

# Transportation Performance Index

## 2011 UPDATE



LET'S REBUILD  
**AMERICA**  
U.S. CHAMBER OF COMMERCE

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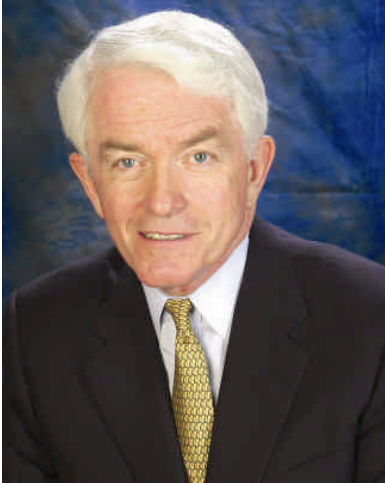


The U.S. Chamber of Commerce is the world's largest business federation representing the interests of more than 3 million businesses of all sizes, sectors, and regions, as well as state and local chambers and industry associations.

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# IT'S TIME TO REBUILD AMERICA

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In 2011, Congressional leaders are faced with difficult fiscal circumstances. Lawmakers must carefully balance the need to reduce unnecessary and unsustainable spending with the need to make essential investments critical to America's long-term growth and prosperity. Rebuilding our nation's crumbling infrastructure is an investment that underpins sustainable growth, ensures the mobility of people and commerce, and puts a lot of Americans to work.

We can't afford to delay—these investments are too important to our economic future and to public safety. If we wait to solve our transportation crisis, materials, labor, and land will grow more costly. Opportunities to save lives and prevent injuries will be missed.

Americans are already paying dearly for deteriorating infrastructure through lost productivity, wasted fuel, and tragically, more transportation fatalities.

Public and private investment in the economic foundation of the United States is critical for long-term economic prosperity. The United States' global competitiveness is dependent on construction and maintenance of a world class infrastructure, and as the President recognized in his State of the Union address, lasting jobs grow where infrastructure is strong.

Let's Rebuild America challenges us to fundamentally rethink how we fund infrastructure projects and bring them to completion. Our strategic approach spurs innovation and brings together policy and regulatory reforms to strengthen infrastructure through new investments.

In this report we have outlined the widening gap between what is needed to fund a modern system and the investments that are actually being made today. We have emphasized the hundreds of thousands of well-paying jobs that could be created by modernizing our highways, transit systems, airports, seaports, waterways, and rails. Last year, the Chamber became the first organization ever to measure the correlation between the quality of transportation systems and economic growth. The updated results in this report underscore the challenges we still face today.

It's time: Let's Rebuild America.

A handwritten signature in black ink, appearing to read 'Tom Donohue', written in a cursive style.

Thomas J. Donohue  
President and Chief Executive Officer

# INTRODUCTION

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High performing infrastructure is the foundation for U.S. economic competitiveness in a global age. After all, America’s infrastructure—transportation, telecommunications, energy, and water systems—forms the physical platform of our \$14 trillion free-enterprise economy.

By all accounts, the nation’s transportation networks continue to languish. Numerous recent reports have called attention to the dire condition of transportation infrastructure in the United States. These reports have all called for additional investment citing potentially disastrous effects on the economy, from manufacturing to real estate and ultimately, to the nation’s global competitiveness. None of these reports focused on the performance of transportation infrastructure and the relationship between performance and economic growth.

