



U.S. Department of Transportation  
Office of Public Affairs  
1200 New Jersey Avenue, SE  
Washington, DC 20590  
<http://www.dot.gov/briefingroom>

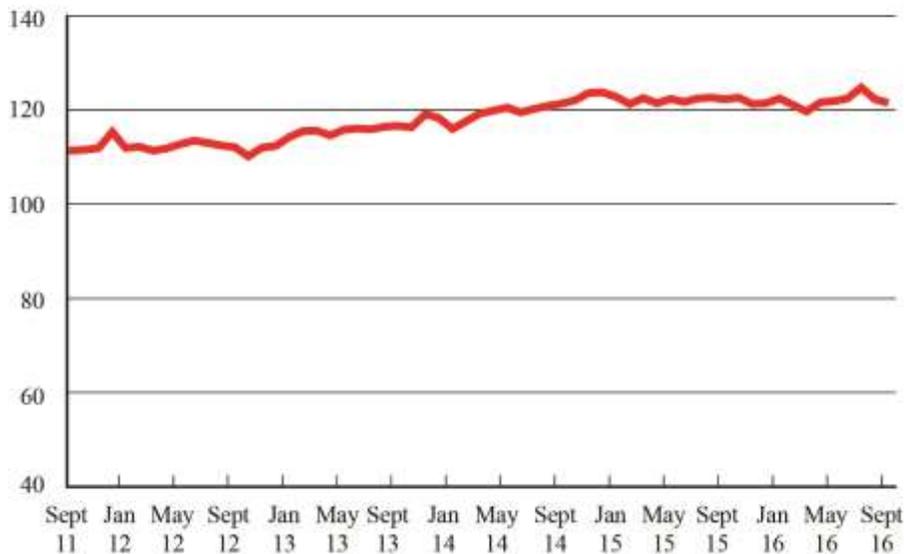
## BTS Data

BTS 57-16  
Wednesday, November 9, 2016  
Contact: Dave Smallen  
Tel: 202-366-5568

### September 2016 Freight Transportation Services Index (TSI)

The Freight Transportation Services Index (TSI), which is based on the amount of freight carried by the for-hire transportation industry, fell 0.6 percent in September from August, falling for the second consecutive month, according to the U.S. Department of Transportation's Bureau of Transportation Statistics' (BTS). The September 2016 index level (121.5) was 28.2 percent above the April 2009 low during the most recent recession (Tables 1, 2, and 2A).

Freight Transportation Services Index, September 2011 - September 2016  
Monthly average of 2000 = 100



The level of freight shipments in September measured by the Freight TSI (121.5) was 2.6 percent below the all-time high level of 124.7 in July 2016 (Table 2A). BTS' TSI records begin in 2000. See historical [TSI data](#).

The August index was revised down slightly to 122.2 from 122.3 in last month's release. The July index was revised up slightly to 124.7 from 124.5.

The Freight TSI measures the month-to-month changes in freight shipments by mode of transportation in tons and ton-miles, which are combined into one index. The index measures the output of the for-hire freight transportation industry and consists of data from for-hire trucking, rail, inland waterways, pipelines and air freight. The TSI is seasonally adjusted to remove regular seasons from month-to-month comparisons.

**Analysis:** The September Freight TSI fell 0.6 percent due to declines in trucking, pipeline and rail intermodal, while air freight, water, and rail carloads rose. The September decrease took place as the economy was relatively stable. The [Federal Reserve Board Industrial Production index](#) rose only 0.1 percent in September, though employment grew by 161,000 jobs and housing starts were 1.9 percent above the August level.

The 0.7 percent third quarter decrease matched slow growth in Industrial Production, which remained unchanged in the third quarter, while [Gross Domestic Product](#) (GDP) growth quickened to 2.9 percent in the third quarter. GDP growth in the second and third quarters outpaced the 1.5 percent growth of TSI over those two quarters, after two earlier quarters when GDP grew less than 1 percent and TSI declined.

**Trend:** The Freight TSI decreased 0.6 percent in September following a 2.0 percent decline August, for a total decline of 2.6 percent over the two months. These two months of decreases followed four months of consecutive monthly increases, leaving the Freight TSI at its lowest point since March. The September level was 0.1 percent below the level at the start of 2016.

The third quarter decrease of 0.7 percent followed an increase of 2.3 percent in the previous quarter, for a net increase of 1.5 percent over the six months. Since the beginning of 2015 Freight TSI has declined in five out of seven quarters and is down 1.8 percent since peaking at 123.7 at the end of the fourth quarter of 2014. The index remains high compared to earlier years, rising 28.2 percent since the low of 94.7 in April 2009. For additional historical data, go to [TSI data](#).

