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Research and Innovative Technology Administration BTS Data

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## American Industry Shipped 13 Billion Tons of Goods in 2007

American industry shipped 13 billion tons of goods valued at almost \$12 trillion in 2007, according to preliminary numbers from the 2007 Commodity Flow Survey (CFS) released today by the U.S. Department of Transportation's Bureau of Transportation Statistics and the U.S. Department of Commerce's Census Bureau (Table 1).

The preliminary numbers from the CFS, produced in partnership with the U.S. Census Bureau, show that trucks moved manufactured goods and raw materials in 2007 amounting to about 9 billion tons in shipments valued at \$8.4 trillion. These totals represent more than two-thirds of the value and weight of freight shipped in the United States (Table 1, 2).

Based on ton-miles, a measure derived by multiplying the weight by distance shipped, rail and trucking accounted for 37 and 40 percent, respectively, of freight being transported in 2007.

Multiple mode shipments using more than one type of transportation were second to trucking in shipment value, at \$1.9 trillion for a 16 percent share, but carried only 627 million tons or 5 percent by weight (Tables 1, 2). For shipments using multiple modes, parcel, U.S. Postal Service or courier carried the most by value (\$1.6 trillion) but truck-rail combination carried the most weight (213 million tons) (Table 3).

The rail mode was the second most-used mode by weight, carrying 1.9 billion tons of freight for a 15 percent share but only \$388 billion or 3 percent of goods by value (Tables 1, 2). When each individual mode's portion of multiple mode shipments is redistributed to components of individual modal shipments, rail generated the most ton-miles totaling almost 1.5 trillion (Table 4).

Shipments totaling 7.1 billion tons, or more than half of the total weight of all shipments captured by the CFS, moved less than 50 miles, while shipments traveling less than 250 miles represented more than half the value recorded in the 2007 CFS (Tables 5, 6).

Smaller shipments traveled longer distances on average. Shipments of less than 50 pounds traveled an average of 716 miles while shipments of 50 to 99 pounds traveled an average of 395 miles (Table 7). More than 70 percent of total shipment value captured by the 2007 CFS is represented by shipments weighing over 1,000 pounds. More than 92 percent of the tons are represented by shipments of more than 10,000 pounds (Table 8).

# COMMODITY FLOW SURVEY 2007 PRESS RELEASE ADD ONE

Estimates of shipment characteristics by industry are included in the CFS for the first time. The preliminary estimates show the manufacturing industry shipped 5.4 billion tons of commodities valued at \$5.4 trillion and generated 1.5 trillion ton-miles in 2007, representing the largest contribution of any industry sector. See Table 5 <a href="http://www.bts.gov/publications/commodity\_flow\_survey/preliminary\_tables\_december\_2008/index.html/table\_05.html">http://www.bts.gov/publications/commodity\_flow\_survey/preliminary\_tables\_december\_2008/index.html/table\_05.html</a> The two commodities generating the most value in the 2007 CFS were electronic and office equipment and mixed freight. The commodity category with the most tonnage was gravel and crushed stone. See Table 6 (<a href="http://www.bts.gov/publications/commodity\_flow\_survey/preliminary\_tables\_december\_2008/index.html/table\_06.html">http://www.bts.gov/publications/commodity\_flow\_survey/preliminary\_tables\_december\_2008/index.html/table\_05.html</a> The two commodities generating the most value in the 2007 CFS were electronic and office equipment and mixed freight. The commodity category with the most tonnage was gravel and crushed stone. See Table 6 (<a href="http://www.bts.gov/publications/commodity\_flow\_survey/preliminary\_tables\_december\_2008/index.html/table\_06.html">http://www.bts.gov/publications/commodity\_flow\_survey/preliminary\_tables\_december\_2008/index.html/table\_06.html</a>).

The CFS is the primary source of national and state-level data on domestic freight shipments by American establishments in mining, manufacturing, wholesale, auxiliaries, and selected retail industries. Data are provided on the types, origins and destinations, values, weights, modes of transport, distance shipped, and ton-miles of commodities shipped. The CFS is a shipper-based survey and is conducted every five years as part of the Economic Census. It provides a modal picture of national freight flows, and represents the only publicly available source of commodity flow data for the highway mode. The CFS was conducted in 1993, 1997, 2002, and most recently in 2007.