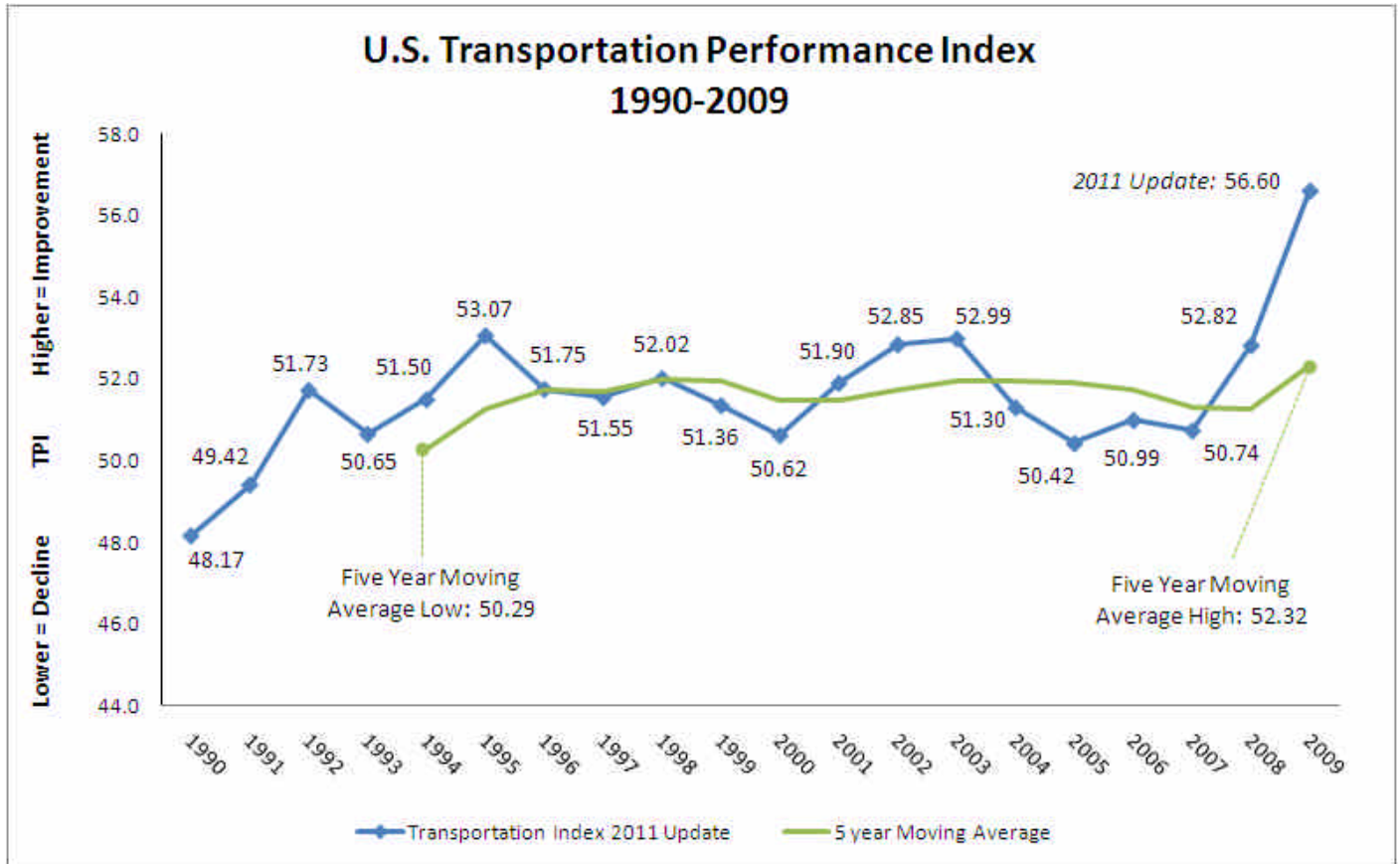
In 2010, through its *Let’s Rebuild America* initiative, the U.S. Chamber created something unprecedented—the **Transportation Performance Index (TPI)**—to quantify how well transportation systems are meeting the demands of the nation.

The TPI includes measures of the performance of infrastructure as it meets the needs of productive businesses working toward economic prosperity. Overarching criteria include availability and accessibility; quality of service—reliability, predictability, and safety; and the capacity to accommodate growth in demand. The specific indicators that combine to form the TPI reflect the needs of businesses large and small in the context of international and domestic trade, and the TPI includes measures for both passenger and freight transportation.





# 2011 Update: Good and Bad News



*First, the good news.*

In 2009, the TPI spiked upward to 56.6, which is the largest improvement in a single year since 1990, the first year of the TPI.

Changes to four indicators accounted for 93% of the change in the TPI:

- The improvement in travel time reliability is temporary. As pointed out in the 2010 Urban Mobility Report (TTI, 2011) congestion has improved because there is less travel.
- Rail safety shows a clear and consistent improvement. As the American Association of Railroads (AAR) noted, “America’s freight railroads have an excellent and improving safety record, reflecting the extraordinary importance they place on the safety of their employees, their customers, and the communities they serve.” (AAR, 2010).

## *Two Trillion on the Table?*

In spite of improvements in the TPI, underperformance cost the U.S. economy nearly \$2 trillion over 2008-2009. This analysis shows why strategic investment in transportation is an economic imperative.

Each point of increase or decline in the TPI is correlated with a 0.03% increase or decrease in U.S. Gross Domestic Product.

The average TPI for states with top performing transportation infrastructure—North Dakota, South Dakota, Nebraska, Montana and Iowa—is 73.96. What if the country as a whole performed the same way? The difference between this “ideal” and the U.S. TPI of 50.74 was over 23 points - nearly \$1 trillion of economic potential left on the table.

In 2009, the U.S. TPI improved to 56.60, GDP was \$14.11 trillion, and the difference between U.S. and top performing states was \$735 billion.

