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Trump Versus Clinton On Infrastructure

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INTRODUCTION

This report provides an analysis of the competing infrastructure plans of Democratic presidential candidate Hillary Clinton versus Republican Donald Trump on the critical issue of financing, refurbishing, rebuilding, and expanding America's infrastructure.

America's infrastructure is a linchpin of private sector growth. Our complex network of airports, bridges, highways, ports, tunnels, and waterways bring us to work and our products to market. Our digital superhighways connect us to each other and the world. Dams and levees protect us from floods while our water and wastewater facilities are keys to public health. Railroads and pipelines are critical parts of our transportation infrastructure, especially when it comes to moving energy—coal and shale gas and oil—in this nation.

Today, much of America's infrastructure is crumbling. Much more needs to be built anew. Under Obama-Clinton, urgently needed projects have been routinely delayed for years due to endless studies, red-tape, and obstructionist lawsuits. The numbers do not lie.

The US ranks ninth in roads investment as a percent of GDP and twelfth on the Global Competitiveness Index in infrastructure. More than 60,000 American bridges are considered "structurally deficient." Traffic delays cost the U.S. economy more than \$50 billion annually.

Meanwhile, our iPhones are smarter than many of our air traffic control systems. The water in cities like Flint, Michigan is unfit to drink, and over 6 million Americans are potentially exposed to contaminated water.

An investigation by USA Today "identified almost 2,000 additional water systems spanning all 50 states where testing has shown excessive levels of lead contamination over the past four years." This included 350 systems that supplied drinking water to schools or day care facilities.

Building new infrastructure is a critical part of any growth strategy. Every \$200 billion in additional infrastructure expenditures creates \$88 billion more in wages for average Americans and increases real GDP growth by more than a percentage point. Each GDP point creates 1.2 million additional jobs.

Remember too that with the decline of manufacturing in our country, infrastructure projects are one of the few high paying jobs that could employ the less well educated segment of our population. At present one-sixth of the 18 to 34 year old prime working age population is either unemployed or in prison and the minority group statistics are even worse. Infrastructure could help solve this sociological tragedy.

Over the last eight years, the Obama-Clinton administration has doubled our national debt from \$10 trillion to almost \$20 trillion. Yet despite this massive deficit spending, less and less of it has been going into our infrastructure.

For example, with Hillary Clinton's full support, only 5% of Obama's \$840 billion program of infrastructure spending, initiated in 2008 at the depths of the Great Recession, was actually spent on "shovel ready" projects. The rest was dissipated, with little stimulus result while our nation's infrastructure gap has widened.

The critical need for infrastructure investment has been well documented, but there are two reasons why it has not been met. The first is a mountain of red tape.

On January 16, 2015, with great fanfare, the White House announced its latest ideas for boosting infrastructure. It consisted of sprinkling a few billion dollars around but mainly of creating new bureaucracies, one at the EPA, another at the Department of Transportation, and a third at the Department of Agriculture. These will not fix the 237,600 water mains that break each year. Nor will they stop the 46 billion gallons of water lost each day from pipe leaks admitted by the President.

We don't need more conferences and bureaucracies to fix our infrastructure. We need muscular and implementable transactions, and we need them now. This is not the direction of Obama-Clinton.

With Hillary Clinton's strong support, the Obama administration has blocked or delayed billions of dollars of infrastructure projects through endless studies, government reviews, and litigation. According to the Wall Street Journal, "more than a dozen [energy infrastructure] projects, worth about \$33 billion, have been either rejected by regulators or withdrawn by developers since 2012, with billions more tied up in projects still in regulatory limbo."

Major pipelines are being blocked as well. As noted in the Wall Street Journal, blocking such projects "leaves some communities without access to lower-cost fuel and higher-paying jobs." The Keystone XL Pipeline, alone, would have amounted to an \$8 billion investment in U.S. infrastructure and create 42,000 jobs. According to the Heritage Foundation, by 2030, the Obama-Clinton energy restrictions will eliminate another half a million manufacturing jobs, reduce economic output by \$2.5 trillion dollars, and reduce incomes by \$7,000 dollars per person.

All these delays have increased costs and prevented American taxpayers and businesses from obtaining the infrastructure this country needs to properly function and ultimately prosper. They even have blocked the development of tens of billions of dollars' worth of LNG export facilities, although these wouldn't need one dollar of government funding.

The second reason why America faces a huge infrastructure gap is a lack of adequate and innovative financing options. Here, we note that those projects with strong and clearly defined cash flows are readily financeable in the capital markets. This has been demonstrated by the ease with which almost \$200 billion of Build America Bonds were sold.