Final data will be available in December 2009. Commodity Flow Survey data products and information on survey coverage, contents, and methods can be found at the BTS website at <u>http://www.bts.gov/publications/commodity\_flow\_survey/</u> Additional tables can be found at

http://www.bts.gov/publications/commodity\_flow\_survey/preliminary\_tables\_december\_2008/index.html

Mode of transportation	Value* (\$millions)	Tons (thousands)	Ton- Miles (millions)	Average miles per shipment
All modes	11,831,503	13,016,610	3,490,806	580
Truck	8,363,657	8,957,687	1,390,102	187
For-hire truck	4,764,442	4,029,016	1,011,018	527
Private truck	3,599,215	4,928,670	379,084	82
Rail	387,567	1,928,530	1,294,921	691
Water	106,905	423,282	175,973	330
Air (includes truck and air)	209,611	3,525	4,014	1,299
Pipeline	487,140	774,732	S	S
Multiple modes	1,938,884	626,539	489,767	915
Other and unknown modes**	337,739	302,315	47,964	149

### Table 1 Freight Shipments by Mode 2007

**SOURCE:** Bureau of Transportation Statistics and U.S. Census Bureau, 2007 Economic Census: Transportation Commodity Flow Survey, Preliminary Release, December 2008.

\* The value of goods measured in the CFS includes the market value of goods used in production and final demand. Hence the goods may be counted more than once in the production cycle. The tonnage of products could also be counted multiple times depending on the number times the product is transported in the production and consumption cycle.

\*\* Other mode refers to any mode not listed in the categories that were provided. Unknown means the respondent didn't know the mode of transport.

S: Numbers withheld because of poor response quality.

# COMMODITY FLOW SURVEY 2007 PRESS RELEASE ADD TWO

	Percent of Total (%)		
Mode of transportation	Value	Tons	Ton- Miles
All modes	100.0	100.0	100.0
Truck	70.7	68.8	39.8
Rail	3.3	14.8	37.1
Water	0.9	3.3	5.0
Air (includes truck and air)	1.8	0.0	0.1
Pipeline	4.1	6.0	S
Multiple modes	16.4	4.8	14.0
Other and unknown modes*	2.9	2.3	1.4

### Table 2 Percent of Freight Shipments by Mode 2007

**SOURCE:** Bureau of Transportation Statistics and U.S. Census Bureau, 2007 Economic Census: Transportation Commodity Flow Survey, Preliminary Release, December 2008.

\* Other mode refers to any mode not listed in the categories that were provided. Unknown means the respondent didn't know the mode of transport.

S: Numbers withheld because of poor response quality

#### Table 3 Multiple Mode Freight Shipments 2007

Mode of transportation	Value* (\$millions)	Tons (thousands)	Ton- Miles (millions)	Average miles per shipment
All modes	11,831,503	13,016,610	3,490,806	580
Single modes	9,554,880	12,087,756	2,953,076	213
Multiple modes Parcel, US Postal Service or	1,938,884	626,539	489,767	915
courier	1,597,931	36,029	29,535	914
Truck and rail	197,748	213,411	188,547	1,053
Truck and water	31,112	74,421	48,870	1,347
Rail and water	7,744	44,979	30,444	2,608
Other multiple modes	104,350	257,698	192,372	2,190
Other and unknown modes**	337,739	302,315	47,964	149

**SOURCE:** Bureau of Transportation Statistics and U.S. Census Bureau, 2007 Economic Census: Transportation Commodity Flow Survey, Preliminary Release, December 2008.

\* The value of goods measured in the CFS includes the market value of goods used in production and final demand. Hence the goods may be counted more than once in the production cycle. The tonnage of products could also be counted multiple times depending on the number times the product is transported in the production and consumption cycle.

\*\* Other mode refers to any mode not listed in the categories that were provided. Unknown means the respondent didn't know the mode of transport.

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### COMMODITY FLOW SURVEY 2007 PRESS RELEASE ADD THREE

Mode	Ton-miles (mil)	Avg miles
All modes	3,490,806	577
Truck	1,400,654	186
Rail	1,496,353	842
Shallow draft	283,519	222
Great Lakes	41,066	429
Deep draft	100,534	1,597
Air (incl truck and air)	4,166	1,154
Pipeline**	S	S
Parcel, U.S.P.S. or courier	29,426	911
Other and unknown		
modes**	41,271	103

#### Table 4 Total Freight Shipments by Individual Mode 2007\*

**SOURCE:** Bureau of Transportation Statistics and U.S. Census Bureau, 2007 Economic Census: Transportation Commodity Flow Survey, Preliminary Release, December 2008.

\* This table differs from Tables 1 through 3 as follows: Tables 1-3 report the mode categories, as reported by the respondent, that include multi-mode combinations. Table 4 breaks out the multiple components to their single mode parts to obtain a picture of total activity by a particular mode. Thus, multi-modes get redistributed to represent their single mode parts. Example: a multi-mode shipment reported as truck-rail of 500 miles. In Table 1, it would be represented as 500 miles in truck-rail, while in Table 2 it would be represented as (an example) 50 miles in truck and 450 miles in rail.

