



# **Valuing Impacts of Transportation System: Adding to Asset Management Dialogue**

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# Overview

## Bureau of Transportation Statistics

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- In 1991, the [Intermodal Surface Transportation Efficiency Act \(ISTEA\)](#) created BTS to:
  - administer transportation data collection, analysis, and reporting; and
  - ensure the most cost-effective use of resources to monitor:
    - Transportation's contributions to the economy
    - Transportation's implications, e.g., safety, environment
  
- BTS is one of the 14 Principal Federal Statistical Agencies
  - Policy-neutral, objective broker of information
  - Special abilities to protect confidentiality



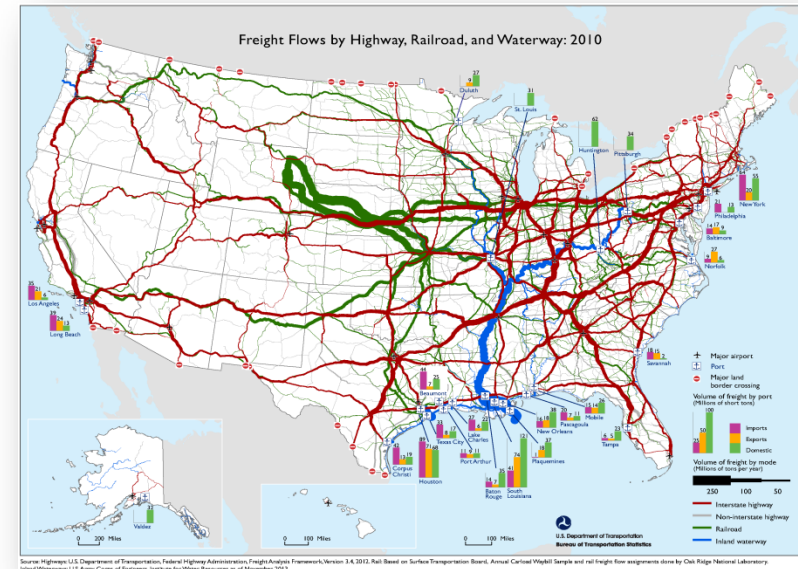
# The U.S. transportation system is the largest in the world

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- More airports and more miles of road and rail than any other country
  - 4 million miles of roads
  - 19,000 public and private use airports
- Fourth in miles of navigable waterways
  - 25,000 miles
- The highest in the world in terms of per capita vehicle ownership

# Transportation system is to move people and goods. Our system

- Provides mobility to destinations for
  - 321 million U.S. residents, of whom 25 million do not own a vehicle
  - 75 million visitors and tourists
  - 7.5 million businesses
- Moves an average of 56 tons of freight per year for every man, woman, and child in the United States



- Does so to encourage economic vitality while considering safety, environment, and energy.

# Value of transportation is little known.

## TRB Task Force was convened to:

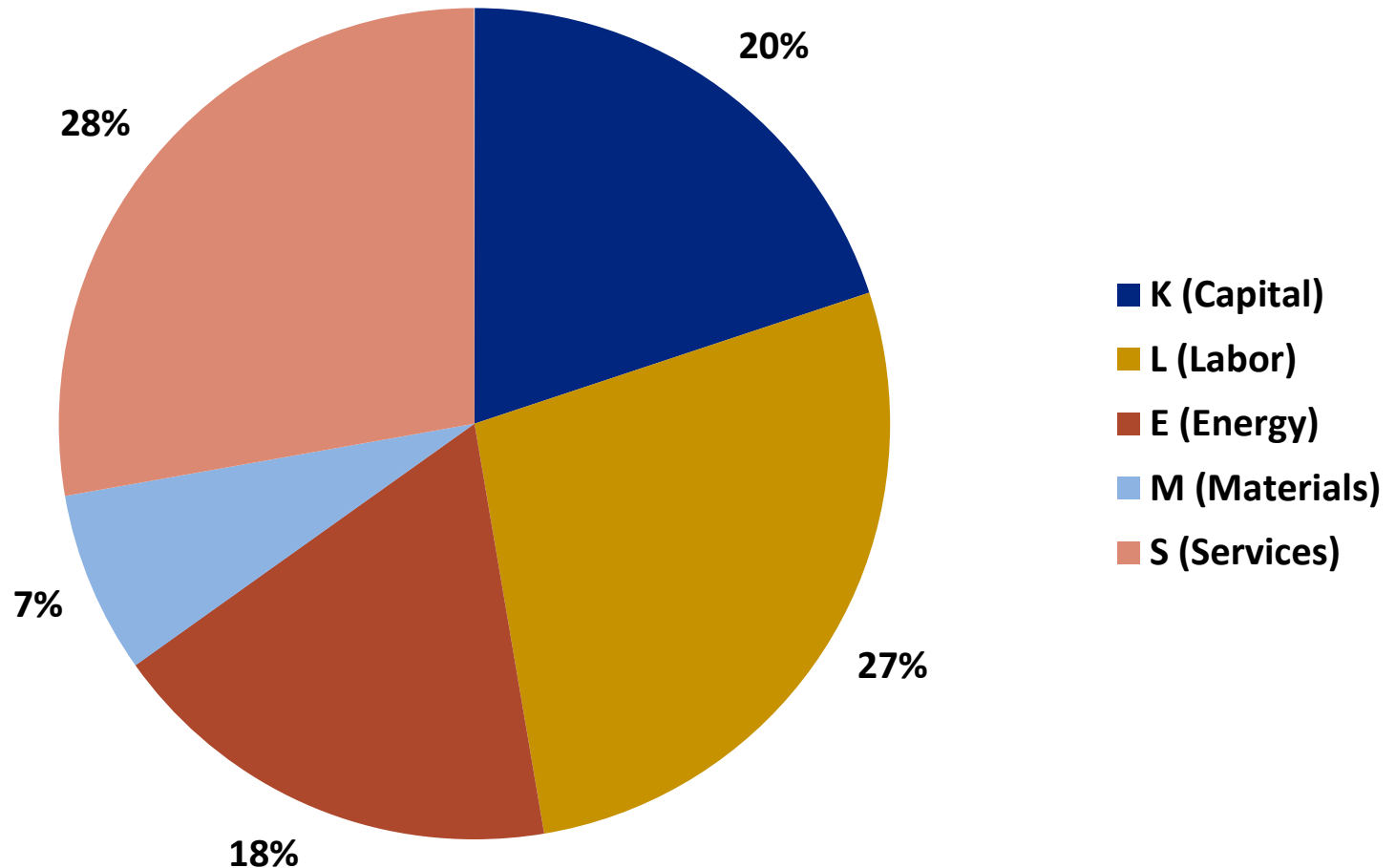
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- Estimate the value of transportation beyond the replacement costs
- Ultimately, develop a framework to capture and quantify the value of transportation **to:**
  - Economic growth
  - Quality of life
  - Ability to sustain other critical infrastructure sectors such as
    - Utility
    - Manufacturing

