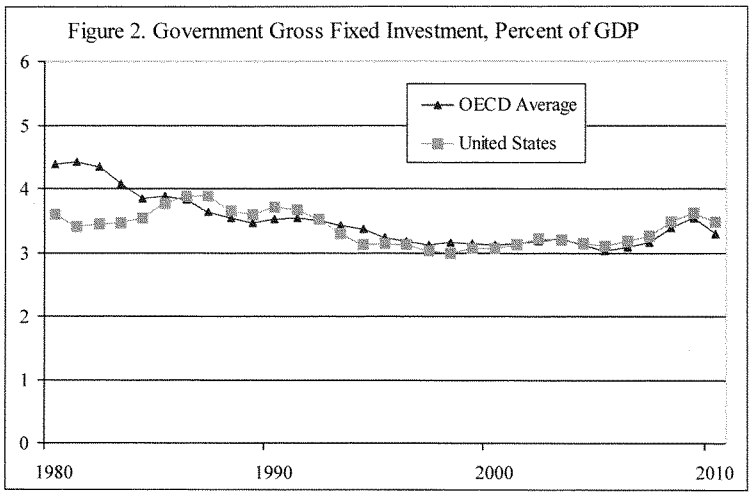
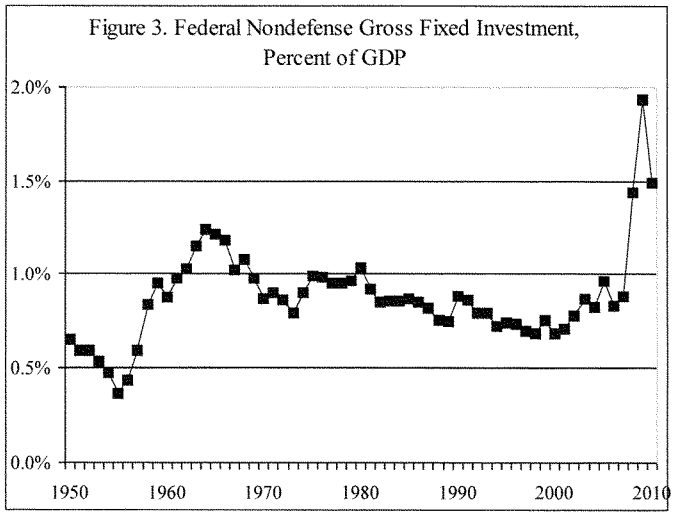


Let's take a closer look at just U.S. federal infrastructure spending using data from the Bureau of Economic Analysis.[5] Figure 3 shows that federal nondefense infrastructure spending declined somewhat during the 1980s and 1990s, but started to rise again during the 2000s even before the recent "stimulus" spending. Spending in recent decades was generally above the levels of the 1950s, but below the high levels of the 1960s.



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The high federal infrastructure spending of the 1960s was unique. A large share of that spending was for building the Interstate Highway System, which is now complete. Also note that substantial federal infrastructure spending at that time was misallocated to dubious or harmful activities. For example, federal funding of urban redevelopment and high-rise public housing schemes often had damaging social and economic effects. Also, federal spending on water infrastructure, such as dams, peaked in the mid-20th century, and a substantial part of that spending made little sense from an economic or an environmental perspective.

Thus, the important thing about infrastructure is to focus on allocating funds efficiently, not to maximize the amount of government spending. If infrastructure funding flows to low-value activities, it doesn't aid economic growth, nor does it help industries such as manufacturing. Experience shows that Washington often does a poor job at allocating infrastructure spending, which partly stems from the fact that its decisions are far removed from market-based demands and price signals.

Most federal nondefense infrastructure spending today is for activities that are state, local, and private in nature. Federal budget data for fiscal 2011 show that nondefense infrastructure spending was about $162 billion, including both direct spending and aid to the states.[6] Some of this spending that is state, local, and private in nature included: $42.0 billion for highways, $16.8 billion for water and power projects, $14.3 billion for urban transit, $12.5 billion for community development, $12.5 billion for housing, and $3.5 billion for airports.

Problems with Federal Infrastructure Investment

There are calls today for more federal spending on infrastructure, but advocates seem to overlook the downsides of past federal efforts. Certainly, there have been federal infrastructure successes, but there has also been a history of pork barrel politics and bureaucratic bungling in federal investment spending. A substantial portion of federal infrastructure spending has gone to low-value and dubious activities.

