WEEKLY ECONOMIC COMMENTARY

Global Economic Research
50 South La Salle Street
Chicago, Illinois 60603
northerntrust.com

Carl R. Tannenbaum
Chief Economist
312-557-8820
ct92@ntrs.com

Ryan James Boyle
Senior Economist
312-444-3843
rjb13@ntrs.com

Vaibhav Tandon
Associate Economist
630-276-2498
vt141@ntrs.com

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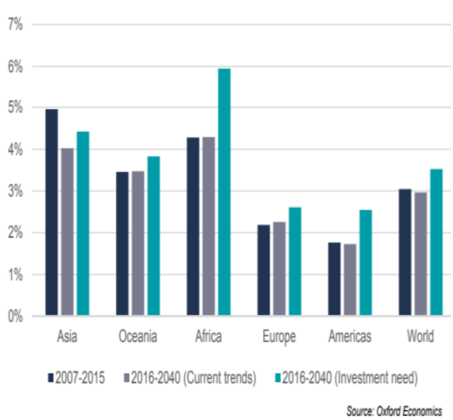
Editor's note: The following is an update to a piece we filed early last year. Promises to renew and upgrade America's infrastructure remain unfulfilled.

In the movie "Field of Dreams," a mysterious voice urges Kevin Costner to unearth part of his cornfield and replace it with a baseball diamond. "If you build it, he will come," the voice says. It takes Costner immense perseverance to fulfill his mission, but in the end, the field is completed and serves its purpose.

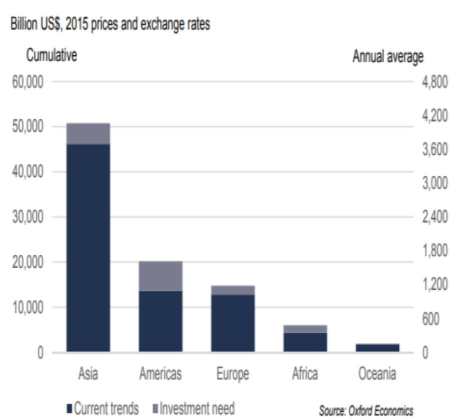
Today, it seems as if there is a mysterious voice speaking to politicians all over the world, urging them to build. Infrastructure is a siren's song that governments are tempted to follow as they search for strategies to sustain economic growth. But the mission of designing an effective infrastructure program has proven frustrating for many who have attempted it. What seems like a panacea can be problematic.

Physical infrastructure encompasses systems and facilities essential to economic functioning. Projects follow a hierarchy of needs: at the bottom are public works that support basic subsistence (water treatment, electricity) and at the top are endeavors that expand horizons (broadband). A 2016 report from the McKinsey Global Institute estimates that global spending on physical infrastructure amounts to $2.5 trillion annually.

Global Infrastructure Spending (% of GDP)



Global Investment Requirements (2016-2040)



Investing in infrastructure generates several types of benefits:

- Maintaining existing infrastructure reduces the risk of unfortunate occurrences. Aging architecture near geological faults, decaying power grids and poorly maintained levees in flood plains can introduce terrible human costs when they fail.

- Spending on infrastructure accrues directly to economic growth. Sales of essential materials increase, and those involved in construction and maintenance see their incomes enhanced. When these earnings are spent, economic activity is boosted.
- Investing in progressive infrastructure can boost productivity. When people, products and ideas move more fluidly, the potential for creating output is higher. At a time of tepid advances in productivity growth, infrastructure is a potential avenue to better outcomes.