- Waterway congestion improvement may be temporary. While the trends in the data are questionable, traffic significantly decreased in 2009. Like the travel time reliability, this improvement is likely to be temporary and resulting from decreased activity.

- Transit safety data is highly variable. As discussed in Appendix C of the Complete Technical Report (U.S. Chamber of Commerce, 2010) there are some concerns about inconsistencies in reporting.

### *And now, the bad news.*

Much of the improvement in the TPI can be attributed to the decline in economic activity in 2009. Fewer people and goods used the highways, rails, waterways, and airways in 2009 than in the previous years. The increase in the TPI from 2007 to 2009 does not represent a long-term trend. It is due to the economic downturn, rather than strategic policy and regulatory reforms or new investment.

This begs a question: If the performance of transportation infrastructure improves by stopping economic growth, is that progress? Of course, the answer is “no.” Stopping economic growth is not progress; it is not a solution to the problem of poor performing transportation infrastructure in America. An one or two year improvement in performance as a result of an economic downturn will not result in sustained TPI increases: strategic policy and program reform and increased investments are required.

The economic analysis for the TPI shows that transportation infrastructure is a “leading indicator” of economic activity. Therefore, transportation performance has to improve for a while—and stay improved in the face of increasing demand—before economic activity will expand as a result.<sup>1</sup>

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<sup>1</sup> See “Transportation Infrastructure: Paving the Way,” at [www.uschamber.com/lra](http://www.uschamber.com/lra).

*"...The U.S. is missing a huge opportunity to ignite economic growth, improve our global competitiveness, and create jobs. This is not just "transportation for transportation's sake." Without more robust economic growth, the U.S. will not create the 20 million jobs needed in the next decade to replace those lost during the recession and to keep up with a growing workforce, will not have the revenue to get the deficit under control, will not have the ability to keep pace with global competitors, and will not be able to provide our children and grandchildren with a better future."*

Thomas J. Donohue, President and CEO, U.S. Chamber of Commerce  
Statement to the Senate Committee on Environment and Public Works  
February 16, 2011



*"Not in 50 years have we needed investments in our infrastructure like we do today. Frankly, the situation is approaching a crisis. Our congested and deteriorating transportation systems are hurting all of us—threatening business productivity and affecting the lives of anybody who travels. Let me just say that I think we need to put our [Chamber, AFL-CIO] combined muscle behind the wheel, behind a renewed effort to win the investments America needs."*

Richard Trumka, President, AFL-CIO  
Remarks to the U.S. Chamber Board of Directors  
June, 8, 2011



# TPI Indicators

*Indicators driving TPI change are highlighted*

Criteria	Mode	Description	Measure
Supply	Highway	Highway Density (Availability of highways)	Route-miles per 10,000 population
	Transit	Density (Availability of transit)	Miles of transit per 10,000 population
	Air	Access (Proximity of airports)	Percent of population within 50 miles of major airport(s)
		Capacity (Availability of airport service)	Airport arrival rate and departure rate per hour
	Rail	Density (Availability of railroads)	Route-miles per 10,000 population
	Marine	Density (Availability of marine transportation)	Miles of waterways per 10,000 population
		Port Access (Proximity of ports)	Distance from the center of MSA to the closest international container port
	Intermodal	Freight Access (Proximity of intermodal facilities)	Number of facilities per 10,000 population
Quality of Service	Highway	Travel Time Reliability (Variability in travel time due to congestion)	Travel Time Index
		Safety (Fatal highway crashes)	Fatalities per 100 million vehicle miles traveled
		Road Roughness (Highway ride comfort)	Percent of lane miles in poor or fair condition (based on an International Roughness Index greater than 170 in/mi)
		Bridge Integrity (Ability of bridges to meet the needs of the users)	Percent of bridges structurally deficient or functionally obsolete
	Transit	Safety (Transit incidents)	Number of incidents per million passenger miles traveled
	Aviation	Congestion (Airport congestion)	Percent of on-time performance for departures
		Safety (Chances of crashes)	Runway incursions per million operations
	Rail	Safety (Railroad incidents)	Number of incidents per million train miles
	Marine	Congestion (Delays on inland waterway)	Average lock delay per tow
Utilization	Highway	Reserve capacity	Percent of lane miles uncongested defined as Level of Service C or better
	Transit	Reserve capacity	Passenger miles traveled per capacity (standing and seating)
	Aviation	Reserve capacity	Percent of capacity used between 7 am and 9 pm
	Rail	Reserve capacity	Ton-miles per track mile

# RECOMMENDATIONS

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What should the TPI goal be? Where should investment occur and in what projects? How much will it cost? These questions are all important, and very difficult to answer, especially in a country where decision-making on transportation is nearly entirely decentralized and left to states and municipalities, and specific national priorities have not been identified unlike in nations where infrastructure improvement is an economic imperative.