I've examined spending by the two oldest federal infrastructure agencies—the Army Corps of Engineers and the Bureau of Reclamation.[7] While both of those agencies constructed some impressive projects, they have also been known for proceeding with uneconomic boondoggles, fudging the analyses of proposed projects, and spending on activities that serve private interests rather than the general public interest. (I am referring to the Civil Works part of the Corps here).

Federal infrastructure projects have often suffered from large cost overruns.[8] Highway projects, energy projects, airport projects, and air traffic control projects have ended up costing far more than originally promised. Cost overruns can happen on both public and private infrastructure projects, but the problem is exacerbated when multiple levels of government are involved in a project because there is less accountability. Boston's Big Dig—which exploded in cost to five times the original estimate—is a classic example of mismanagement in a federal-state project.[9]

Perhaps the biggest problem with federal involvement in infrastructure is that when Washington makes mistakes it replicates those mistakes across the nation. Federal efforts to build massive public housing projects in dozens of cities during the 20th century had very negative economic and social effects. Or consider the distortions caused by current federal subsidies for urban light-

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rail systems. These subsidies bias cities across the country to opt for light rail, yet rail systems are generally less efficient and flexible than bus systems, and they saddle cities with higher operating and maintenance costs down the road.[10]

When the federal government subsidizes certain types of infrastructure, the states want to grab a share of the funding and they often don't worry about long-term efficiency. High-speed rail is a rare example where some states are rejecting the "free" dollars from Washington because the economics of high-speed rail seem to be so poor.[11] The Obama administration is trying to impose its rail vision on the nation, but the escalating costs of California's system will hopefully warn other states not to go down that path.[12]

Even if federal officials were expert at choosing the best types of infrastructure to fund, politics usually intrudes on the efficient allocation of dollars. Passenger rail investment through Amtrak, for example, gets spread around to low-population areas where passenger rail makes no economic sense. Indeed, most of Amtrak's financial loses come from long-distance routes through rural areas that account for only a small fraction of all riders.[13] Every lawmaker wants an Amtrak route through their state, and the result is that investment gets misallocated away from where it is really needed, such as the Northeast corridor.

Another problem is that federal infrastructure spending comes with piles of regulations. Davis-Bacon rules and other federal regulations raise the cost of building infrastructure. Regulations also impose one-size-fits-all solutions on the states, even though the states have diverse needs. The former 55-mph speed limit, which used to be tied to federal highway funds, is a good example. Today, federal highway funds come with requirements for the states to spend money on activities such as bicycle paths, which state policymakers may think are extraneous.[14]

Decentralizing Infrastructure Financing

The U.S. economy needs infrastructure, but state and local governments and the private sector are generally the best places to fund and manage it. The states should be the "laboratories of democracy" for infrastructure, and they should be able to innovate freely with new ways of financing and managing their roads, bridges, airports, seaports, and other facilities.

It is true that—like the federal government—the states can make infrastructure mistakes. But at least state-level mistakes aren't automatically repeated across the country. If we ended federal involvement in high-speed rail, for example, California could continue to move ahead with its own system. Other states could wait and see how California's system was performing before putting their own taxpayers on the hook.

A big step toward devolving infrastructure financing would be to cut or eliminate the federal gasoline tax and allow the states to replace the funds with their own financing sources. President Reagan tried to partly devolve highway funding to the states, and more recent legislation by Rep. Scott Garrett (R-NJ) and Rep. Jeff Flake (R-AZ) would move in that direction.[15] Reforms to decentralize highway funding would give states more freedom to innovate with the financing, construction, and management of their systems.[16]

One option for the states is to move more of their infrastructure financing to the private sector through the use of public-private partnerships (PPP) and privatization. The OECD has issued a

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new report that takes a favorable view on the global trend towards infrastructure PPPs.[17] The OECD says that there is a "widespread recognition" of "the need for greater recourse to private sector finance" in infrastructure.[18] The value of PPP infrastructure projects has soared over the past 15 years in major industrial countries.[19]

PPPs differ from traditional government projects by shifting activities such as financing, maintenance, management, and project risks to the private sector. There are different types of PPP projects, each fitting somewhere between traditional government contracting and full privatization. In my view, full privatization is the preferred reform option for infrastructure that can be supported by user fees and other revenue sources in the marketplace.