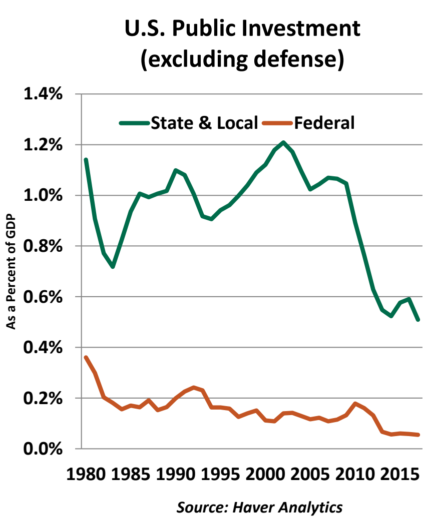
The post-election period in the U.S. generated considerable excitement in the infrastructure arena. President Trump proposed a $1 trillion program that would be the largest in the nation's history. Given the critical needs in this area, the proposed program was among the few things that could attract bipartisan support.

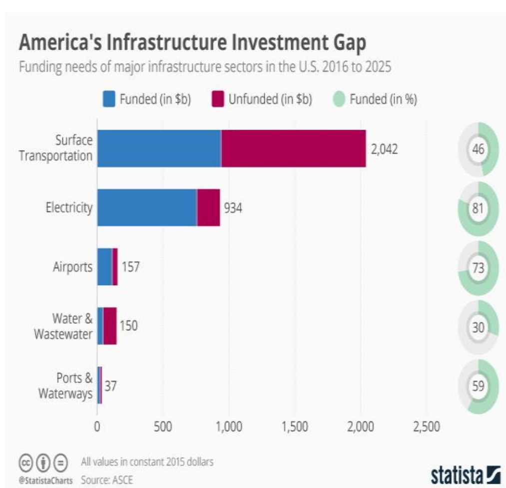
Unfortunately, no progress has been made. Other priorities took precedence, and tax reform steepened the prospective trajectory of U.S. government debt. Little room was designated in the budget for building, even though infrastructure is an investment and not a cost. If the investments aren't made, the returns will not be realized.

Globally, even when money is available for appropriation, most countries' allocation systems do not distribute the funds effectively. State and local governments bear much of the responsibility for public works, and their efforts are often poorly coordinated. Infrastructure involves networks (transportation, electric, communications) where failure to optimize plans across broad geographies invites inefficiency. As each district thinks only of its own needs, project designs fail to consider important interconnections. McKinsey estimates that a more efficient approach could save $1 trillion annually across the globe.

Governments are ideally positioned to provide infrastructure, but poor finances are a major constraint.

Furthermore, state and local budgets are often more stressed than national ledgers. This situation has led to deferred maintenance and a substantial infrastructure gap. In its annual report card on infrastructure, the American Society of Civil Engineers gave the U.S. a D+. Simply catching up on maintenance would cost an estimated $2 trillion.





Public-private partnerships (PPPs) to develop and maintain infrastructure have become an important solution in some countries. Under a PPP, investment groups contract with the government to build and manage public works, offering capital up front for a share of the revenue generated by the project.

But PPPs can be controversial. Terms intended to protect residents from fee increases diminish the attraction to investors. When stress occurs, Main Street is pitted against Wall Street. This was illustrated by a recent water infrastructure project in New Jersey: residents had trouble comprehending the costs and resented paying the fees necessary to bring facilities up to date.

This mismatch between economic ideals and political realities exists in many arenas. But in the case of infrastructure, misaligned incentives and short-termism are especially pernicious. The current funding models throughout the world are in serious need of re-evaluation. While new ideas have been advanced, something more comprehensive is called for.

Short-termism makes it difficult to invest properly in infrastructure.

Infrastructure is at once essential and impossible, local and global, strategic and tactical. Those contradictions make it difficult to design and execute programs that deliver on the great promise that infrastructure offers. Infrastructure done well would be hugely beneficial to the global economy; done poorly, it could make matters considerably worse.

A Deadly Gap

On August 14, Italy gave the world a brutal reminder of the risks involved in deferred infrastructure investment. The Morandi Bridge in Genoa, dating from the 1960s, collapsed suddenly. The economic cost of the loss of a vital transport link is massive; the cost of the 43 lives lost is incalculable.

