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BTS Data

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May 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, rose 0.2 percent in May from April, rising for the second consecutive month, according to the U.S. Department of Transportation's Bureau of Transportation Statistics' (BTS). The May 2016 index level (121.8) was 28.6 percent above the April 2009 low during the most recent recession (Tables 1, 2, and 2A).



The level of freight shipments in May measured by the Freight TSI (121.8) was 1.5 percent below the all-time high level of 123.7 in December 2014 (Table 2A). BTS' TSI records begin in 2000. See historical [TSI data](#).

The April index was revised to 121.5 from 121.1 and the March index was revised to 119.7 from 119.5 in last month's release.

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.

Analysis: The April to May Freight TSI increase of 0.2 percent was due to growth in all freight modes except trucking and air freight, which declined. See numbers for [individual modes](#). The increase took place as the [Federal Reserve Board Industrial Production index](#) declined by 0.4 percent in May, after rising by 0.6 percent in April. However, personal income, measured by the [Bureau of Economic Analysis](#), increased by 0.2 percent, led by personal consumption which increased by 0.4 percent, while imports of goods increased by 1.9 percent. Also, employment grew, and the [ISM Manufacturing Index](#), already above 50, increased slightly, indicating accelerating manufacturing growth.

Trend: The 0.2 percent Freight TSI rise in May from April was the second monthly increase in a succession. The combined increase of 1.8 percent over the two months from March to May was the largest two-month increase since September to November 2014. The two months of successive increase followed two months of successive decline, leaving the May level 1.6 percent below the December 2014 peak of 123.7. The index remains high compared to earlier years, rising 28.6 percent since the low of 94.7 in April 2009. For additional historical data, go to [TSI data](#).

Index highs and lows: For-hire freight shipments in May 2016 (121.8) were 28.6 percent higher than the recent low in April 2009 during the recession (94.7). The May 2016 level was 1.5 percent below the historic peak reached in December 2014 (123.7).

Year to date: Freight shipments measured by the index were up 0.3 percent in May compared to the end of 2015 (Table 3).

Long-term trend: For-hire freight shipments are up 12.5 percent in the five years from the level of May 2011 and are up 7.3 percent in the 10 years from May 2006 (Table 5).

Same month of previous year: May 2016 for-hire freight shipments were down 0.3 percent from May 2015 (Tables 4, 5).

The TSI includes only domestic "for-hire" freight and passenger transportation. For-hire transportation consists of freight or passenger transport services provided by a firm to external customers for a fee. The TSI does not include taxi services, paid ride services in personal motor vehicles (e.g., Uber, Lyft, etc.), intercity bus services, in-house transportation (vehicles owned and operated by private firms for their own use), or noncommercial passenger travel (e.g., trips in the household car).

The TSI uses seasonally-adjusted data on for-hire freight and passenger transportation services to create three indexes measuring monthly changes in transportation services output from the base year of 2000. The three indexes are for-hire freight shipments, passenger travel, and a combined measure that merges 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 June 2016 index is scheduled for Aug. 10.

Passenger Index: The TSI for passengers rose 0.1 percent in May from its April level (Table 6). The Passenger TSI May 2016 level of 123.6 was 1.3 percent above the May 2015 level (Table 7). The index is up 7.6 percent in five years and up 10.8 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 rose 0.2 percent in May from its April level (Table 8). The combined TSI May 2016 level of 122.4 was 0.2 percent above the May 2015 level (Table 9). The combined index is up 11.0 percent in five years and up 8.1 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 November 2015

**Percent Change from Previous Month
(Seasonally Adjusted, Monthly Average of 2000 = 100)**

	Freight		Passenger		Combined	
	Index	Pct. Change	Index	Pct. Change	Index	Pct. Change
November	121.1	-1.4	123.2	-1.0	121.8	-1.3
December	121.4	0.2	124.3	0.9	122.3	0.4
January	122.6	1.0	123.2	-0.9	122.8	0.4
February	120.9	-1.4	123.6	0.3	121.9	-0.7
March	119.7	-1.0	122.2	-1.1	120.5	-1.1
April	121.5	1.5	123.5	1.1	122.2	1.4
May	121.8	0.2	123.6	0.1	122.4	0.2