Transportation is the largest area of PPP investment. A number of projects in Virginia illustrate the options:

- *Midtown Tunnel*. Skanska and Macquarie will be building a three-mile tolled tunnel under the Elizabeth River between Norfolk and Portsmouth. Private debt and equity will pay $1.5 billion of the project's $1.9 billion cost.[20]
- *Capital Beltway*. Transurban and Fluor will be building, operating, and maintaining new toll lanes on the I-495. The firms are financing $1.4 billion of the project's $1.9 billion cost.[21]
- *Dulles Greenway*. The Greenway is a privately-owned toll highway in Northern Virginia completed with $350 million of private debt and equity in mid-1990s.[22]
- *Jordan Bridge*. FIGG Engineering Group is constructing, financing, and will own a $100 million toll bridge over the Elizabeth River between Chesapeake and Portsmouth, which is to be completed in 2012.[23]

About $900 billion of state-owned assets have been sold in OECD countries since 1990, and about 63 percent of the total has been infrastructure assets.[24] The OECD notes that "public provision of infrastructure has sometimes failed to deliver efficient investment with misallocation across sectors, regions or time often due to political considerations. Constraints on public finance and recognized limitations on the public sector's effectiveness in managing projects have led to a reconsideration of the role of the state in infrastructure provision."[25]

There has been a large increase in privatization and infrastructure PPPs in many countries, but the United States has lagged behind. The OECD notes that the United States "has lagged behind Australia and Europe in privatization of infrastructure such as roads, bridges and tunnels."[26] More than one-fifth of infrastructure spending in Britain and Portugal is now through the PPP process, so this is becoming a normal way of doing business in some countries.[27]

The industry reference guide for infrastructure PPP and privatization is *Public Works Financing*.[28] According to this source, only 2 of the top 40 companies doing transportation PPP and privatization around the world are American. Of 733 transportation projects currently listed by *PWF*, only 20 are in the United States. Canada—a country with one-tenth of our population—has more PPP deals than we do. In Canada, PPPs account for 10 to 20 percent of all public infrastructure spending.[29]

One of the fuels for infrastructure PPP has been growing investment by pension funds.[30] In Canada, Australia, and other countries, there is larger pension fund investment in infrastructure

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than in the United States. In some countries, such as Australia, the growth in pension assets has been driven by the privatization of government retirement programs.[31] Thus, there is a virtuous cycle in place—the privatization of savings in some countries has created growing pools of capital available to invest in privatized infrastructure.

There are many advantages of infrastructure PPP and privatization. One advantage is that we are more likely to get funding allocated to high-return investments when private-sector profits are on the line. Of course, businesses can make investment mistakes just as governments do. But unlike governments, businesses have a systematic way of choosing investments to maximize the net returns. And when investment returns are maximized, it stimulates the largest gains to the broader economy.

One reason that privatized infrastructure is efficient is that private companies can freely tap debt and equity markets to build capacity and meet market demands. By contrast, government investment suffers from the politics and uncertainties of the federal budget process. You can see the problems with our air traffic control system, which needs long-term investment but the Federal Aviation Administration can't count on a stable funding stream. For its part, the FAA's management of ATC investment has been poor. The agency has a history of delays and cost overruns on its technology upgrade projects. The solution to privatize our air traffic control system, as Canada has done with very favorable results.[32]

A recent Brookings Institution study describes some of the advantages of PPPs. It notes that the usual process for government infrastructure investment decouples the initial construction from the later management, which results in contractors having few incentives to build projects that will minimize operation and maintenance costs.[33] PPP solves this problem because the same company will both build and operate projects. "Many advantages of PPP stem from the fact that they bundle construction, operations, and maintenance in a single contract. This provides incentives to minimize life-cycle costs which are typically not present when the project is publicly provided," notes the Brookings' study.[34]

There are other advantages of infrastructure PPP and privatization. One advantage is the efficiency of construction. Extensive British experience shows that PPP projects are more likely to be completed on time than traditional government projects.[35] Another advantage is the efficiency of operations. Private firms have incentives to reduce excessive operational costs, as illustrated by the labor cost savings from the leasing of the Chicago Skyway.[36] Finally, private operators of infrastructure such as toll roads are more likely to charge efficient market rates to users, as illustrated by the leasing of the Indiana Toll Road.[37]

The Brookings' paper raises some important concerns with PPP, which I share. One is that state officials may lease assets such as toll roads simply to paper over short-term budget deficits. Another concern is that policymakers write poor contracts that assign profits to private parties but risks and possible losses to taxpayers. The Brookings' authors propose approaches to structuring contracts and competitive bidding to ensure efficiency.