Scenario analysis through 2020 shows<sup>2</sup> strategic investment in condition, capacity, and operations is required across all modes of transportation and geographies for major improvements in the TPI. Improving performance only in the largest metropolitan areas produces some gains in the TPI. Performance levels that vary widely from place to place fail to produce sufficient improvements, indicating a need for leadership at the national level. No net new investment nationwide will result in a significant drop in the TPI. Aspiring only to “state of good repair” results in a decline in the TPI to 2008 levels by 2020 because while important, state of good repair is just one aspect of transportation infrastructure performance.

In general:

- Strategic transportation policy and investment means orienting decisions at all levels of government and in the private sector around the three categories of performance: supply, quality of service, and capacity for the future.
- The United States as a whole should aspire to systems that perform as well as top performing states where there is (1) generally good availability of transportation infrastructure that is needed today, (2) reliability, predictability, and safety, and (3) adequate capacity to accommodate projected growth.
- Focus is especially needed where there is significant pressure in terms of population growth, high levels of development, and limited access to aging infrastructure.

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<sup>2</sup> See *Complete Technical Report: 2011 Supplement* at [www.uschamber.com/lra](http://www.uschamber.com/lra).

## *Case Study in Rebuilding America: Charlotte/Douglas International Airport*

Charlotte/Douglas International Airport (CDIA) has a plan to create the most efficient and integrated multi-modal hub on the East Coast and a foundation for regional economic development and job creation. The strategy is based on capitalizing on airport’s modal linkages and taking full advantage of the potential offered by CDIA’s strategic location at the intersection of the Interstate grid (I-85, I-77 and I-485 outer belt), the East Coast rail network (the main line of the Norfolk Southern Railroad) and to global sea trade through the ports of Charleston, Savannah and Norfolk.

The airport is at the center of over 10,000 acres of undeveloped land and adjacent to a large inner city community with high unemployment.

A plan for the entire area was developed to position the multi-modal center as the core for office and industrial developments that would be immediately connected by roads and transit. The multi-modal complex would become a magnet for new businesses and strengthen the economic future of the adjacent inner city community by providing a wide range of jobs while resulting in significant environmental improvements. CDIA involved industry and community leaders in developing the plan including Norfolk Southern, Bell South, Duke Energy, ABF and Bank of America.

By connecting air, sea, rail and road at a single center with ancillary services, relevant government agencies and other related facilities, the airport could transform itself into an integrated, multi-modal transportation hub, anchoring the region in the emerging global network and linking it to world markets.

There is a real opportunity to rebuild America today to support the economy tomorrow—and not only physically rebuilding crumbling or aging infrastructure. The United States must rebuild its mindset toward transportation infrastructure, focusing on supporting international trade and interstate commerce, regional and local economic development, and an efficient and productive workforce. The approaches to prioritizing, planning and delivering projects, and then operating and maintaining facilities need to support a fast-paced economy where technology gives individuals and organizations high expectations for increased precision, real-time information for planning, and on-the-fly decision making.