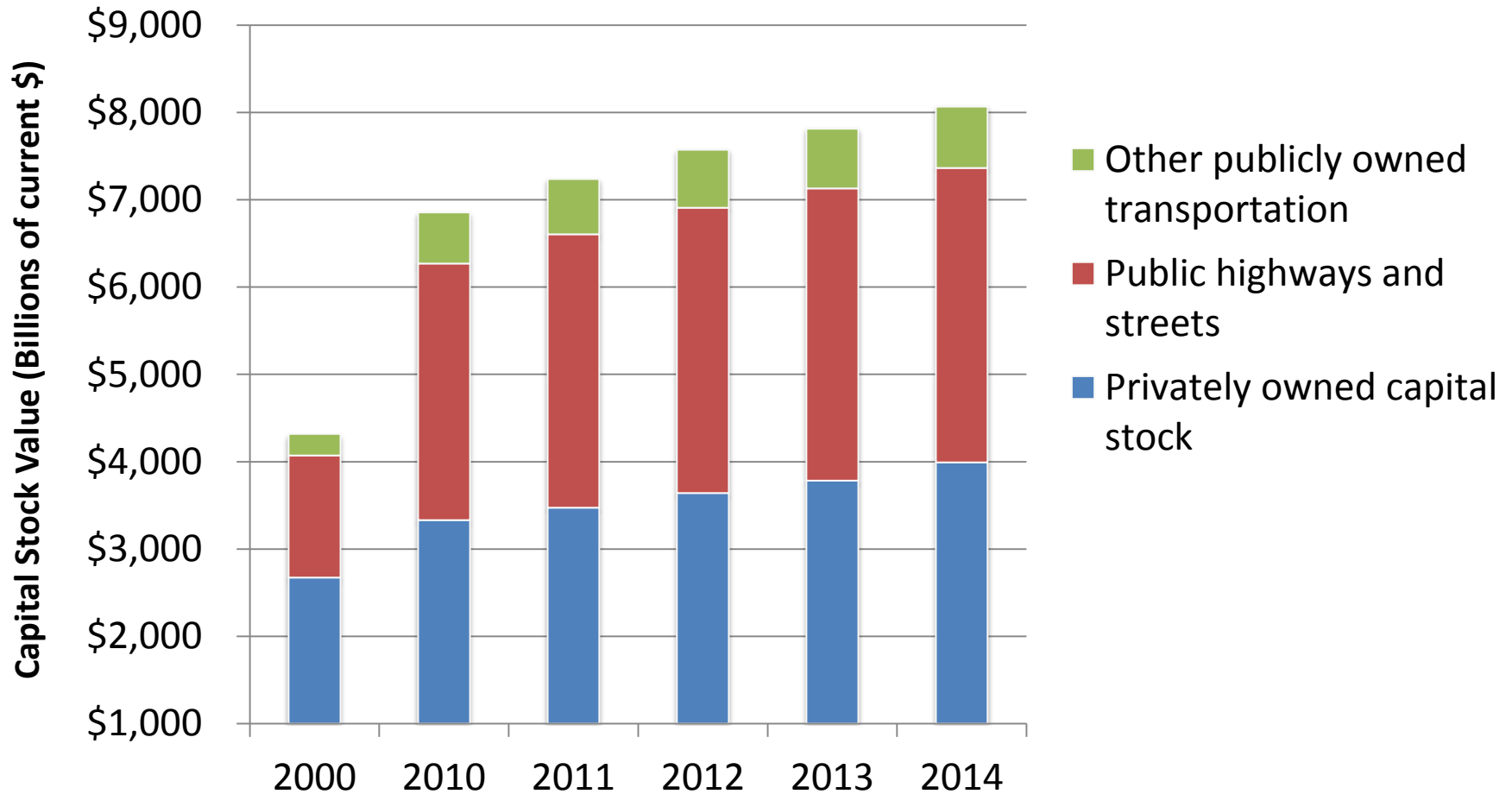
# What does it take to produce transportation services?

Twenty percent of the inputs is capital stock

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# Value of transportation capital stock increased steadily and reached \$8.1 trillion in 2014.



Source: 2016 preliminary results. U. S. Bureau of Economic Analysis.

