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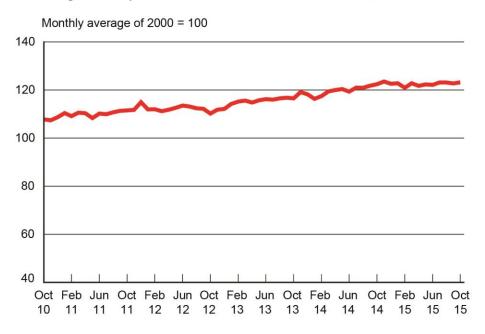
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October 2015 Freight Transportation Services Index (TSI)

The Freight Transportation Services Index (TSI), which is based on the amount of freight carried by the for-hire transportation industry, rose 0.4 percent in October from September, rising after one month of decline, according to the U.S. Department of Transportation's Bureau of Transportation Statistics' (BTS). The October 2015 index level (123.2) was 30.1 percent above the April 2009 low during the most recent recession (Tables 1, 2, and 2A).

Freight Transportation Services Index, October 2010 - October 2015



The level of freight shipments in October measured by the Freight TSI (123.2) was 0.2 percent below the all-time high level of 123.5 in November 2014 (Table 2A). BTS' TSI records begin in 2000. See historical TSI data.

The September index was revised to 122.7 from 123.4 in last month's release. Monthly numbers for June through August were revised down slightly.

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 Freight TSI increase was narrower in terms of modes than it has been in many previous months – trucking, waterborne and pipeline showed gains, while rail carload, rail intermodal and air freight decreased. Similarly, the increase took place against a background of mixed indicators for the general economy – personal income increased, employment increased substantially, while housing starts, the Federal Reserve Board Industrial Production index and the ISM Manufacturing Index declined, indicating slower growth.

Trend: Since hitting a peak in November 2014, the Freight TSI has not had two consecutive months of either growth or decline. October was no exception, as the index increased by 0.4 percent, leaving it only 0.1 percent above its August level. After alternating increases and decreases for the last 11 months, the October TSI was 0.2 percent below the November 2014 high point. The index remains high compared to earlier years however, and has increased by 30.1 percent since its low of 94.7 in April 2009. For additional historical data, go to TSI data.

Index highs and lows: Freight shipments in October 2015 (123.2) were 30.1 percent higher than the recent low in April 2009 during the recession (94.7). The October 2015 level was 0.2 percent below the historic peak reached in November 2014 (123.5).

Year to date: Freight shipments measured by the index were up 0.5 percent in October compared to the end of 2014 (Table 3).

Long-term trend: Freight shipments are up 14.3 percent in the five years from the post-recession level of October 2010 and are up 10.9 percent in the 10 years from October 2005 (Table 5).

Same month of previous year: October 2015 freight shipments were up 0.7 percent from October 2014 (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 freight shipments, passenger travel and a combined measure that merges the freight and passenger indexes. See <u>Seasonally-Adjusted Transportation Data</u> for numbers for individual modes. TSI includes data from 2000 to the present. Release of the November index is scheduled for Jan. 13.

Passenger Index: The TSI for passengers rose 0.4 percent in October from its September level (Table 6). The Passenger TSI October 2015 level of 122.6 was 1.6 percent above the October 2014 level (Table 7). The index is up 6.7 percent in five years and up 13.9 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 0.4 percent in October from its September level (Table 8). The combined TSI October 2015 level of 123.1 was 0.9 percent above the October 2014 level (Table 9). The combined index is up 11.9 percent in five years and up 11.6 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 <u>study of this relationship</u> using smoothed and detrended TSI data. Researchers who wish to compare TSI over time with other economic indicators, can use the <u>FRED database</u>, which includes freight, passenger and combined TSI, and which makes it possible to easily graph TSI alongside the other series in that database. See <u>TSI data on FRED</u>.

For a webinar on the TSI, see <u>Past Webinars</u>. For a video explanation of the TSI, see <u>Overview of the Transportation Services Index</u>. A BTS report explaining the TSI, <u>Transportation Services Index and the Economy</u>, is available for download.

Table 1: Freight, Passenger and Combined Transportation Services Indexes since April 2015

Combined

Passenger

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

Freight

		J		J		
	Index	Pct. Change	Index	Pct. Change	Index	Pct. Change
April	121.7	-0.9	121.3	0.4	121.7	-0.5
May	122.3	0.5	121.6	0.2	122.2	0.4
June	122.1	-0.2	122.3	0.6	122.2	0.0
July	123.1	0.8	124.5	1.8	123.6	1.1
August	123.1	0.0	122.4	-1.7	123.0	-0.5
September	122.7	-0.3	122.1	-0.2	122.6	-0.3
October	123.2	0.4	122.6	0.4	123.1	0.4

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.