For new infrastructure investments, well-structured PPP or full privatization appears to be a winning approach for taxpayers, governments, and the broader economy. Taxpayers win because their subsidies to infrastructure users are minimized. Governments win by getting new facilities

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built. And the economy wins because private investment is more likely to be cost-efficient and well-targeted than traditional government investments.

Conclusions

In its report on the state of U.S. infrastructure, the American Society of Civil Engineers gives America a "D" grade.[38] However, the ASCE report mainly focuses on infrastructure provided by governments, so if you believe that this low grade is correct, then it is mainly due to government failures. The ASCE lobbies for more federal spending, but OECD data shows that public-sector spending on infrastructure is about the same in this country as in other high-income nations.

Some of the infrastructure shortcomings in the United States stem from mismanagement and misallocation by the federal government, rather than a lack of taxpayer support. So part of the solution is to decentralize infrastructure financing, management, and ownership as much as possible. State and local governments and the private sector are more likely to make sound investment decisions without the federal subsidies and regulations that distort their decisionmaking.

This committee's description of today's hearing noted: "Transportation infrastructure is especially important to the manufacturing sector, which relies on various modes of transportation to obtain raw materials and to transport end products to the marketplace." That is certainly true, and I think transportation privatization is part of the answer to improve America's competitiveness in global markets. For example, nearly all airports and seaports in this country are owned by governments, but many airports and seaports abroad have been partly or fully privatized. The World Economic Forum rates America's seaports only 23rd in the world, but the first- and third-best seaports in the world, according to WEF, are private—Singapore and Hong Kong.[39]

The federal government cannot afford to expand its infrastructure spending because of today's massive deficits. Many states are also in a budget squeeze. Fortunately, the global trend is toward partly or fully privatizing the financing and ownership of infrastructure. U.S. policymakers should study these recent innovations in infrastructure investment, and then start unloading the financing and ownership of our infrastructure to the private sector.

Thank you for holding these important hearings.

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[1] Bureau of Economic Analysis, National Income and Product Accounts, Table 1.5.5.
[2] www.downsizinggovernment.org/transportation/highway-funding.

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[3] www.downsizinggovernment.org/transportation/urban-transit.
[4] This is OECD data for total government gross fixed capital spending based on national income accounts. The OECD emailed me the data behind Figure 2.1 in Organization for Economic Cooperation and Development, "Pension Funds Investment in Infrastructure: A Survey," September 2011.
[5] Data in Figure 3 is gross federal investment spending including direct spending and capital aid to the states. See Bureau of Economic Analysis, National Income and Products Accounts, Table 3.2.
[6] *Budget of the United States Government, Fiscal Year 2012, Historical Tables*, Tables 9.2, 9.5, and 9.6.
[7] Essays on these agencies are forthcoming from the Cato Institute.
[8] www.downsizinggovernment.org/government-cost-overruns.
[9] See the *Boston Globe*'s "Easy Pass" series of reports by Raphael Lewis and Sean Murphy, www.boston.com/globe/metro/packages/bechtel.
[10] www.downsizinggovernment.org/transportation/urban-transit.
[11] www.downsizinggovernment.org/transportation/high-speed-rail.
[12] www.msnbc.msn.com/id/45153941/ns/us_news.
[13] www.downsizinggovernment.org/transportation/amtrak/subsidies.
[14] Ronald Utt, "Next Highway Authorization Bill Should Terminate the Transportation Enhancement Program," Heritage Foundation, November 7, 2011.
[15] Garrett's bill is the Surface Transportation and Taxation Equity Act. Flake's bill is the Transportation Empowerment Act.
[16] www.downsizinggovernment.org/transportation/highway-funding.
[17] Organization for Economic Cooperation and Development, "Pension Funds Investment in Infrastructure: A Survey," September 2011.
[18] Organization for Economic Cooperation and Development, "Pension Funds Investment in Infrastructure: A Survey," September 2011, p. 27.
[19] Organization for Economic Cooperation and Development, "Pension Funds Investment in Infrastructure: A Survey," September 2011, p. 36.
[20] Dennis Moore, "Virginia Takes P3 Route for Tunnel," *The Bond Buyer*, August 4, 2011.
[21] www.virginiahotlanes.com/beltway/project-info/funding.php.
[22] For background, see http://dullesgreenway.com.
[23] www.southnorfolkjordanbridge.com.
[24] Organization for Economic Cooperation and Development, "Pension Funds Investment in Infrastructure: A Survey," September 2011, p. 34. For a look at water infrastructure privatization around the world, see Steve H. Hanke and Stephen J.K. Walters, "Reflections on Private Water Supply: Agency and Equity Issues," *Journal of Applied Corporate Finance*, Summer 2011.
[25] Organization for Economic Cooperation and Development, "Pension Funds Investment in Infrastructure: A Survey," September 2011, p. 34.
[26] Organization for Economic Cooperation and Development, "Pension Funds Investment in Infrastructure: A Survey," September 2011, p. 107
[27] Eduardo Engel, Ronald Fischer, and Alexander Galetovic, "Public-Private Partnerships to Revamp U.S. Infrastructure," Brookings Institution, February 2011, p. 5.
[28] *Public Works Financing*, October 2011, www.pwfinance.net.
[29] *Public Works Financing*, October 2011, www.pwfinance.net, p. 18.
[30] Cezary Podkul, "Behind the Curve," *Washington Post*, October 23, 2011.