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

	2013	2014	2015	2016
	% Change	% Change	% Change	% Change
January	1.7	-1.9	-0.8	1.0
February	0.9	1.2	-1.5	-1.4
March	0.2	1.4	1.2	-1.0
April	-0.9	0.5	-0.9	1.5
May	0.9	0.5	0.7	0.2
June	0.4	-0.7	-0.3	
July	-0.2	0.7	0.8	
August	0.4	0.6	0.0	
September	0.3	0.2	-0.4	
October	-0.3	0.7	0.4	
November	2.4	1.1	-1.4	
December	-0.7	0.2	0.2	

SOURCE: Bureau of Transportation Statistics

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

	2013	2014	2015	2016
January	114.4	116.1	122.7	122.6
February	115.4	117.5	120.9	120.9
March	115.6	119.2	122.4	119.7
April	114.6	119.8	121.3	121.5
May	115.6	120.4	122.2	121.8
June	116.1	119.6	121.8	
July	115.9	120.4	122.8	
August	116.4	121.1	122.8	
September	116.7	121.4	122.3	
October	116.3	122.2	122.8	
November	119.1	123.5	121.1	
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 May from December of the previous year

Year	Freight	Passenger	Combined
2007	-0.4	4.9	1.2
2008	0.5	0.9	0.6
2009	-5.3	-2.3	-4.4
2010	4.6	0.8	3.5
2011	-0.5	1.4	0.1
2012	-2.3	-0.6	-1.8
2013	2.8	0.9	2.2
2014	1.8	2.4	2.0
2015	-1.2	0.9	-0.6
2016	0.3	-0.6	0.1

SOURCE: Bureau of Transportation Statistics

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

	May Freight TSI	Percent change from same month previous year
2007	110.2	-2.9
2008	111.3	1.0
2009	95.0	-14.6
2010	106.2	11.8
2011	108.3	2.0
2012	112.6	4.0
2013	115.6	2.7
2014	120.4	4.2
2015	122.2	1.5
2016	121.8	-0.3

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 (May to May)**

Since May ...	Duration in years	Freight TSI Percent change to May 2016	Passenger TSI Percent change to May 2016	Combined TSI Percent change to May 2016
2015	1	-0.3	1.3	0.2
2014	2	1.2	2.4	1.5
2013	3	5.4	5.6	5.4
2012	4	8.2	7.4	7.9
2011	5	12.5	7.6	11.0
2010	6	14.7	11.1	13.5
2009	7	28.2	14.6	23.9
2008	8	9.4	5.4	8.0
2007	9	10.5	3.7	8.3
2006	10	7.3	10.8	8.1

SOURCE: Bureau of Transportation Statistics

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

	2013	2014	2015	2016
	% Change	% Change	% Change	% Change
January	0.9	-0.1	-0.9	-0.9
February	-0.2	-0.3	-1.2	0.3
March	-0.5	2.1	2.4	-1.1
April	0.7	0.0	0.3	1.1
May	0.0	0.6	0.2	0.1
June	0.7	-0.7	0.6	
July	-0.8	0.2	1.8	
August	0.6	0.3	-1.9	
September	-0.1	-0.2	0.4	
October	0.2	0.2	1.2	
November	0.8	-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 May Passenger TSI
(Monthly average of 2000 = 100)

	May Passenger TSI	Percent change from same month previous year
2007	119.2	6.8
2008	117.3	-1.6
2009	107.9	-8.0
2010	111.3	3.2
2011	114.9	3.2
2012	115.1	0.2
2013	117.1	1.7
2014	120.7	3.1
2015	122.0	1.1
2016	123.6	1.3

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

	2013	2014	2015	2016
	% Change	% Change	% Change	% Change
January	1.4	-1.3	-0.8	0.4
February	0.6	0.8	-1.4	-0.7
March	0.0	1.6	1.7	-1.1
April	-0.4	0.3	-0.6	1.4
May	0.6	0.6	0.6	0.2
June	0.5	-0.7	-0.1	
July	-0.3	0.5	1.1	
August	0.4	0.5	-0.6	
September	0.2	0.1	-0.2	
October	-0.2	0.6	0.7	
November	1.9	0.5	-1.3	
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 May Combined TSI
(Monthly average of 2000 = 100)

	May Combined TSI	Percent change from same month previous year
2007	113.0	-0.2
2008	113.3	0.3
2009	98.8	-12.8
2010	107.8	9.1
2011	110.3	2.3
2012	113.4	2.8
2013	116.1	2.4
2014	120.6	3.9
2015	122.2	1.3
2016	122.4	0.2

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.

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.