Table 2: Freight Transportation Services Index Monthly Changes, 2012-2015 Percent change from previous month

	2012	2013	2014	2015
	% Change	% Change	% Change	% Change
January	-2.6	1.9	-1.6	0.2
February	0.1	0.9	1.0	-1.5
March	-0.7	0.3	1.6	1.6
April	0.5	-0.7	0.5	-0.9
May	0.7	8.0	0.3	0.5
June	0.8	0.4	-0.9	-0.2
July	-0.4	-0.2	1.4	8.0
August	-0.6	0.4	-0.1	0.0
September	-0.2	0.3	0.7	-0.3
October	-1.8	-0.3	0.5	0.4
November	1.5	2.2	0.9	
December	0.3	-0.8	-0.7	

Table 2A: Freight Transportation Services Index by Month, 2012-2015

	2012	2013	2014	2015
January	111.9	114.2	116.3	122.8
February	112.0	115.2	117.5	120.9
March	111.2	115.6	119.4	122.8
April	111.8	114.8	120.0	121.7
May	112.6	115.7	120.4	122.3
June	113.5	116.2	119.3	122.1
July	113.1	116.0	121.0	123.1
August	112.4	116.5	120.9	123.1
September	112.2	116.8	121.8	122.7
October	110.2	116.5	122.4	123.2
November	111.8	119.1	123.5	
December	112.1	118.2	122.6	

SOURCE: Bureau of Transportation Statistics

 $\begin{tabular}{ll} \textbf{Table 3: Freight, Passenger and Combined Transportation Services Indexes Year-to-Date Change, 2006-2015} \end{tabular}$

Percent change to October from December of the previous year

Year	Freight	Passenger	Combined
2006	-1.3	2.6	-0.2
2007	0.1	2.5	0.8
2008	-3.2	-3.1	-3.2
2009	-1.9	-0.3	-1.5
2010	6.3	4.0	5.6
2011	2.6	1.9	2.4
2012	-4.1	-1.9	-3.4
2013	3.9	1.5	3.2
2014	3.6	2.3	3.2
2015	0.5	1.2	0.7

SOURCE: Bureau of Transportation Statistics

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

	October Freight TSI	Percent change from same month previous year
2006	110.8	-0.3
2007	110.7	-0.1
2008	107.2	-3.2
2009	98.3	-8.3
2010	107.8	9.7
2011	111.5	3.4
2012	110.2	-1.2
2013	116.5	5.7
2014	122.4	5.1
2015	123.2	0.7

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 2015 (October to October)

Since October	Duration in years	Freight TSI Percent change to October 2015		Combined TSI Percent change to October 2015
2014	1	0.7	1.6	0.9
2013	2	5.8	4.1	5.2
2012	3	11.8	7.9	10.6
2011	4	10.5	6.3	9.2
2010	5	14.3	6.7	11.9
2009	6	25.3	11.5	20.9
2008	7	14.9	8.8	12.9
2007	8	11.3	5.3	9.3
2006	9	11.2	9.9	10.6
2005	10	10.9	13.9	11.6

Table 6: Passenger Transportation Services Index Monthly Changes, 2012-2015 Percent change from previous month

	2012	2013	2014	2015
	% Change	% Change	% Change	% Change
January	-0.6	0.7	-0.5	-1.4
February	1.8	0.1	0.1	-0.8
March	-1.0	-0.9	1.8	1.9
April	-0.3	0.9	0.0	0.4
May	-0.6	-0.2	0.6	0.2
June	0.3	0.7	-0.7	0.6
July	-0.3	-0.8	0.3	1.8
August	0.7	0.7	0.3	-1.7
September	0.1	-0.1	-0.2	-0.2
October	-1.8	0.3	0.6	0.4
November	1.8	8.0	-1.0	
December	0.4	-0.6	1.4	

SOURCE: Bureau of Transportation Statistics

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

	October Passenger TSI	Percent change from same month previous year
2006	111.6	3.7
2007	116.4	4.3
2008	112.7	-3.2
2009	110.0	-2.4
2010	114.9	4.5
2011	115.3	0.3
2012	113.6	-1.5
2013	117.8	3.7
2014	120.7	2.5
2015	122.6	1.6

NOTE: Percent changes based on numbers prior to rounding.

Table 8: Combined Transportation Services Index Monthly Changes, 2012-2015 Percent change from previous month

	2012	2013	2014	2015
	% Change	% Change	% Change	% Change
January	-2.0	1.5	-1.3	-0.3
February	0.6	0.6	0.8	-1.3
March	-0.8	0.0	1.7	1.7
April	0.3	-0.3	0.3	-0.5
May	0.4	0.5	0.4	0.4
June	0.6	0.5	-0.8	0.0
July	-0.4	-0.3	1.0	1.1
August	-0.2	0.5	0.1	-0.5
September	-0.2	0.2	0.5	-0.3
October	-1.8	-0.1	0.5	0.4
November	1.5	1.7	0.3	
December	0.4	-0.7	-0.1	

SOURCE: Bureau of Transportation Statistics

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

	October Combined TSI	Percent change from same month previous year
2006	111.3	0.9
2007	112.6	1.2
2008	109.0	-3.2
2009	101.8	-6.6
2010	110.0	8.1
2011	112.7	2.5
2012	111.3	-1.2
2013	117.0	5.1
2014	122.0	4.3
2015	123.1	0.9

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.