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[31] Eduardo Engel, Ronald Fischer, and Alexander Galetovic, "Public-Private Partnerships to Revamp U.S. Infrastructure," Brookings Institution, February 2011, p. 89.
[32] www.downsizinggovernment.org/transportation/airports-atc.
[33] Eduardo Engel, Ronald Fischer, and Alexander Galetovic, "Public-Private Partnerships to Revamp U.S. Infrastructure," Brookings Institution, February 2011, pp. 5, 7, 8.
[34] Eduardo Engel, Ronald Fischer, and Alexander Galetovic, "Public-Private Partnerships to Revamp U.S. Infrastructure," Brookings Institution, February 2011, pp. 7, 8.
[35] Eduardo Engel, Ronald Fischer, and Alexander Galetovic, "Public-Private Partnerships to Revamp U.S. Infrastructure," Brookings Institution, February 2011, p. 13.
[36] Eduardo Engel, Ronald Fischer, and Alexander Galetovic, "Public-Private Partnerships to Revamp U.S. Infrastructure," Brookings Institution, February 2011, p. 9.
[37] Eduardo Engel, Ronald Fischer, and Alexander Galetovic, "Public-Private Partnerships to Revamp U.S. Infrastructure," Brookings Institution, February 2011, p. 16.
[38] www.infrastructurereportcard.org.
[39] World Economic Forum, "Global Competitiveness Report, 2011-2012," 2011, p. 415.

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Congressional Testimony of
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Presented before the
Joint Economic Committee
United States Congress

Transformative Infrastructure to Boost Exports and Manufacturing
November 16, 2011

Good afternoon Chairman Casey, Vice Chairman Brady, and members of the Committee. I am pleased to appear before you this afternoon and very much appreciate the invitation.

Throughout most of our nation's history, there has been a broad understanding of the role of strategic and rational investments in physical infrastructure in advancing the American economy. In the past, the U.S. embodied this audacious and innovative investment spirit and conceived projects that were significant on national and metropolitan scales.

Some examples are well known. The Erie and Panama Canals, the Transcontinental Railroad, the Interstate Highway System, and rural electrification each helped build out our nation and connect it within. Within metros, the development of Baltimore's Inner Harbor and the build out of rail transit in Washington, DC and Portland, Oregon had catalytic effects by inspiring redevelopment of underutilized areas and changing the pattern of physical and economic growth in their regions.

The conversation has new meaning today because the understanding seems to be that we are too broke (both financially and in spirit) to make similar investments in our nation's economic future, and we are too beset by various political, regulatory, and institutional barriers to get anything important done.

Mr. Chairman, we must not let this be the case. Today we need targeted and smart ways to drive economic growth, create jobs, restore fiscal health, and regain our lead in manufacturing, innovation and productivity. We live in an internationally competitive world where established nations and emerging economies alike steadfastly produce transformative investments in surface transportation, sea, and air ports to move products to market—both domestically and internationally.