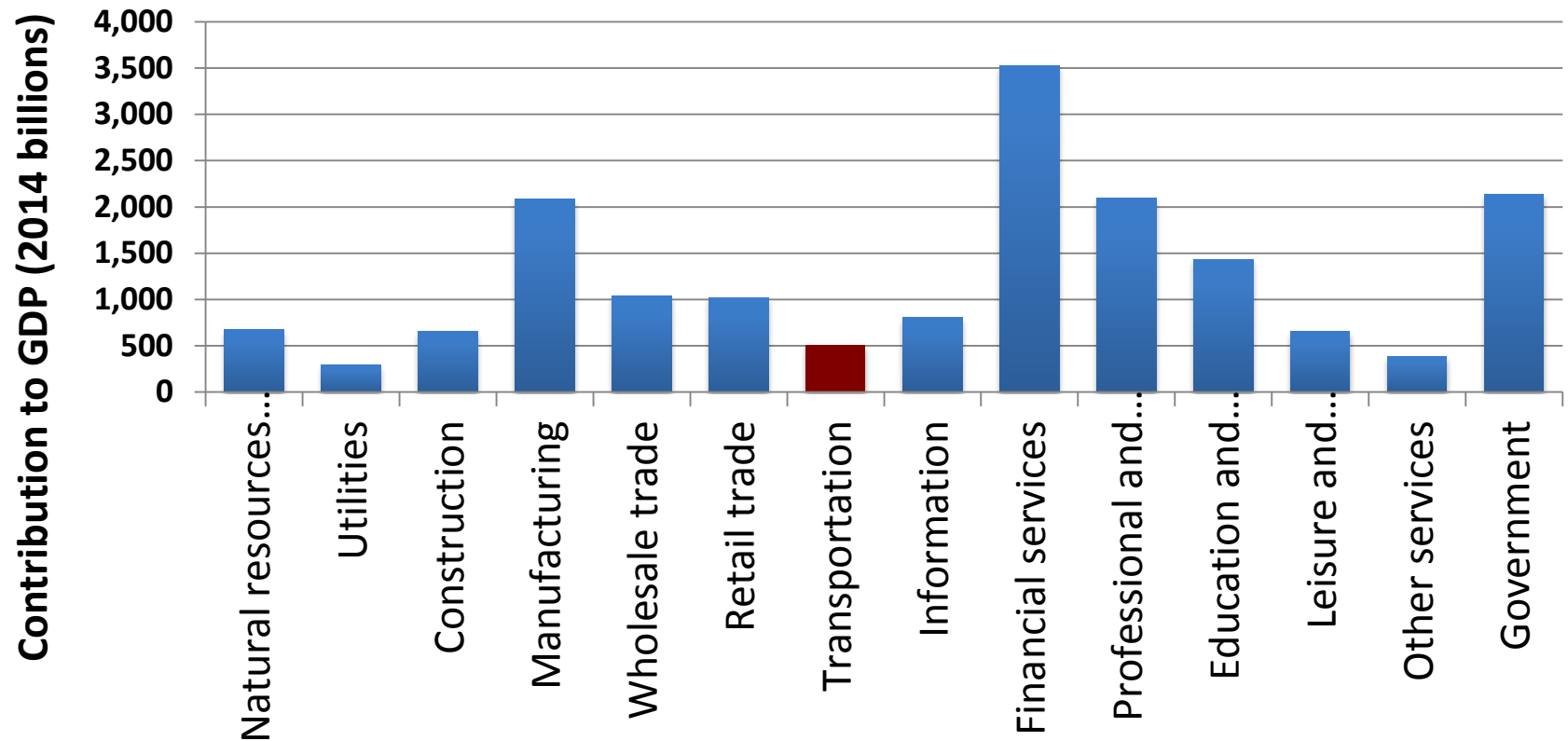
# Existing metrics to measure transportation contribution to the economy include:

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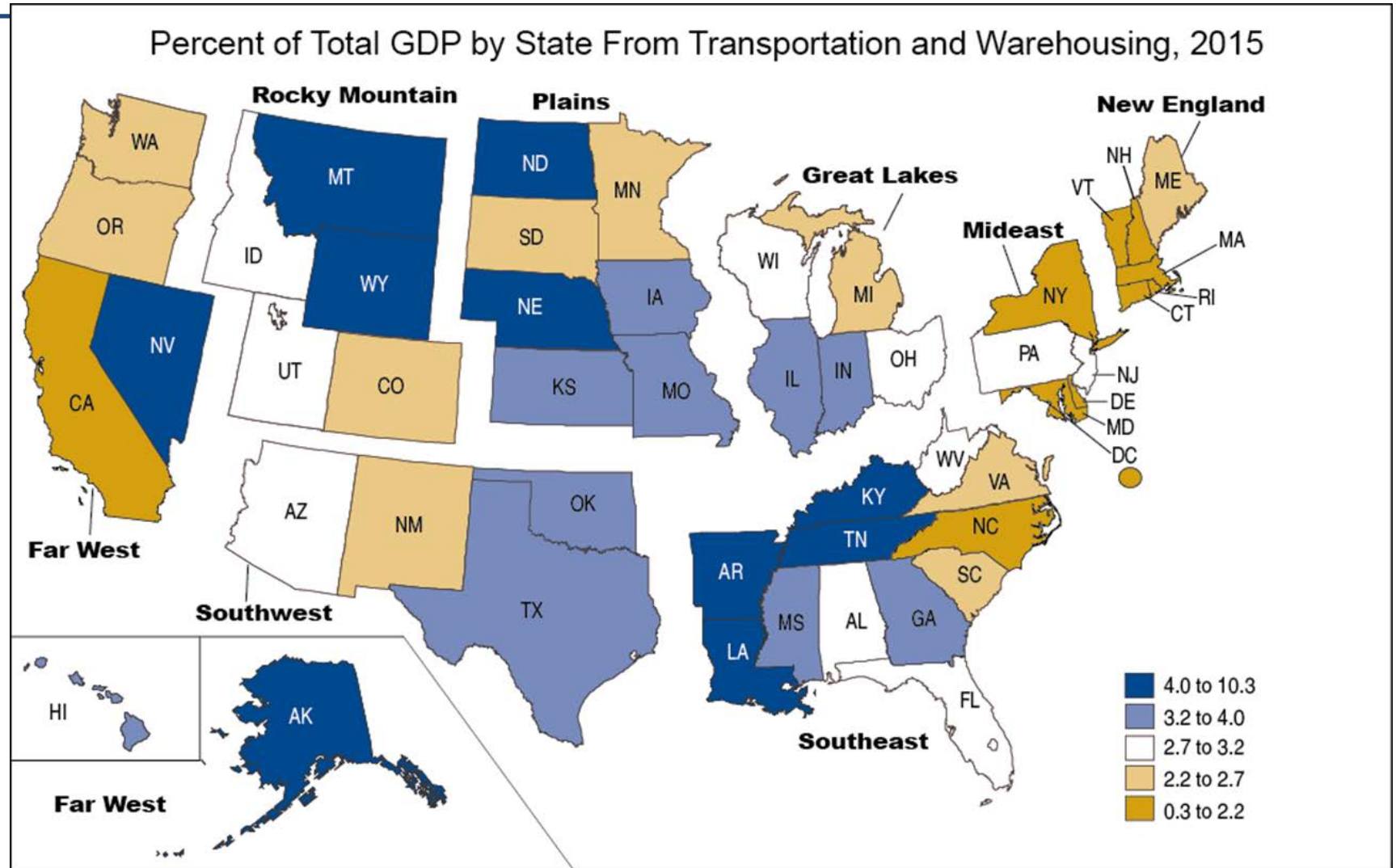
1. Contribution to Gross Domestic Product (GDP) by
  - Mode
  - State
2. Value added by transportation sector
3. Transportation requirements to produce industry output
4. Transportation employment
5. Transportation Services Index