The Genoa bridge collapse isn't Italy's only recent incident of infrastructure failure. In January 2018, a commuter train derailed near Milan; in March 2017, a couple was killed after bridge near Ancona collapsed on their car. According to Italy's national statistical agency, more than 2 million homes across the country are unstable and over 150 school roofs have fallen over the last five years.

According to the Organization for Economic Cooperation and Development, investment and maintenance spending on Italy's transport network fell by 58% between 2008 and 2018. Italy's chaotic political climate, coupled with economic difficulties, has thwarted infrastructure investment. This certainly raised the possibility of tragic episodes.

The country's bridges, motorways and viaducts are managed by multitude of public, private, regional and national agencies, each with little oversight. There is a significant infrastructure gap between the Northern and Southern parts of Italy, with the latter being less developed. Even prior to the Morandi tragedy, concerns about the transit network in Italy were rising.

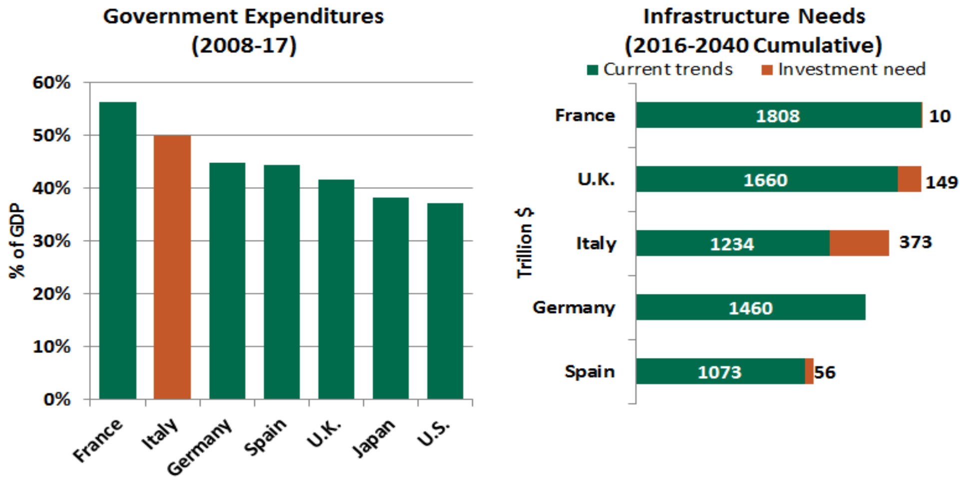
To respond, in 2016 the Italian government allocated investments for railway lines and highways. An ambitious infrastructure investment plan was also adopted in 2017. Despite these extra efforts, investments are still held back by structural factors such as underdeveloped capital markets and impaired bank lending.

Resources for Italian infrastructure are severely limited by the large debt servicing costs born of a high level of public debt, which stands at over 130% of Gross Domestic Product (GDP). The high cost of debt crowds out more productive investments in infrastructure and should serve as a cautionary tale to other countries with growing debt burdens.

Though Italy's interior minister, Matteo Salvini, has put the onus on "external constraints," a reference to European Union (EU) budget standards, a comparison of Italian government expenditures with other advanced economies over the last decade tells a different story.

Italy has one of the highest levels of government spending as a percent of GDP, well ahead of countries like the U.S., Japan, the U.K. and Germany. But Italy ranks only 27th in the World Economic Forum's index for infrastructure, with the fourth-worst transport infrastructure among advanced economies. This implies there is scope for further improvement of infrastructure without added outlay, if monies can be effectively re-oriented.

Italy can no longer afford to defer infrastructure investments.



Sources: IMF, Oxford Economics

The EU's Transport Scoreboard further shows that Italy not only fares poorly among global advanced economies but also ranks low among its European peers. Among the 28 EU member countries, Italy's railroad infrastructure ranks 18th, port infrastructure ranks 20th and road infrastructure ranks 17th.

The Genoa incident should raise important questions for governments across Europe. According to the European Investment Bank, public investments are at a 20-year low of 2.7% of EU GDP. The need to re-prioritize public infrastructure investments is no longer conceptual. If leaders aren't moved by news of collapsing bridges, we expect voters will be.