**Index highs and lows:** Freight shipments in September 2016 (121.5) were 28.2 percent higher than the recent low in April 2009 during the recession (94.8). The September 2016 level was 2.6 percent below the historic peak reached in July 2016 (124.7) (Table 1A).

**Year to date:** Freight shipments measured by the index were up 0.1 percent in September compared to the end of 2015 (Table 3).

**Long-term trend:** Freight shipments are up 9.1 percent in the five years from the post-recession level of September 2011 and are up 7.6 percent in the 10 years from September 2006 (Table 5).

**Same month of previous year:** September 2016 freight shipments were down 0.6 percent from September 2015 (Tables 4, 5).

**3rd quarter changes:** The Freight TSI fell 0.7 percent in the third quarter, the third quarterly decline in the last four quarters (Table 10).

The TSI has three seasonally adjusted indexes that measure changes from the monthly average of the base year of 2000. The three indexes are freight shipments, passenger travel and a combined measure that merges the freight and passenger indexes. See [Seasonally-Adjusted Transportation Data](#) for numbers for individual modes. TSI includes data from 2000 to the present. Release of the October 2016 index is scheduled for Dec. 14.

**Passenger Index:** The TSI for passengers rose 0.7 percent in September from its August level (Table 6). The Passenger TSI September 2016 level of 123.8 was 0.6 percent above the September 2015 level (Table 7). The index is up 7.5 percent in five years and up 11.7 percent in 10 years (Table 5). The passenger TSI measures the month-to-month changes in travel that involves the services of the for-hire passenger transportation sector. The seasonally adjusted index consists of data from air, local transit and intercity rail.

**Combined Index:** The combined freight and passenger TSI fell 0.2 percent in September from its August level (Table 8). The combined TSI September 2016 level of 122.3 was 0.2 percent below the September 2015 level (Table 9). The combined index is up 8.6 percent in five years and up 8.7 percent in 10 years (Table 5). The combined TSI merges the freight and passenger indexes into a single index.

**Revisions:** Monthly data has changed from previous releases due to the use of concurrent seasonal analysis, which results in seasonal analysis factors changing as each month's data are added.

BTS research has shown a clear relationship between economic cycles and the Freight and Passenger Transportation Services Indexes. See a [study of this relationship](#) using smoothed and detrended TSI data. Researchers who wish to compare TSI over time with other economic indicators, can use the [FRED database](#), which includes freight, passenger and combined TSI, and which makes it possible to easily graph TSI alongside the other series in that database. See [TSI data on FRED](#).

For a webinar on the TSI, see [Past Webinars](#). For a video explanation of the TSI, see [Overview of the Transportation Services Index](#). A BTS report explaining the TSI, [Transportation Services Index and the Economy](#), is available for download.

**Table 1: Freight, Passenger and Combined Transportation Services Indexes since March 2016**

**Percent Change from Previous Month**

(Seasonally Adjusted, Monthly Average of 2000 = 100)

	Freight		Passenger		Combined	
	Index	Pct. Change	Index	Pct. Change	Index	Pct. Change
March	119.7	-1.1	122.2	-1.3	120.6	-1.1
April	121.6	1.6	123.8	1.3	122.3	1.4
May	121.9	0.2	124.1	0.2	122.7	0.3
June	122.4	0.4	125.4	1.0	123.4	0.6
July	124.7	1.9	124.6	-0.6	124.7	1.1
August	122.2	-2.0	123.0	-1.3	122.5	-1.8
<b>September</b>	121.5	-0.6	123.8	0.7	122.3	-0.2

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.

**Table 1A: Annual High and Low Points in Freight Transportation Services Index, 2009-2016**

(Seasonally Adjusted, Monthly Average of 2000 = 100)

Year	Month	Peak	Month	Bottom
2009	December	101.5	<b>April</b>	<b>94.8</b>
2012	June	113.5	October	110.2
2013	November	119.1	January	114.2
2014	December	123.7	January	116.0
2015	January	122.8	February, November	121.2
2016 (thru September)	<b>July</b>	<b>124.7</b>	March	119.7

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.

**Table 2: Freight Transportation Services Index Monthly Changes, 2013-2016**  
**Percent change from previous month**

	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
	<b>% Change</b>	<b>% Change</b>	<b>% Change</b>	<b>% Change</b>
January	1.6	-1.9	-0.7	0.8
February	1.1	1.4	-1.3	-1.1
March	0.1	1.4	1.1	-1.1
April	-0.9	0.5	-0.9	1.6
May	1.0	0.6	0.7	0.2
June	0.3	-0.8	-0.5	0.4
July	-0.2	0.6	0.6	1.9
August	0.4	0.6	0.2	-2.0
September	0.2	0.3	-0.3	-0.6
October	-0.3	0.7	0.3	
November	2.4	1.2	-1.1	
December	-0.7	0.1	0.2	