# Transportation contributed \$506 billion (or 2.9%) to U. S. Gross Domestic Product



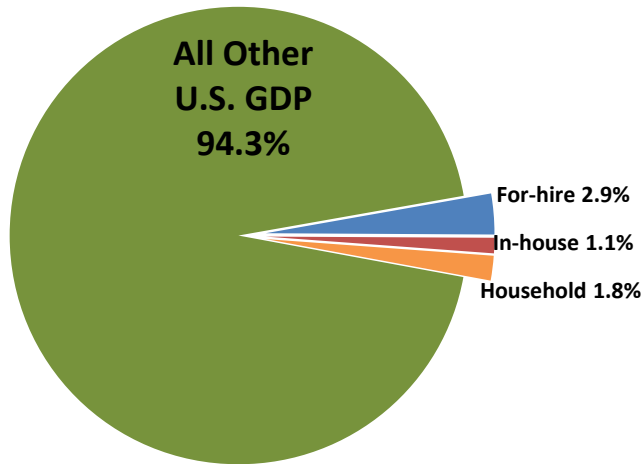
# For-Hire Transportation Contribution to State GDP



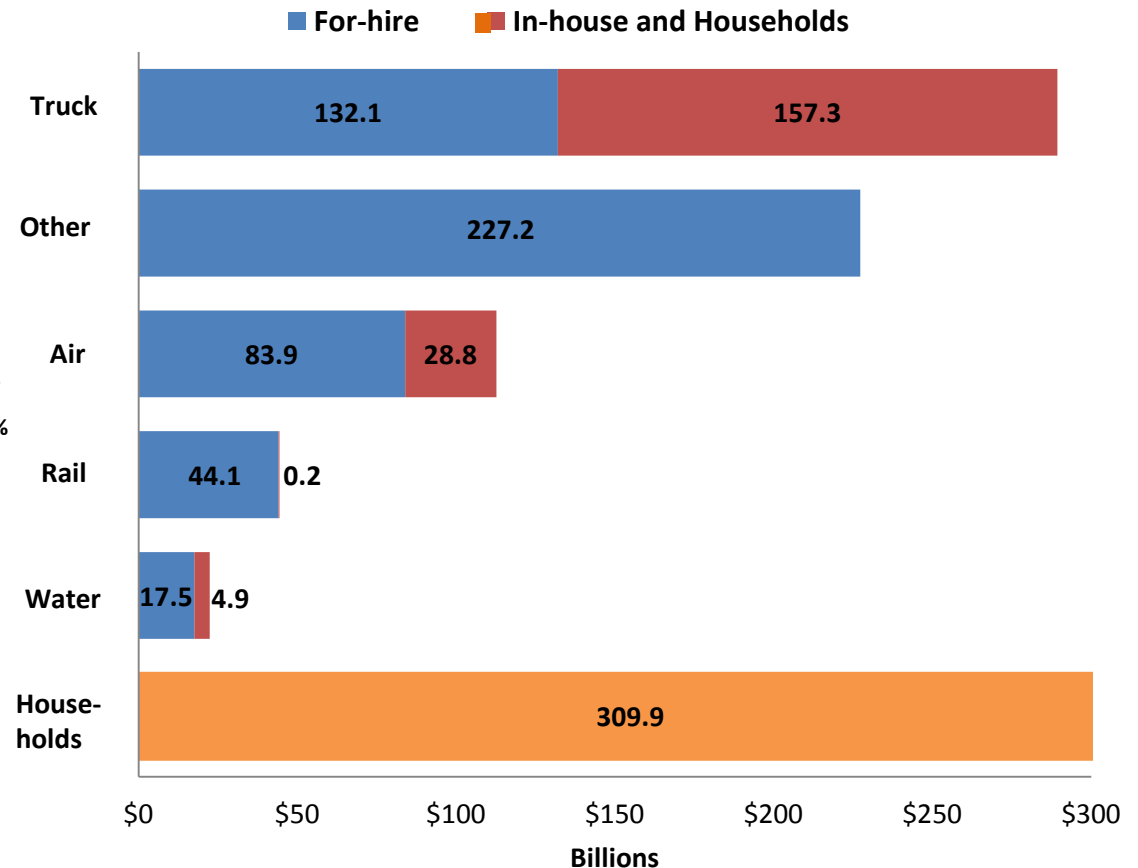
# Contribution of for-hire and in-house transportation to U.S. Gross Domestic Product amounted to 5.8%.