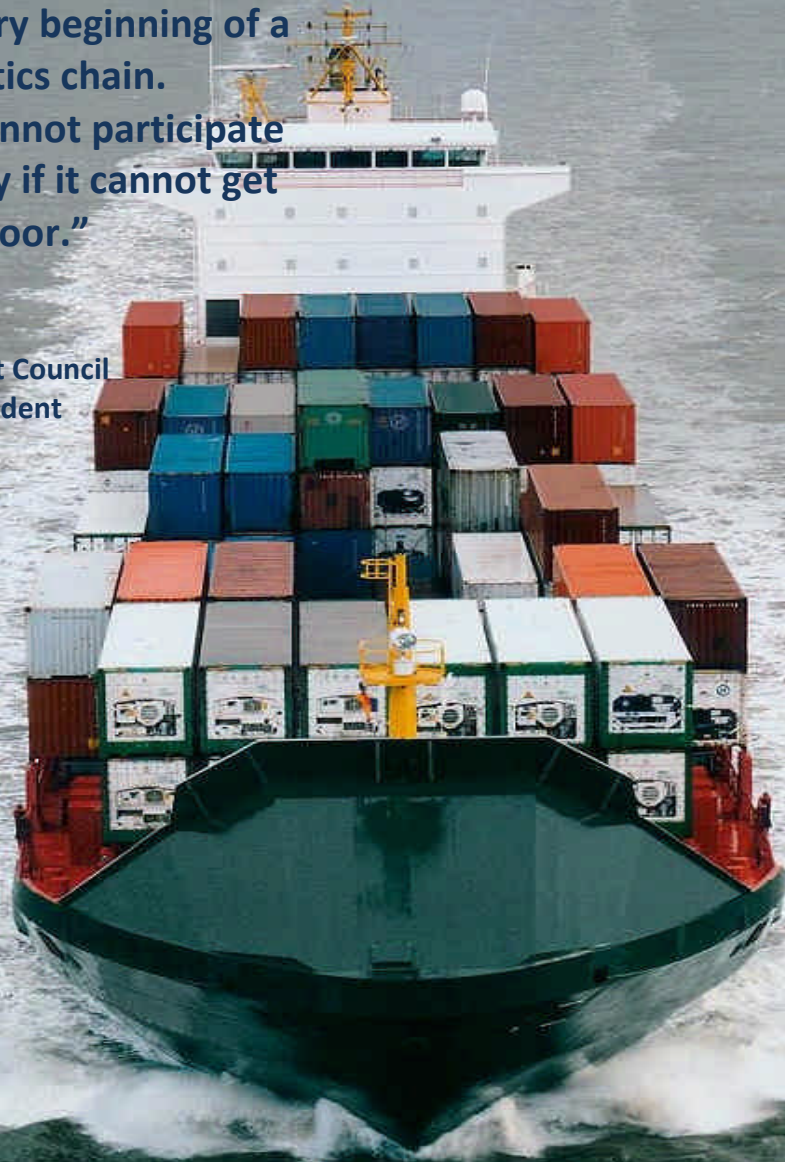
The federal government must play a leadership role by passing legislation that will:

- Establish clear policy goals and target federal transportation funds to investments that improve system performance;
- Establish priorities for scarce federal dollars;
- Provide incentives for widespread adoption of public private partnerships and developing projects that can make use of private capital;
- Provide adequate direct funding levels to support projects not suitable for financing;
- Encourage performance management and accountability for recipients of federal assistance; and
- Speed up project delivery.

The three vehicles for surface, air and water transportation are currently pending in Congress. The Federal Aviation Administration reauthorization is about to receive a 21<sup>st</sup> extension. The House and the Senate are working to develop surface transportation reauthorization bills for roads and bridges, public transportation and rail. The Water Resources Development Act (WRDA), with investments for inland waterways and ports, is not likely to be reauthorized this year, but some elements of assistance for marine transportation, including an act that would make full use of the Harbor Maintenance Trust Fund for dredging, could be rolled into other legislation. Each of these bills needs to deliver on policy and program reforms as well as direct funding, federal credit resources, and incentives for creating a pipeline of projects appropriate for public private partnerships and direct private sector investment.

**“America’s transportation infrastructure is also its export infrastructure. Our highways, railways, bridges, waterways, ports, runways, and air traffic control systems are at the very beginning of a very long global logistics chain. American business cannot participate in the global economy if it cannot get its products out the door.”**

**W. James McNerney  
Chairman, President’s Export Council  
Chairman of the Board, President  
& CEO, The Boeing Company  
Letter to the President  
March 11, 2011**



The majority of transportation decisions are out of the hands of the federal government. That is why states, regions and localities all need to rebuild their mindsets around transportation, starting with opening doors wide to private investment and public-private partnerships. As public federal resources stagnate, nearly \$200 billion in private sector capital is ready to go to work boosting U.S. competitiveness and supporting jobs. Innovative leaders are creating projects to serve local, regional and national needs by partnering with the private sector and creating synergy among existing facilities (see sidebar on page 9).

The voice of business is more necessary than ever to keep infrastructure on the front burner in Washington and across the country. In the short run, there is no question that infrastructure investment supports jobs. It puts people to work in construction. It supports jobs in manufacturing construction equipment, quarrying materials, design, engineering, planning and finance. Long-run economic priorities must be a top consideration when making transportation investment decisions: where infrastructure is strong, businesses are drawn to the location, inducing even more jobs, and today, businesses can locate anywhere in the world. The United States needs to strategically invest in transportation infrastructure to keep its competitive advantage as a place for businesses to locate, relocate and expand. Manufacturing, retail, services, agriculture and natural resources and the transportation services sectors need to reinforce the critical role a high-performing transportation system plays in economic prosperity and global competitiveness.

Countries that seek to compete with the United States understand the importance of transportation infrastructure and are building and rebuilding at a staggering pace. It is past time to start rebuilding America.



# NOTES

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U.S. Chamber of Commerce  
1615 H Street, NW | Washington, DC 20062-2000  
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