In the U.S., we need to develop a new way of structuring and implementing infrastructure to both create jobs in the short term and support the cornerstones of the next American economy for the long haul.

One critical economic imperative is to boost exports and manufacturing and to fully connect American firms and metro areas to the global marketplace—particularly with nations that are rapidly urbanizing and industrializing. Brazil, India and China are expected to account for about a fifth of

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global GDP in 2010, surpassing the United States for the first time. By 2015, that share will grow to more than 25 percent.[1]

However, exports make up only about 13 percent of U.S. GDP compared to 30 percent in China, 30 percent in Canada, and higher levels in India, Japan, and the entire EU.[2] We need to reorient our economy to take advantage of this new demand.

Yet ambitious initiatives to double exports and boost the manufacturing sector not only require opening up foreign markets for American goods and services. We also need to build and retool the next generation of advanced production facilities and the underlying infrastructure to move goods, services and ideas quickly and efficiently by air, land, and sea.

To do that we need systemic reform. This means reforming the institutions and partnerships that exist today and the process for choosing projects. We also need to address a range of overlapping financial, regulatory, and institutional hurdles that currently stand in the way to ensure that the investments we make today keep pace with the growth and the evolution of the global economy.

Since the recession began, financial markets have contracted and all actors are feeling the strain of insufficient funds and constrained credit supplies. On the public side federal resources are strained, especially for transportation projects which generally make up the largest share of federal domestic discretionary spending. The Congressional Budget Office estimates that the highway trust fund will be unable to meet obligations sometime next summer, if not sooner. And while money from the American Recovery and Reinvestment Act provided roughly $335 billion to support the physical drivers of prosperity—innovation, human capital, infrastructure, and quality places—those funds are largely spent with little prospect for additional dollars anytime soon.[3]

State funding sources are also shrinking. Twenty-one states saw transportation program cuts in fiscal year 2010 and 14 are already proposing transportation program cuts in fiscal year 2012.[4] Other state and local sources—such as revenue from sales taxes—that are earmarked for infrastructure projects are also in decline due to the slow recovery.

These financial barriers affect our ability to pursue a diverse set of new projects. The *I-11 Corridor for the Intermountain West* is initially proposed to extend from Phoenix to Las Vegas but will ultimately be a critical link in global trade networks linking ports from Mexico to Canada and Alaska. The *Intermodal Cargo Hub* is a project intended to "re-internationalize" the St. Louis metro by utilizing the excess freight capacity that currently exists in dormant parts of the urban core. The *U.S. Route 460 Corridor Improvement Project* in south central Virginia is designed to promote the

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[1] John Hawksworth and Anmol Tiwari, "The Accelerating Shift of Global Economic Power: Challenges and Opportunities," London: PricewaterhouseCoopers LLP, 2011.

[2] Emilia Istrate, Jonathan Rothwell, and Bruce Katz, "Export Nation: How U.S. Metros Lead National Export Growth and Boost Competitiveness," Washington: Brookings, 2010.

[3] For innovation, ARRA provided $50 billion for universities, labs, and research centers with an emphasis on clean energy technologies. For human capital: $125 billion in funding and tax measures to improve schools and upgrade workforce skills largely as a backstop against inevitable state budget cuts. For infrastructure: $126 billion in spending on transportation, energy, water, and others. For sustainable, quality place-making: $34 billion for efforts in energy efficiency, affordable housing, neighborhood stabilization, and local economic development. See: Mark Muro and others, "Metro Potential in ARRA: A Preliminary Assessment of the American Recovery and Reinvestment Act from a Metropolitan Perspective" Washington: Brookings, 2009.

[4] National Association of State Budget Officers, "The Fiscal Survey of States," Washington, 2010 and 2011.

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growth of an inland logistics center by enhancing intermodal connectivity to the Port of Virginia. That port is currently the third busiest on the east coast, making it critical to the nation.

Project sponsors are actively working on a range of creative and complex funding and finance packages for these and other projects.

One approach is to use public-private partnerships (PPPs.) In ten states, PPPs need prior approval by the state legislature before they can be developed. Waiting for such authorization is generally considered too burdensome and unpredictable to the private sector as costs associated with the bidding process are sunk and public relations campaigns have to be launched to garner public support for the project.[5] The major barrier currently delaying the *New International Trade Crossing* from Detroit to Windsor, Ontario is the need for legislation authorizing the state to, among other things, create a PPP to design, build, and construct the bridge. This project is part of the largest bi-national trading corridor on the planet and is therefore central to any conversation about exports and global trade.