## Economic Activity

Total GDP = 17,658 billion

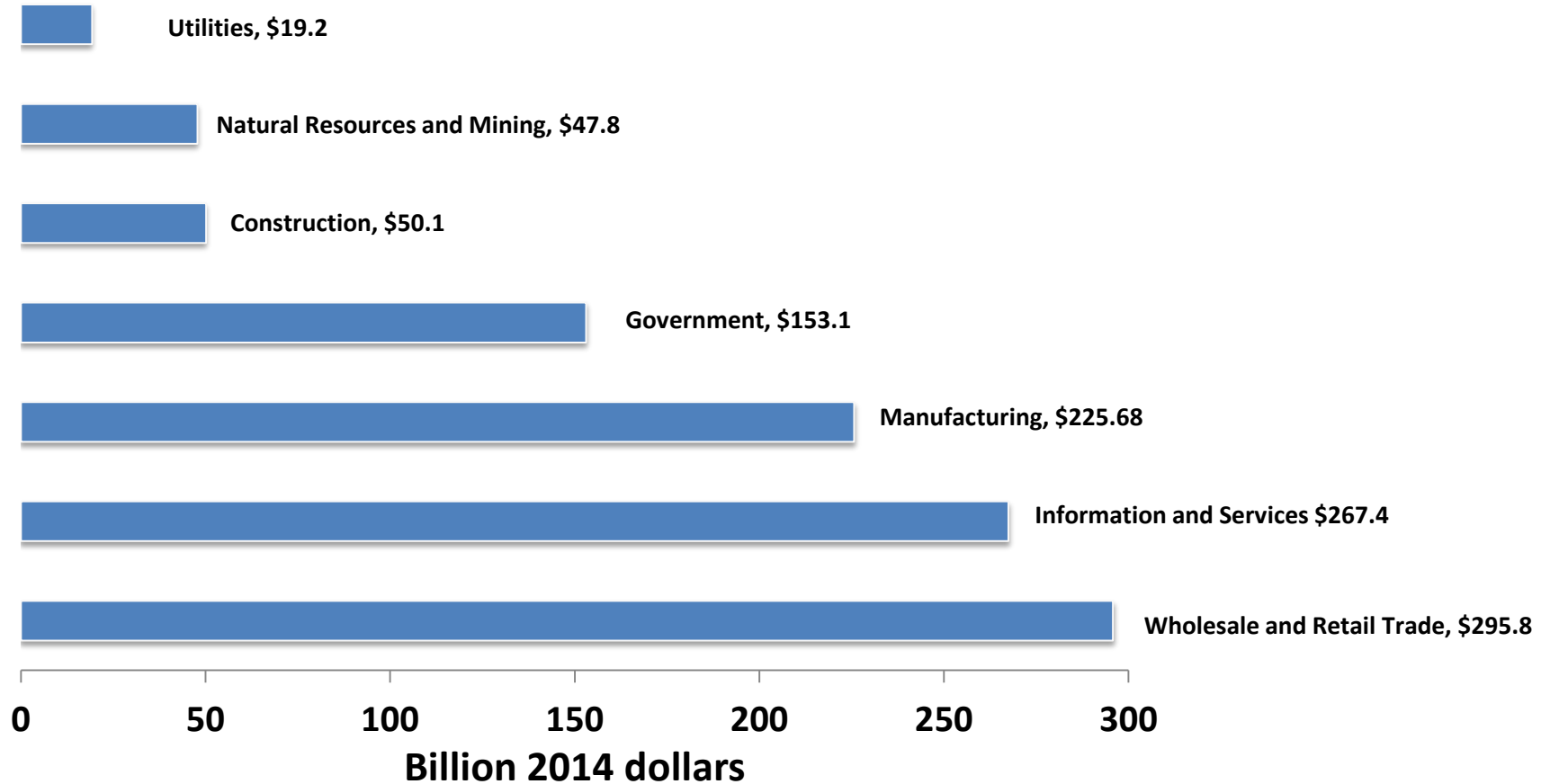


## Total Transportation

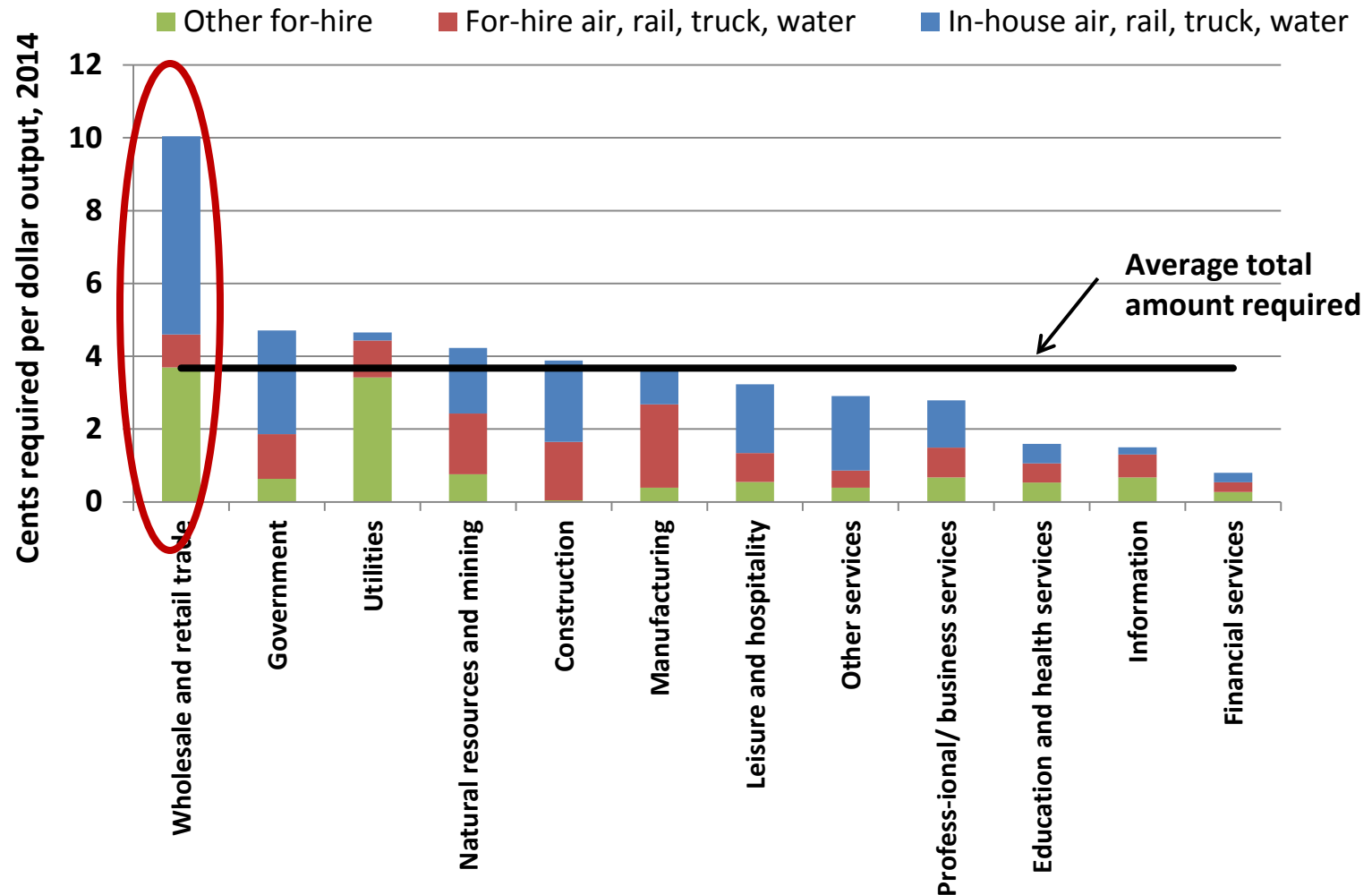