\*\* Other mode refers to any mode not listed in the categories that were provided. Unknown means the respondent didn't know the mode of transport.

S: Numbers withheld because of poor response quality.

Distance Shipped (in miles)	Value* (\$ millions)	Tons (thousands)	Ton- miles (millions)
All Shipments	11,831,503	13,016,610	3,490,806
Less than 50	3,909,625	7,087,855	157,308
50 - 99	1,084,779	1,288,812	129,358
100 - 249	1,832,167	1,780,263	415,260
250 - 499	1,642,995	1,112,023	554,553
500 - 749	1,047,504	665,131	577,798
750 - 999	741,766	514,753	618,350
1,000 - 1,499	728,986	410,497	648,167
1,500 - 2,000	454,626	95,219	210,219
More than 2,000	389,055	62,058	179,794

#### Table 5 Freight Shipments by Distance 2007

**SOURCE:** Bureau of Transportation Statistics and U.S. Census Bureau, 2007 Economic Census: Transportation Commodity Flow Survey, Preliminary Release, December 2008.

\* The value of goods measured in the CFS includes the market value of goods used in production and final demand. Hence the goods may be counted more than once in the production cycle. The tonnage of products could also be counted multiple times depending on the number times the product is transported in the production and consumption cycle.

# COMMODITY FLOW SURVEY 2007 PRESS RELEASE ADD FOUR

	Percent of Value (%)		
Distance Shipped (in miles)	Value	Tons	Ton- miles
All Shipments	100.0	100.0	100.0
Less than 50	33.0	54.5	4.5
50 - 99	9.2	9.9	3.7
100 - 249	15.5	13.7	11.9
250 - 499	13.9	8.5	15.9
500 - 749	8.9	5.1	16.6
750 - 999	6.3	4.0	17.7
1,000 - 1,499	6.2	3.2	18.6
1,500 - 2,000	3.8	0.7	6.0
More than 2,000	3.3	0.5	5.2

#### Table 6 Percent of Freight Shipments by Distance 2007 Percent of Value (%)

**SOURCE:** Bureau of Transportation Statistics and U.S. Census Bureau, 2007 Economic Census: Transportation Commodity Flow Survey, Preliminary Release, December 2008.

Weight of Shipment (in pounds)	Value (\$millions)	Tons (thousands)	Ton-miles (millions)	Avg miles
Total	11,831,503	13,016,610	3,490,806	580
Less than 50	1,483,671	25,388	14,814	716
50 - 99	379,404	17,053	6,709	395
100 - 499	1,059,568	100,072	26,711	278
500 - 749	312,704	50,329	11,301	225
750 - 999	221,630	45,614	9,322	203
1,000 - 9,999	2,370,634	733,768	169,993	222
10,000 - 49,999	4,050,062	5,182,776	1,011,805	199
50,000 - 99,999	727,465	2,438,722	237,971	95
More than 100,000	1,226,365	4,422,887	2,002,181	545

### Table 7 Freight Shipments by Weight 2007

**SOURCE:** Bureau of Transportation Statistics and U.S. Census Bureau, 2007 Economic Census: Transportation Commodity Flow Survey, Preliminary Release, December 2008.

\* The value of goods measured in the CFS includes the market value of goods used in production and final demand. Hence the goods may be counted more than once in the production cycle. The tonnage of products could also be counted multiple times depending on the number times the product is transported in the production and consumption cycle.

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# COMMODITY FLOW SURVEY 2007 PRESS RELEASE ADD FIVE

	Percent of Total (%)		
Weight of Shipment (in pounds)	Value	Tons	Ton- miles
Total	100.0	100.0	100.0
Less than 50	12.5	0.2	0.4
50 - 99	3.2	0.1	0.2
100 - 499	9.0	0.8	0.8
500 - 749	2.6	0.4	0.3
750 - 999	1.9	0.4	0.3
1,000 - 9,999	20.0	5.6	4.9
10,000 - 49,999	34.2	39.8	29.0
50,000 - 99,999	6.1	18.7	6.8
More than 100,000	10.4	34.0	57.4

#### Table 8 Percent of Freight Shipments by Weight 2007 Percent of Total (%)

**SOURCE:** Bureau of Transportation Statistics and U.S. Census Bureau, 2007 Economic Census: Transportation Commodity Flow Survey, Preliminary Release, December 2008.

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