In contrast, many of those projects that have gone unfinanced tend to have somewhat less certain revenue sources. Others would cause so much sticker shock to users paying the fees

that politicians won't undertake them. Now, in an era of low interest rates, there is a unique opportunity to institute an innovative financing plan, one that preserves the lower cost and more rapid execution of a private sector solution to the provision of public infrastructure.

The Trump Private Sector Financing Plan

The Trump infrastructure plan features a major private sector, revenue neutral option to help finance a significant share of the nation's infrastructure needs. For infrastructure construction to be financeable privately, it needs a revenue stream from which to pay operating costs, the interest and principal on the debt, and the dividends on the equity. The difficulty with forecasting that revenue stream arises from trying to determine what the pricing, utilization rates, and operating costs will be over the decades. Therefore, an equity cushion to absorb such risk is required by lenders.

The size of the required equity cushion will of course vary with the riskiness of the project. However, we are assuming that, on average, prudent leverage will be about five times equity. Therefore, financing a trillion dollars of infrastructure would necessitate an equity investment of \$167 billion, obviously a daunting sum.

We also assume that the interest rate in today's markets will be 4.5% to 5.0% with constant total monthly payments of principal and interest over a 20- to 30-year period. The equity will require a payment stream equivalent to as much as a 9% to 10% rate of return over the same time periods.

To encourage investors to commit such large amounts, and to reduce the cost of the financing, government would provide a tax credit equal to 82% of the equity amount. This would lower the cost of financing the project by 18% to 20% for two reasons.

First, the tax credit reduces the total amount of investor financing by 13.7%, that is, by 82% of 16.7%. The elegance of the tax credit is that the full amount of the equity investment remains as a cushion beneath the debt, but from the investor point of view, 82 percent of the commitment has been returned. This means that the investor will not require a rate of return on the tax credited capital.

Equity is the most expensive part of the financing; it requires twice as high a return as the debt portion, 9 to 10% as compared to 4.5 to 5.0%. Therefore, the 13 percent effective reduction in the amount of financing actually reduces the total cost of financing by 18 to 20 percent. By effectively reducing the equity component through the tax credit, this similarly reduces the revenues needed to service the financing and thereby improves the project's feasibility.

These tax credits offered by the government would be repaid from the incremental tax revenues that result from project construction in a design that results in revenue neutrality. Two identifiable revenue streams for repayment are critical here: (1) the tax revenues from additional wage income, and (2) the tax revenues from additional contractor profits.

For example, labor's compensation from the projects will be at least 44 percent. At a 28 percent tax rate, this would yield 12.32% of the project cost in new revenues. Second, assuming contractors earn a fairly typical 10 percent average profit margin, this would yield 1.5% more in new tax revenues based on the Trump business tax rate of 15 percent. Combining these two revenue streams does indeed make the Trump plan fully revenue neutral with 13.82 percent of project cost recovered via income taxes versus 13.7 percent in tax credits.

An Example

To look at this at a more granular level, conventional financing would require total payments of \$1,625 per thousand dollars of project cost if the final maturity were twenty years at 4.5% and the equity got a 9% rate of return over the same period. However, with an 82% tax credit, the payments would be reduced to \$1,330, an 18.1% reduction. If the respective rates instead were 5% and 10% and the final maturity 30 years, the respective payments would be \$2,138 and \$1,705, a savings of 20.2%.

Note that this tax credit reduces the risk of loss to the equity yet it still leaves investors with skin in the game. In effect, this tax credit approach means that major revenue shortfalls could occur without impinging on either the debt or the equity.

The tax arithmetic is likewise straightforward. 16.67% of project cost is the equity component, so the 82% tax credit equals 13.69% of project cost. The labor content of construction would be at least the 44% share the Congressional Budget Office attributes to the GDP. Taxing it at the 28% rate (21% plus 7% for the trust) yields 12.32% of tax revenues.

There also would be a 10% pretax profit margin for the contractor. Taxing that at the 15% business rate yields 1.5% of project cost. Adding that to the taxes on wages yields 13.82%, slightly above the 13.69% tax credit.

Note that the risk of a major shortfall is limited because contractors operate on a cost-plus basis. Alternatively, if they commit to a fixed price, they build in a large margin for error. Importantly for the government budget, there will not be much of a time gap between the granting of the credit and receipt of the tax payments under the Trump plan.

A Tax Policy/Repatriation Interaction

As a synergistic interaction with Donald Trump's proposed tax reforms, and to further incentivize the flow of private capital into the development of America's infrastructure, there is this additional possibility: Companies paying the ten percent tax on the repatriation of overseas retained earnings could use the tax credit on infrastructure equity investment to offset their tax liability on bringing the money back. This would effectively convert a tax liability into an equity investment in an infrastructure project.