# The wholesale and retail trade sector is the largest user of transportation services

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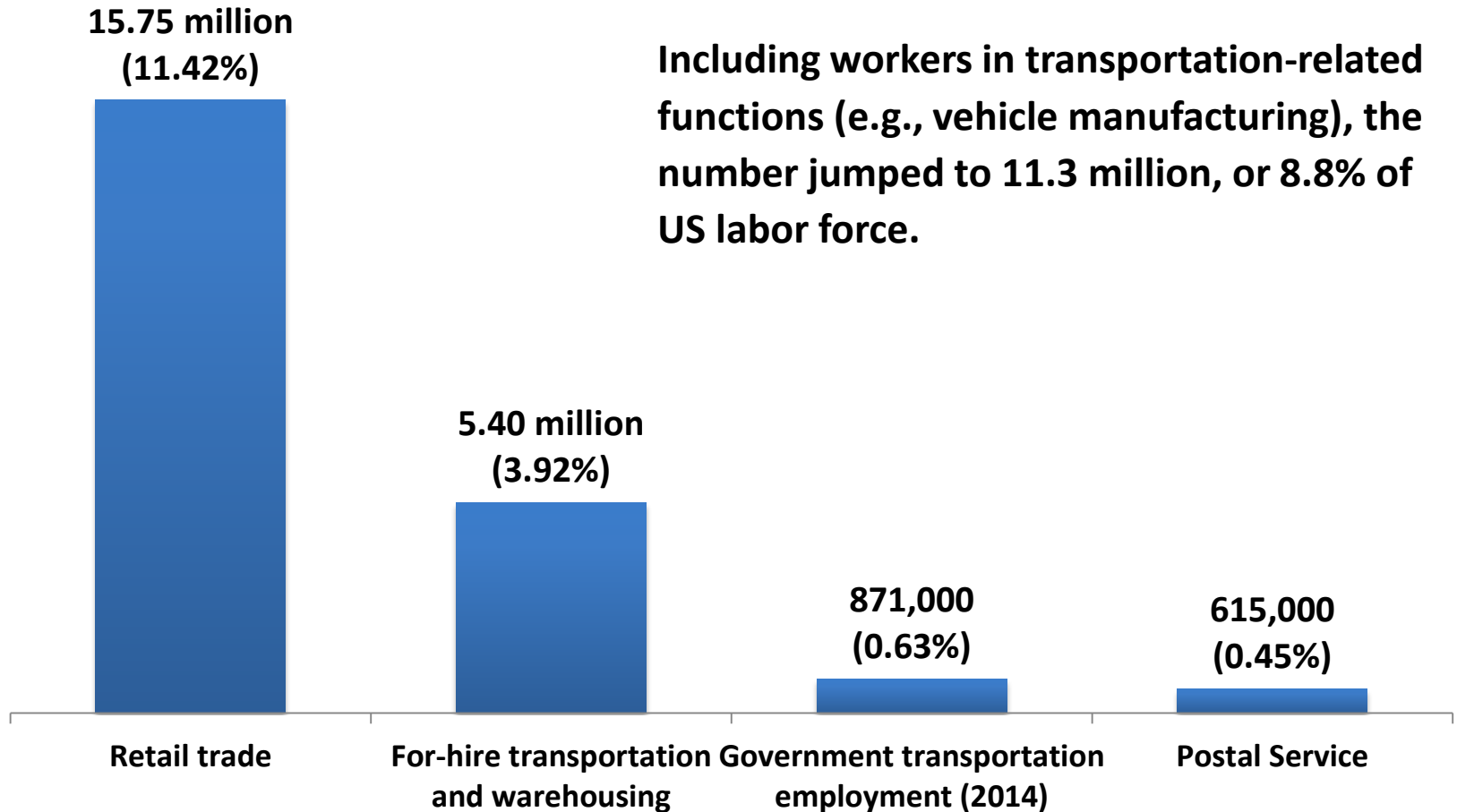