SOURCE: Bureau of Transportation Statistics

**Table 2A: Freight Transportation Services Index by Month, 2013-2016**

	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
January	114.2	116.0	122.8	122.4
February	115.5	117.6	121.2	121.0
March	115.6	119.2	122.5	119.7
April	114.6	119.8	121.4	121.6
May	115.8	120.5	122.3	121.9
June	116.1	119.5	121.7	122.4
July	115.9	120.2	122.4	124.7
August	116.4	120.9	122.6	122.2
September	116.6	121.3	122.2	121.5
October	116.3	122.1	122.6	
November	119.1	123.6	121.2	
December	118.3	123.7	121.4	

SOURCE: Bureau of Transportation Statistics

**Table 3: Freight, Passenger and Combined Transportation Services Indexes Year-to-Date Change, 2007-2016**  
**Percent change to September from December of the previous year**

<b>Year</b>	<b>Freight</b>	<b>Passenger</b>	<b>Combined</b>
2007	-1.3	3.4	0.1
2008	-3.1	-3.6	-3.3
2009	-0.9	-0.7	-1.0
2010	5.5	2.5	4.6
2011	2.4	1.8	2.2
2012	-2.8	0.1	-1.9
2013	3.7	1.3	2.9
2014	2.5	2.0	2.5
2015	-1.2	1.8	-0.2
<b>2016</b>	<b>0.1</b>	<b>-0.4</b>	<b>-0.1</b>

SOURCE: Bureau of Transportation Statistics

**Table 4: Freight Transportation Services Index from Year-to-Year Percent Change in the September Freight TSI (Monthly average of 2000 = 100)**

	<b>September Freight TSI</b>	<b>Percent change from same month previous year</b>
2007	109.3	-3.2
2008	107.3	-1.8
2009	99.4	-7.4
2010	107.1	7.7
2011	111.4	4.0
2012	112.1	0.6
2013	116.6	4.0
2014	121.3	4.0
2015	122.2	0.7
<b>2016</b>	<b>121.5</b>	<b>-0.6</b>

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.

**Table 5: Transportation Services Indexes from Previous Years  
Percent Change to 2016 (September to September)**

Since September ...	Duration in years	Freight TSI Percent change to September 2016	Passenger TSI Percent change to September 2016	Combined TSI Percent change to September 2016
2015	1	-0.6	0.6	-0.2
2014	2	0.2	3.0	1.0
2013	3	4.2	5.4	4.6
2012	4	8.4	6.9	7.9
2011	5	9.1	7.5	8.6
2010	6	13.4	9.4	12.2
2009	7	22.2	13.0	19.4
2008	8	13.2	10.4	12.3
2007	9	11.2	5.4	9.3
2006	10	7.6	11.7	8.7

SOURCE: Bureau of Transportation Statistics

**Table 6: Passenger Transportation Services Index Monthly Changes, 2013-2016  
Percent change from previous month**

	2013 % Change	2014 % Change	2015 % Change	2016 % Change
January	0.9	-0.1	-0.8	-0.8
February	-0.3	-0.3	-1.3	0.4
March	-0.5	2.1	2.4	-1.3
April	0.7	-0.1	0.2	1.3
May	0.0	0.5	0.2	0.2
June	0.6	-0.7	0.3	1.0
July	-0.8	0.3	3.3	-0.6
August	0.8	0.6	-2.7	-1.3
September	-0.1	-0.3	0.3	0.7
October	0.1	0.2	1.1	
November	0.9	-0.7	-1.0	
December	-0.6	1.0	0.9	

SOURCE: Bureau of Transportation Statistics

**Table 7: Passenger Transportation Services Index from Year-to-Year  
Percent change in the September Passenger TSI  
(Monthly average of 2000 = 100)**

	<b>September Passenger TSI</b>	<b>Percent change from same month previous year</b>
2007	117.5	6.0
2008	112.1	-4.6
2009	109.6	-2.2
2010	113.2	3.3
2011	115.2	1.8
2012	115.8	0.5
2013	117.5	1.5
2014	120.2	2.3
2015	123.1	2.4
<b>2016</b>	<b>123.8</b>	<b>0.6</b>

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.