The mechanics of this are straightforward: Repatriate \$1 billion, incurring \$100 million of tax, and invest \$121 billion in the equity of an infrastructure project. The 82 percent tax credit on the \$121 thereby fully extinguishes the repatriation tax so at the end of the day

they have a \$121 million infrastructure equity investment and no tax bill while the US has more and new infrastructure. Any revenues in excess of the basic amounts needed to support the financing, as well as any long term residual values remaining after full repayment of the financing could go for recoupment of the extra \$100 million. For the routine tax payer those same amounts would simply represent additions to the basic rate of return.

The Trump Plan In Historical Context

Historically, much of America's infrastructure financing has been done through public authority issuance of bonds, the interest on which is tax-exempt to the recipient. There are three problems with this approach.

First, somewhat lower quality revenue stream projects need an equity component or a guarantee by a creditworthy public authority or municipality. These are becoming scarcer.

Second, construction costs tend to be higher when projects are built by the government rather than the private sector – one of the authors has observed this first hand over a long period of time and over multiple venues. These higher construction costs more than offset the benefit of lower interest rates, especially in today's low rate environment when spreads between taxable and tax-free bonds are so small.

Third, not all projects may meet the complex eligibility rules. For example, public bonds need to be issued in relatively large amounts so that there is a reasonable after market. The money must also be spent on the project within a certain amount of time relative to the date the bonds are issued. These restrictions limit the extent to which the drawdown of the funds can be matched to the construction schedule. In today's especially low short-term rate environment this means the project will have to pay a negative interest rate arbitrage on money it actually doesn't need yet or get a short term construction loan and run the risk that interest rates will rise between the date that the loan is taken down and the date of the long term refinancing. In the tax exempt market it is expensive to obtain fixed rate commitments years before the draw down.

Trump's core concept of tax relief to facilitate project investment is not especially new. It has been used historically to target real estate investment. However, the concept of offsetting a major portion of project cost with income tax credits that are repaid as issued by means of the tax revenues generated just by the construction is new. Because the combination is revenue neutral, whatever taxes flow from the actual operation of the new infrastructure will be additive to tax revenues.

We believe that this tax credit-assisted program could help finance up to a trillion dollars' worth of projects over a ten-year period. This innovative financing option would serve as a critical supplement to existing financing programs, public-private partnerships, Build America Bonds, and other prudent funding opportunities.

The Trump Plan would also provide maximum flexibility to the states and employ incentive-based contracting where appropriate to ensure projects are on time and on budget. It would link increases in spending to reforms that streamline permitting and approvals, improve the project delivery system, and cut wasteful spending on boondoggle bridges and highways to nowhere. The plan also could be applied whether the facility was operated by the government, the private sector, or in a public-private partnership.

The Clinton “Tax America First” Plan

In sharp contrast to Trump’s business-like approach, Hillary Clinton proposes to finance \$500 billion worth of new infrastructure spending over five years by levying \$275 billion of new business taxes and creating a national infrastructure bank owned and operated by the government. In effect, Hillary Clinton would be reintroducing subprime lending to the federal government. Apparently she learned nothing from the collapses of Fannie Mae and Freddie Mac, which cost taxpayers billions of dollars, and the scandalous Solyndra failure that left taxpayers on the hook for \$535 million in federal guarantees.

She will use \$250 billion of the proposed business tax hikes for direct public lending – thereby substituting less efficient government spending for more efficient private sector investment decisions. (Besides the loss of efficiency and attendant higher costs, this approach would potentially open the doors to bad loans to politically connected applicants who build bridges to nowhere – a real risk in a post-WikiLeaks era in which the cronyism of the Clinton machine has been revealed.)

Clinton would then take the remaining \$25 billion of the \$275 billion raised and use it to establish a national infrastructure bank. It would “support up to an additional \$225 billion in direct loans, loan guarantees, and other forms of credit enhancement.” This is a high-risk 9-to-1 leveraging scheme almost double the leverage of the Trump plan.

To borrow at such high leverage – and to have any hope of repaying the principal and interest – borrowers would have to have high-quality and clearly defined sources of cash flow to pay back the loans or credit worthy guarantor. However, such low-risk projects could easily access the public markets on their own. This was proven by the successful sale of almost \$200 billion worth of Build America Bonds.

In fact both Trump and Clinton support the concept of Build America Bond program. It permits government issuers to issue taxable bonds instead of the usual tax-exempt ones. This provides issuers with access to investors who seek taxable income and therefore broadens the potential market. Nonetheless, Build America Bonds still need to be made credit worthy either by strong guarantees or equity beneath them, and they still need to be serviced by a revenue stream. They are simply a tool, not a solution in and of themselves.