At the federal and state level, lack of targeted metrics to analyze projects and conduct impact assessment misses good projects that would have a measurable economic effect. Institutions are often siloed and compartmentalized, preventing learning on how to structure, implement, and finance projects across different sectors. This is especially important for multi-modal projects that do not fit a specific mold for a "traditional" infrastructure project. The *Gary-East Chicago South Shore Redevelopment & Airport Expansion Plan* is a good example of a multifaceted, multijurisdictional, and multimodal transportation and waterfront infrastructure project where stakeholder alignment is critical to its success.

Barriers to infrastructure investments like these can be far reaching and overlap across financial, regulatory and institutional types. Understanding the areas in which reform can be achieved will help create policy solutions to streamline processes and invest in transformative projects that catalyze economic growth and opportunity. There are several critical areas that demand attention:

First, in collaboration with the states and metropolitan areas, the federal government should develop a comprehensive National Freight Transportation Plan as a framework for goods movement policy and investment that spans all modes. This process should build off the proposal contained in the Moving Ahead for Progress in the 21st Century Act (MAP–21) to build a national freight network program and prioritize corridors on a cost-benefit analysis that would include all modal options.[6] Learning from Germany, part of this effort should be to determine the appropriate finance and evaluation mechanism to help major U.S. seaports and airports remain globally competitive.[7]

Another is for states to establish a state infrastructure bank (SIB) or enhance it if one is already in place. Beginning in 1998 SIBs have become an attractive financing tool and 33 states have established SIBs to finance transportation projects. Most of this support comes in the form of below-market revolving loans and loan guarantees. States are able to capitalize their accounts with federal transportation dollars but are then subject to federal regulations over how the funds are spent. Others,

[5] Emilia Istrate and Robert Puentes, "Public/Private Partnership Units for Infrastructure: The Missing Institutional Link in PPPs in the U.S.," Washington: Brookings, 2011.
[6] Moving Ahead for Progress in the 21st Century (S. 1813) 112th Congress: 2011-2012.
[7] Germany created a national freight policy to support its major ports and airports in the summer of 2008. See German Federal Ministry of Transport, Building, and Urban Development, Freight Transport and Logistics Masterplan, 2008.

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including Kansas, Ohio, Georgia, and Florida, capitalize their accounts with a variety of state funds and are not bound by the federal oversight which they feel helps accelerate project delivery. Other states—such as Virginia, Texas, and New York—are also examining ways to recapitalize their SIBs with state funds.[8]

But rather than bringing a tough, merit-based approach to funding, many SIBs are simply used to pay for projects selected from the state's wish list of transportation improvements, without filtering projects through a competitive application process. A better approach would be for states to use their infrastructure banks more strategically, focusing on those projects that advance growth through the lens of the Next American Economy.

This means also looking beyond just transportation and create true infrastructure and economic development banks to finance not just roads and rails, but also energy and water infrastructure, perhaps even school and manufacturing development. California's Infrastructure and Economic Development Bank ("I-Bank") provides a compelling model. After its initial capitalization of $181 million in 1999, the I-Bank has funded itself on interest earnings, loan repayments, and other fees, and has supported over $400 million in loans.[9]

On the national level, the creation of an infrastructure bank would leverage federal dollars for large projects whose impact is of national significance, like the border crossings and ports that are integral to our national trade strategy. This is especially crucial for projects that cross multiple state borders and require funding and coordination across a number of public agencies and from the private sector.[10]

A recent poll shows strong willingness for public entities to consider private investments rather than increasing taxes, cutting budgets, or taking on more debt.[11] While half of the states have enacted enabling statutes for PPPs, the wide differences between them makes it time consuming and costly for private partners wishing to engage in PPPs in multiple states to handle the different procurement and management processes.[12] States should therefore move to enact comprehensive PPP legislation that is accountable, transparent, and permanent.