**Table 8: Combined Transportation Services Index Monthly Changes, 2013-2016  
Percent change from previous month**

	<b>2013 % Change</b>	<b>2014 % Change</b>	<b>2015 % Change</b>	<b>2016 % Change</b>
January	1.4	-1.4	-0.7	0.2
February	0.7	0.9	-1.3	-0.6
March	-0.2	1.6	1.5	-1.1
April	-0.3	0.3	-0.6	1.4
May	0.7	0.6	0.6	0.3
June	0.4	-0.8	-0.2	0.6
July	-0.4	0.5	1.4	1.1
August	0.5	0.6	-0.7	-1.8
September	0.1	0.2	-0.1	-0.2
October	-0.1	0.5	0.6	
November	1.9	0.6	-1.1	
December	-0.7	0.4	0.4	

SOURCE: Bureau of Transportation Statistics

**Table 9: Combined Transportation Services Index from Year-to-Year  
Percent change in the September Combined TSI  
(Monthly average of 2000 = 100)**

	September Combined TSI	Percent change from same month previous year
2007	111.9	-0.5
2008	108.9	-2.7
2009	102.4	-6.0
2010	109.0	6.4
2011	112.6	3.3
2012	113.3	0.6
2013	116.9	3.2
2014	121.1	3.6
2015	122.6	1.2
<b>2016</b>	<b>122.3</b>	<b>-0.2</b>

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.

**Table 10: Freight Transportation Services Index Change by Quarter, 2007-2016  
Percent change from the last month of the previous quarter**

Year	1st Quarter (Jan-Mar) % Growth	2nd Quarter (Apr-Jun) % Growth	3rd Quarter (Jul-Sep) % Growth	4th Quarter (Oct-Dec) % Growth
2007	1.0	-1.9	-0.4	1.3
2008	-0.8	0.0	-2.3	-6.5
2009	-4.4	0.2	3.4	2.1
2010	3.9	0.9	0.7	1.6
2011	1.7	-0.4	1.0	3.5
2012	-3.4	1.9	-1.2	0.3
2013	2.8	0.4	0.4	1.5
2014	0.8	0.3	1.5	2.0
2015	-1.0	-0.7	0.4	-0.7
<b>2016</b>	<b>-1.4</b>	<b>2.3</b>	<b>-0.7</b>	

SOURCE: Bureau of Transportation Statistics

**Table 11: Passenger Transportation Services Index Change by Quarter, 2007-2016**  
**Percent change from the last month of the previous quarter**

Year	1st Quarter (Jan-Mar) % Growth	2nd Quarter (Apr-Jun) % Growth	3rd Quarter (Jul-Sep) % Growth	4th Quarter (Oct-Dec) % Growth
2007	2.6	0.2	0.7	-1.0
2008	0.3	-0.3	-3.7	-1.5
2009	-1.7	0.0	1.0	0.7
2010	0.3	1.1	1.2	0.0
2011	0.3	0.7	0.8	0.4
2012	0.3	-0.7	0.5	0.2
2013	0.2	1.3	-0.2	0.3
2014	1.7	-0.3	0.5	0.6
2015	0.3	0.7	0.8	1.0
<b>2016</b>	<b>-1.7</b>	<b>2.6</b>	<b>-1.3</b>	

SOURCE: Bureau of Transportation Statistics

**Table 12: Combined Transportation Services Index Change by Quarter, 2007-2016**  
**Percent change from the last month of the previous quarter**

Year	1st Quarter (Jan-Mar) % Growth	2nd Quarter (Apr-Jun) % Growth	3rd Quarter (Jul-Sep) % Growth	4th Quarter (Oct-Dec) % Growth
2007	1.4	-1.2	-0.1	0.6
2008	-0.5	0.0	-2.8	-5.1
2009	-3.7	0.2	2.6	1.8
2010	2.8	0.9	0.8	1.1
2011	1.3	0.0	0.9	2.6
2012	-2.3	1.2	-0.7	0.3
2013	1.9	0.8	0.2	1.1
2014	1.1	0.1	1.3	1.5
2015	-0.6	-0.2	0.6	-0.2
<b>2016</b>	<b>-1.5</b>	<b>2.3</b>	<b>-0.9</b>	

SOURCE: Bureau of Transportation Statistics

## **Brief Explanation of the TSI**

The Transportation Services Index (TSI) is a measure of the month-to-month changes in the output of services provided by the for-hire transportation industries. The freight index measure changes in freight shipments while the passenger index measures changes in passenger travel.

The TSI tells us how the output of transportation services has increased or decreased from month to month. The index can be examined together with other economic indicators to produce a better understanding of the current and future course of the economy. The movement of the index over time can be compared with other economic measures to understand the relationship of changes in transportation output to changes in Gross Domestic Product (GDP).

### **The freight transportation index** consists of:

For-hire trucking,

Railroad freight services (including rail based intermodal shipments such as containers on flat cars),

Inland waterways transportation,

Pipeline transportation (including principally petroleum and petroleum products and natural gas), and

Air freight.

The index does not include international or coastal waterborne movements, private trucking, courier services, or the US Postal Service.

### **The passenger transportation index** consists of:

Local transit,

Intercity passenger rail, and

Passenger air transportation.

The index does not include intercity bus, sightseeing services, ferry services, taxi service, private automobile usage, or bicycling and other non-motorized transportation.