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BTS Data

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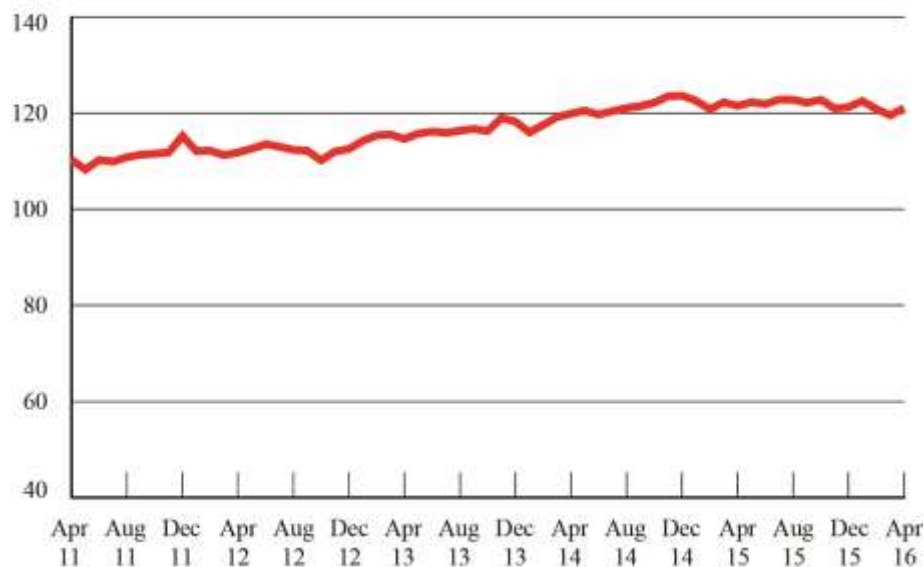
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April 2016 Freight Transportation Services Index (TSI)

The Freight Transportation Services Index (TSI), which is based on the amount of freight carried by the for-hire transportation industry, rose 1.3 percent in April from March, rising after two months of decline, according to the U.S. Department of Transportation's Bureau of Transportation Statistics' (BTS). The April 2016 index level (121.1) was 27.9 percent above the April 2009 low during the most recent recession (Tables 1, 2, and 2A).

Freight Transportation Services Index, April 2011 - April 2016

Monthly average of 2000 = 100



The level of freight shipments in April measured by the Freight TSI (121.1) was 2.0 percent below the all-time high level of 123.6 in December 2014 (Table 2A). BTS' TSI records begin in 2000. See historical [TSI data](#).

The March index was revised to 119.5 from 120.0 in last month's release. Monthly numbers for January and February were revised down slightly as were February through December 2014.

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 March to April Freight TSI increase of 1.3 percent was due to growth in trucking and pipeline, while all other modes declined. See numbers for [individual modes](#). The TSI increase paralleled the increases in housing starts and in industry production. [Federal Reserve Board Industrial Production index](#) rose by 0.7 percent in April, after falling in February and March. Most notable, there were increases in production by utilities (up 5.8 percent) and manufacturing (up 0.3 percent). On the downside, mining production fell 2.3 percent in April. Mining employment also declined while overall employment increased. The [ISM Manufacturing Index](#) declined but remained above 50, indicating slowing but positive manufacturing growth.

Trend: The 1.3 percent Freight TSI rise in April from March, the largest increase since March 2014, brought the index back above its February level. The April level was below that of 10 of the 12 months of 2015, and was 2.0 percent below the December 2014 index peak of 123.6. The April increase took place after two successive monthly declines – the third time since December 2013 where the index declined for two consecutive months followed the next month with a rise of 1.2 percent or more (representing three out of the four largest increases in that period). The index remains high compared to earlier years, rising 27.9 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 April 2016 (121.1) were 27.9 percent higher than the recent low in April 2009 during the recession (94.7). The April 2016 level was 2.0 percent below the historic peak reached in December 2014 (123.6).

Year-to-date: For-hire freight shipments measured by the index were down 0.2 percent in April compared to the end of 2015 (Table 3).

Long-term trend: For-hire freight shipments are up 9.8 percent in the five years from April 2011 and are up 8.6 percent in the 10 years from April 2006 (Table 5).

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

The TSI has three seasonally adjusted indexes that measure changes from the monthly average of the base year of 2000. The three indexes are for-hire 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 May 2016 index is scheduled for July 13.