# Transportation is an enabler of economic activity. Many industries rely on transportation services for production.

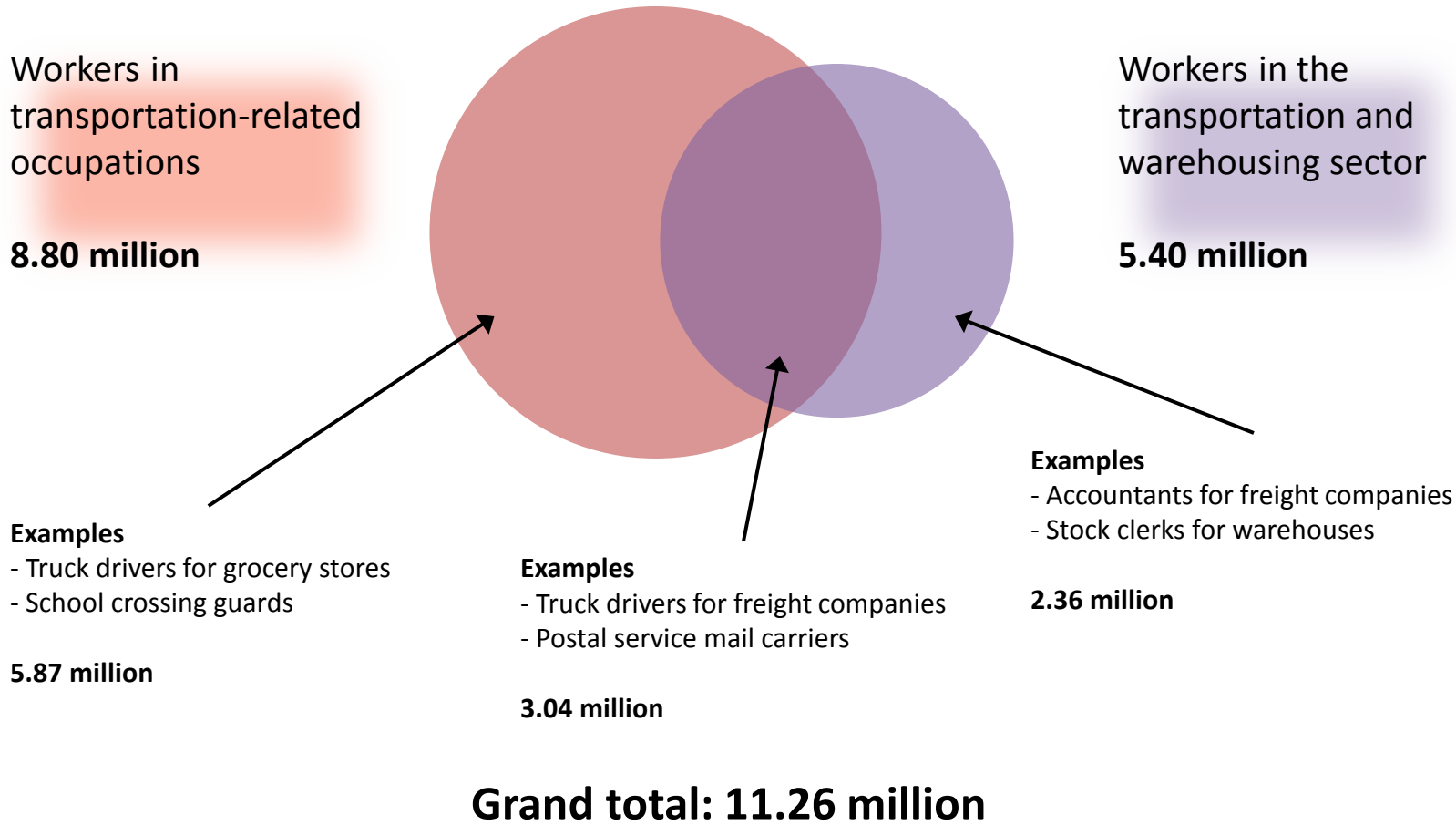


# In 2015, transportation service providers and warehousing employed 5.4 million people.

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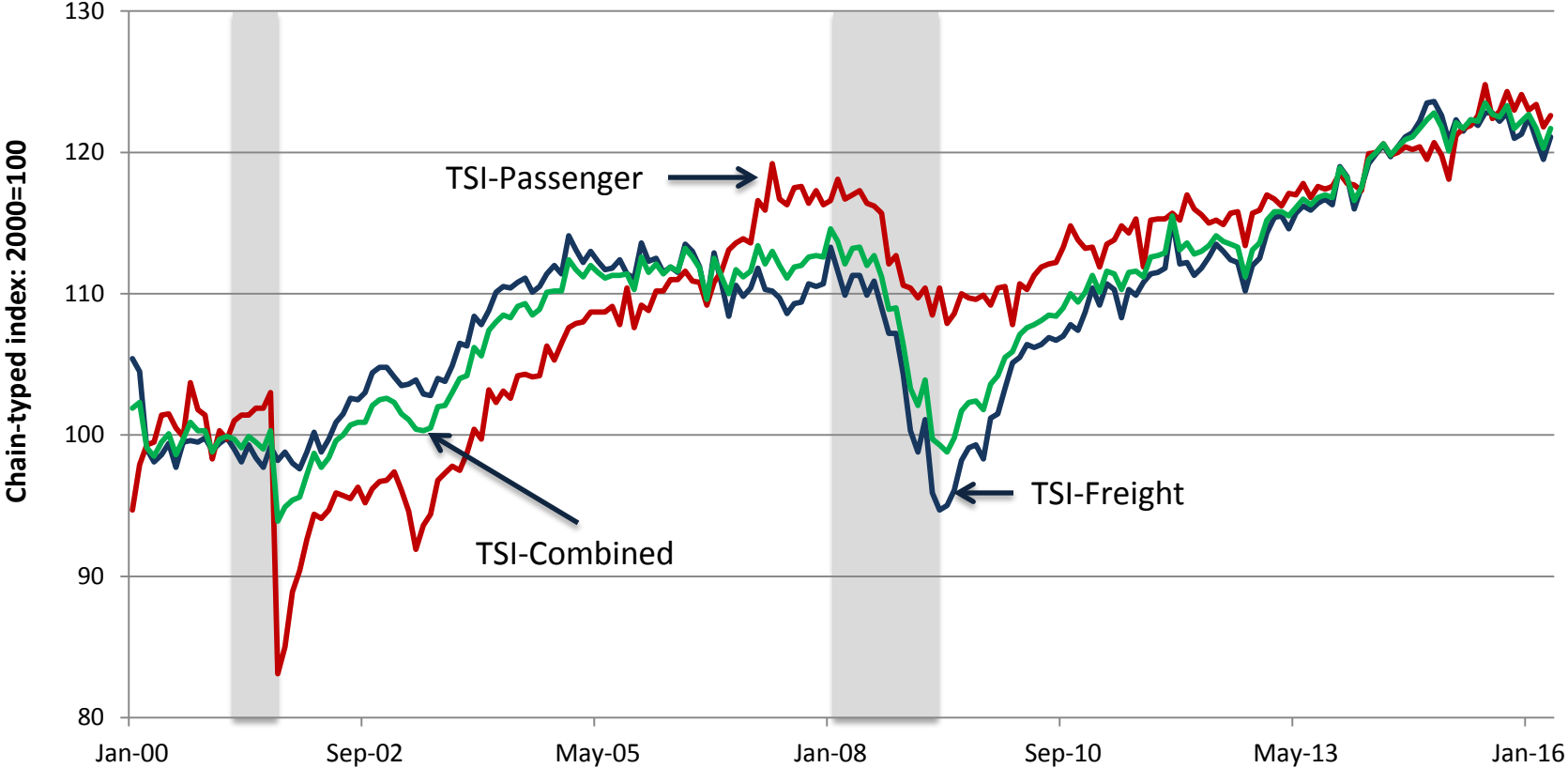


# All employed in the transportation and warehousing sector and other transportation-related jobs reached 11.26 million.



Source: U.S. Bureau of Labor Statistics.