Given that low risk projects will have no need for the expensive and time-consuming use of Hillary Clinton’s bank as an intermediary, the borrowers lining up at its window will be skewed towards customers with less secure sources of repayment who would find it hard to raise capital on their own.

As a final complication, the government will manage the bulk of Hillary's financing projects so these projects will tend to take longer and cost more given government's inherent inefficiencies. This means that the borrowings to finance construction are outstanding for longer periods. This additional interest adds to the total cost of the project, as well as the inflation risk inherent in longer duration of construction.

In view of the extra cost of government projects, it is probably safe to say that public sector control of infrastructure projects will add to the ultimate cost. This naturally raises the amount of debt service. This, in turn, means higher user charges are needed.

Effective collection of such user charges is another issue. One of the authors of this paper studied the New York City Water Authority as Mayor Giuliani's privatization advisor. This public agency was constantly experiencing far worse collection experience than Consolidated Edison, Brooklyn Union Gas or New York Telephone. The reason was simple: Customers knew that the private utilities would cut off their service if they were too delinquent, but a municipal authority would be far less likely to do so because of the political uproar that would result. This literally raised the level of user charges the public agency needed to cover the debt service.

In summary, Hillary Clinton's infrastructure bank is as potentially rife with economic problems as it is with the prospect of crony capitalism. One of two outcomes will likely occur.

First, the infrastructure bank won't make the loans so the infrastructure won't be built. However, businesses will still be stuck with the higher tax rates and the nation will be saddled with the continued aging of our infrastructure. Alternatively, the bank will make the loans and suffer big losses on projects that may well run out of money before they can be completed or fail after completion because of inadequate revenues – remember Solyndra!

Conclusion

With the Trump plan, there is no need to create a new government bureaucracy to make infrastructure loans. The private sector is well equipped to do so, provided enough equity is invested, and that is what the Trump plan provides.

Hillary Clinton's inevitable instinctual reflex of expanding government is misplaced, unnecessary and unworkable. Without the stimulatory effect of her infrastructure plan, there is no basis for saying that her plan would either stimulate growth or build the promised level of infrastructure (still far less than the Trump plan).

The one certain part of her plan is that she will keep her promise to raise business taxes by \$275 billion. This represents about 7.5% of the Federal budget and is about 1.5% of our entire economy. Does anyone really believe that this big an increased tax burden will not

hurt the economy? Does anyone believe that this increase in our already very high business taxation won't encourage more jobs to move overseas? Does anyone believe this won't reduce corporate reinvestment by lowering the rate of return on every project?

Everyone knows our high business tax rates hamper our global competitiveness. It is sheer madness to raise these taxes even higher without total assurance that the money will really be spent on infrastructure that is truly needed, that the projects will be economical to operate and that no private sector solution is available. That is clearly not the case here.

We should not gamble the solution to our infrastructure problem on such a flimsy theory.

Appendix

Calculations for the 4.5% interest rate, 9% equity return 20 year model

Total payments per thousand dollars of debt financing = $\$1,518.4 \times \text{financing ratio } .833 =$
 $\$1,264.83$ total payments on debt

Total payments per thousand dollars of equity financing=

$\$2,159.30 \times .167 = \360.60 totally payments to equity

$\$1,264.83 + \$360.60 = \$1,625.43$ total financing payments

Total payments per thousand dollars of equity financing after 82% discount= $\$360.55 \times .18$
 $= \$64.91$

$\$1,264.83 + \$64.91 = \$1,329.74$ discounted payments total

$\$1,625.43 - \$1,329.74 = \$295.69$ savings

$\$295.69 \div \$1,625.43 = 18.2\%$ reduction

Calculations for the interest rate 5.0%/10.0% 30 equity return year model

Total payments per thousand dollars of debt financing = $\$1,932.60 \times \text{debt financing ratio}$
 $.833 = \$1,609.86$ total payments on debt

Total payments per thousand dollars of equity= $\$3,159.30 \times \text{equity financing ratio } .167 =$
 $\$527.60$

$\$1,609.86 + \$527.60 = \$2,137.46$ total payments

Total payments per thousand dollars of equity financing after 82% tax credit= $\$527.20 \times$
 $.18 = \$94.97$

$\$1,609.86 + \$94.97 = \$1,704.83$ discounted payments total

$\$2,137.46 - \$1,704.83 = \$432.03$ net savings

$\$432.03 \div \$2,137.46 = 20.2\%$ reduction