Passenger Index: The TSI for passengers rose 0.7 percent in April from its March level (Table 6). The Passenger TSI April 2016 level of 122.6 was 0.7 percent above the April 2015 level (Table 7). The index is up 7.7 percent in five years and up 10.5 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 1.2 percent in April from its March level (Table 8). The combined TSI April 2016 level of 121.7 was the same as the April 2015 level (Table 9). The combined index is up 9.2 percent in five years and up 9.1 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 October 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
October	122.8	0.5	124.3	1.1	123.3	0.7
November	121.0	-1.5	123.0	-1.0	121.7	-1.3
December	121.3	0.2	124.1	0.9	122.2	0.4
January	122.5	1.0	123.0	-0.9	122.7	0.4
February	120.9	-1.3	123.4	0.3	121.7	-0.8
March	119.5	-1.2	121.8	-1.3	120.3	-1.2
April	121.1	1.3	122.6	0.7	121.7	1.2

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	1.6	-1.9	-0.8	1.0
February	1.0	1.3	-1.5	-1.3
March	0.1	1.4	1.2	-1.2
April	-0.8	0.6	-0.7	1.3
May	1.0	0.5	0.7	
June	0.4	-0.7	-0.3	
July	-0.3	0.6	0.7	
August	0.4	0.6	0.0	
September	0.3	0.2	-0.5	
October	-0.3	0.7	0.5	
November	2.3	1.1	-1.5	
December	-0.6	0.1	0.2	

SOURCE: Bureau of Transportation Statistics

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

	2013	2014	2015	2016
January	114.3	116.0	122.6	122.5
February	115.4	117.5	120.8	120.9
March	115.5	119.2	122.3	119.5
April	114.6	119.9	121.5	121.1
May	115.7	120.5	122.3	
June	116.2	119.7	121.9	
July	115.9	120.4	122.8	
August	116.4	121.1	122.8	
September	116.7	121.4	122.2	
October	116.3	122.2	122.8	
November	119.0	123.5	121.0	
December	118.3	123.6	121.3	

SOURCE: Bureau of Transportation Statistics

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

Year	Freight	Passenger	Combined
2007	-0.3	2.0	0.4
2008	0.5	0.6	0.5
2009	-5.6	0.0	-3.9
2010	4.8	-0.1	3.3
2011	1.5	0.5	1.2
2012	-3.0	-0.1	-2.2
2013	1.9	1.0	1.7
2014	1.4	1.9	1.5
2015	-1.7	0.8	-0.9
2016	-0.2	-1.2	-0.4

SOURCE: Bureau of Transportation Statistics

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

	April Freight TSI	Percent change from same month previous year
2007	110.3	-1.1
2008	111.3	0.9
2009	94.7	-14.9
2010	106.4	12.4
2011	110.3	3.7
2012	111.8	1.4
2013	114.6	2.5
2014	119.9	4.6
2015	121.5	1.3
2016	121.1	-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 (April to April)**

Since April ...	Duration in years	Freight TSI Percent change to April 2016	Passenger TSI Percent change to April 2016	Combined TSI Percent change to April 2016
2015	1	-0.3	0.7	0.0
2014	2	1.0	2.2	1.4
2013	3	5.7	4.7	5.4
2012	4	8.3	6.1	7.7
2011	5	9.8	7.7	9.2
2010	6	13.8	11.2	13.1
2009	7	27.9	11.1	22.6
2008	8	8.8	4.8	7.5
2007	9	9.8	5.8	8.6
2006	10	8.6	10.5	9.1

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	-0.7	-0.9
February	-0.3	-0.3	-1.4	0.3
March	-0.4	2.2	2.6	-1.3
April	0.8	0.1	0.4	0.7
May	-0.1	0.5	0.2	
June	0.7	-0.7	0.6	
July	-0.8	0.2	1.8	
August	0.7	0.3	-1.9	
September	-0.2	-0.2	0.4	
October	0.2	0.2	1.1	
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 April Passenger TSI
(Monthly average of 2000 = 100)**

	April Passenger TSI	Percent change from same month previous year
2007	115.9	4.4
2008	117.0	0.9
2009	110.4	-5.6
2010	110.3	-0.1
2011	113.8	3.2
2012	115.6	1.6
2013	117.1	1.3
2014	120.0	2.5
2015	121.7	1.4
2016	122.6	0.7

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 % Change	2014 % Change	2015 % Change	2016 % Change
January	1.4	-1.4	-0.8	0.4
February	0.5	0.8	-1.4	-0.8
March	0.0	1.7	1.7	-1.2
April	-0.3	0.4	-0.3	1.2
May	0.5	0.5	0.5	
June	0.5	-0.7	-0.1	
July	-0.3	0.5	1.1	
August	0.4	0.4	-0.6	
September	0.2	0.2	-0.2	
October	-0.2	0.5	0.7	
November	1.8	0.5	-1.3	
December	-0.6	0.4	0.4	

SOURCE: Bureau of Transportation Statistics

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

	April Combined TSI	Percent change from same month previous year
2007	112.1	0.4
2008	113.2	1.0
2009	99.3	-12.3
2010	107.6	8.4
2011	111.4	3.5
2012	113.0	1.4
2013	115.5	2.2
2014	120.0	3.9
2015	121.7	1.4
2016	121.7	0.0

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.