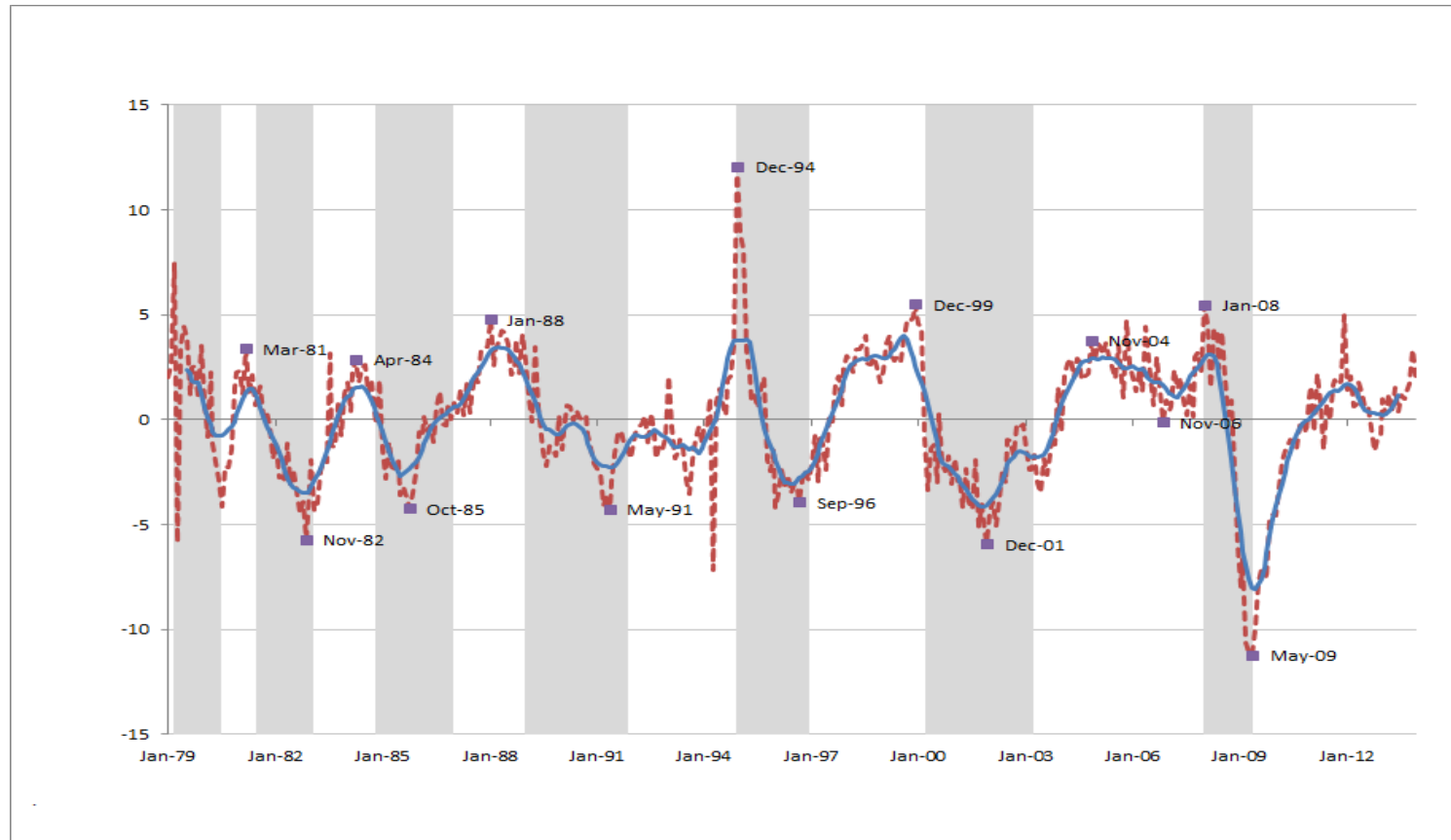
# Seasonally-adjusted monthly freight traffic and passenger travel had rebounded since the last recession



Source: U.S. Bureau of Transportation Statistics

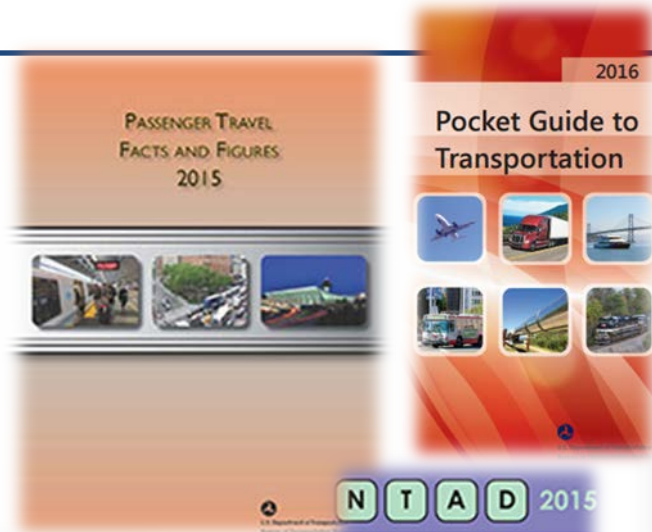
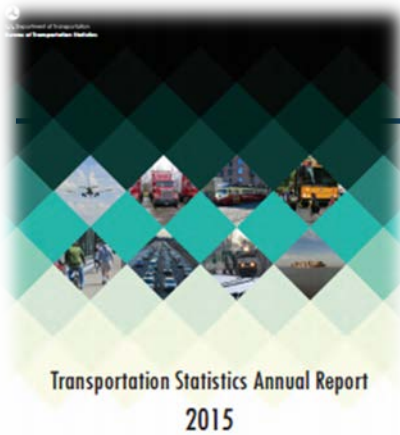


# BTS has shown a close relationship between transportation and the economy: freight as a leading economic indicator by 4 months.

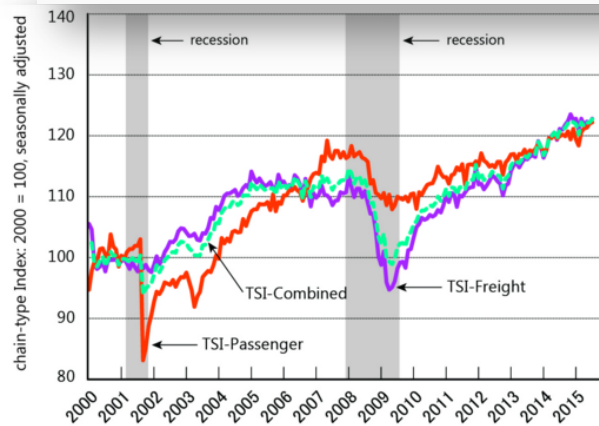


--- Detrended Freight TSI      — Detrended and Smoothed Freight TSI      ■ Peaks and troughs in Freight TSI

# More about BTS: [www.bts.gov](http://www.bts.gov)



Transportation Services Index: Jan. 2000–July 2015



Notes: The Transportation Services Index measures the movement of freight and passengers.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, available at [www.bts.gov](http://www.bts.gov) as of September 2015.