They should also push the federal government to play a helpful role with its state and metropolitan partners by helping them think through potential costs and trade-offs, as well as assessing national interests.[13] Over 25 countries have begun implementing specialized units throughout various governmental agencies to assist with the expanding opportunities for PPPs. These so-called PPP Units fulfill different functions such as quality control, policy formulation and coordination,

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[8] Virginia has proposed capitalizing its SIB with the proceeds from privatizing the state-run liquor stores. Comments of Matt Strader, Virginia Assistant Secretary for Transportation, "Obama's Infrastructure Agenda: Understanding the Pillars," Brookings Institution, Washington, D.C. September 16, 2010.

[9] Stanton C. Hazelroth, Testimony before the House Ways and Means Committee Subcommittee on Select Revenue Measures, May 13, 2010.

[10] Emilia Istrate and Robert Puentes, "Investing for Success: Examining a Federal Capital Budget and a National Infrastructure Bank," Brookings: 2009.

[11] Jonathan Turnbull, "Public-Private Partnerships," Presentation to National Association for Business Economics, September 21, 2010. Available: http://www.nabe.com/rt/reg/documents/Lazard.pdf.

[12] For example, states like Colorado, Florida, and North Carolina allow for both solicited and unsolicited proposals. Others such as Indiana and Tennessee restrict the type of project eligible as a PPP—usually highways or tollways only. Missouri and Alaska restrict authority to certain facilities like a specific bridge crossing. See: Istrate and Puentes, 2011.

[13] U.S. Government Accountability Office, "Highway Public-Private Partnerships: More Rigorous Up-front Analysis Could Better Secure Potential Benefits and Protect the Public Interest," GAO-08-44, 2008.

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technical advice, standardization and dissemination, and promotion of PPPs. In the U.S., the primary purpose of such an entity would be to provide technical, non-binding information, assistance and advice to states and metropolitan governments.

Entities like a PPP Unit or infrastructure bank would ideally help infrastructure investments by leveraging existing funding and finance sources. The federal government could also play a helpful role by amending the Transportation Infrastructure Finance and Innovation Act. This program currently provides subordinated loans and loan guarantees to infrastructure projects and has been successful in supporting a wide range of project-specific applications such as roads directly supported by toll revenues. But the federal government should also be able to provide upfront credit commitment when those projects are part of one holistic package and funded primarily by the same revenue source (such as a regional sales tax.)[14]

These approaches epitomize a new kind of 21st century self-help that the national government should explicitly recognize and embrace.[15] Mr. Chairman, we know that our global competitors, in mature and emerging markets alike, are in the process of making these kinds of investments and by so doing supporting their national economies. These investments—at their core—are the physical means to an economy-shaping end, rather than ends in themselves. Although we are experiencing tumultuous wakes of economic distress, the time is ripe to invest in infrastructure projects that put us on the path to a more productive and sustainable economy.

The views expressed in this testimony are those of the author alone and do not necessarily represent those of the staff, officers, or trustees of The Brookings Institution.

[14] This is the idea behind the America Fast Forward proposal currently incorporated in MAP-21.

[15] Maricopa Association of Governments, "United States Department of Transportation and Metropolitan Planning Organizations: A New Partnership," Phoenix, 2010.

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PREPARED STATEMENT OF REPRESENTATIVE MICHAEL C. BURGESS, MD

Thank you Mr. Chairman for the recognition. I'm glad to be here today to discuss this important subject.

One of the best ways our economy could rebound, and benefit the manufacturing industry, would be to pass a long-term highway reauthorization bill. On November 28th I will be holding a transportation summit back in my district in Texas where engineers, consultants, design firms, and state and local officials will gather to discuss the importance of a highway reauthorization bill. I would like people here in Washington to know that reauthorization is the goal that people should be focusing upon, not political messaging bills.

Reauthorization is not the one-off political proposals used to get on the news, but instead the long-term proposals that require hard work from both sides of the aisle. If passed, this law would put thousands of people to work over the next several years. This includes engineers, road workers, and design firms. It also includes the factories that produce large equipment like road graders, and the companies that provide the raw materials for our highways and transit systems that will all benefit from such a law.

This is one of the areas of agreement in Washington that we should focus on. We should take our attention away from messaging bills and quick political points, and we should do the hard work it takes to pass a highway bill. Both parties agree we need a reauthorization of these programs. My only hope is we can actually sit down and agree and pass such legislation.

I am eager to hear from our witnesses today to hear what Congress can do to help our economy. Thank you Mr. Chairman and I yield back.