Truckers in Luck

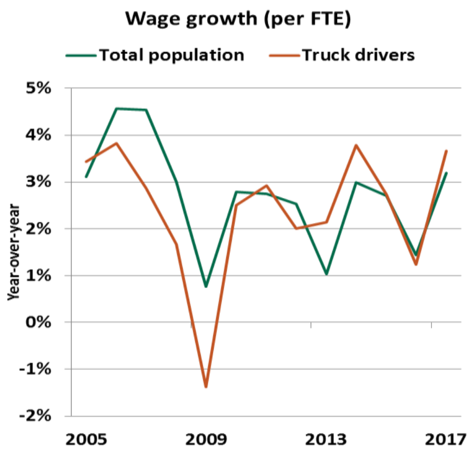
In a strong economy, "help wanted" signs are abundant. They have become especially noticeable on U.S. roads and highways, affixed to the backs of trucks. Given the density of American traffic, the placement is especially effective.

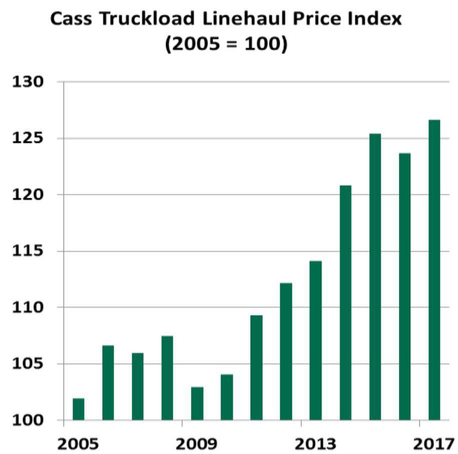
America faces a shortage of qualified truck drivers. Truckers are crucial to supply chains, connecting ports, factories, distribution centers, customers and retailers. The e-commerce wave has generated more demand for drivers, particularly package carriers. With consumer spending strong and a lot of goods to move, operators must offer incentives to recruit and retain workers. While wages have shown generally sluggish growth of late, the wage growth in the transportation industry has outpaced the broader economy throughout this recovery cycle.

These higher wage costs are reflected in higher shipping costs, and the room to absorb these costs into producers' and receivers' margins is limited. These costs have therefore been passed along to finished goods, leading to higher inflation measures.

Why the labor shortage? For one, trucking is a solitary pursuit. Drivers spend most of their working time alone in a truck's cab, often sleeping away from home. Over-the-road drivers are typically paid per mile, putting their pay at the mercy of traffic, construction and delays at loading docks. But the risks can be more than mere nuisances: driving consistently falls into the top ten most dangerous professions. Long-haul drivers can expect to clock over 100,000 miles each year, and that much exposure to the roads leads to a higher risk of collisions. The risks of driving lead to stringent licensing, logging and drug-testing requirements, eliminating many potential applicants.

Transportation costs have been an important driver of goods inflation.





Sources: Bureau of Economic Analysis, Cass Information Systems, Haver Analytics

Longer term, the trucking industry will face disruption. Earlier this year, a driverless truck drove 2,400 miles from California to Florida. Autonomous trucks will one day drive around the clock, at slower speeds that are safer and more fuel-efficient. This development may help cure both the rising cost of transportation and the shortage of labor, but it remains years away. Human drivers are still needed today and will be for years to come.

Trucking has historically been a steady, well-paying job, especially for less-educated workers. Some quite enjoy the lifestyle and stick with it: The average age of a truck driver is 49, compared to the national average worker age of 42. Today's young potential truckers now face the choice: Pursue a dangerous job with long hours and impaired long-term prospects, or apply to the abundant jobs in other industries. As older truckers retire, especially if the current trade agenda leads to a recovery in domestic production, demand for drivers will only grow, and offered wages will only increase. We see no end in sight for help wanted signs on the backs of trailers.

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@NT_CTannenbaum