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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 truckrail 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 tonmiles 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 ).

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 ADD ONEEstimates 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
http://www.bts.gov/publications/commodity flow survey/preliminary tables december 2008/inde x.html/table 05.html 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
(http://www.bts.gov/publications/commodity flow survey/preliminary tables december 2008/ind ex.html/table 06.html).

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 http://www.bts.gov/publications/commodity_flow_survey/ Additional tables can be found at http://www.bts.gov/publications/commodity flow survey/preliminary tables december 2008/inde x.html

Table 1 Freight Shipments by Mode 2007

| Mode of transportation | Value* <br> (\$millions) | Tons <br> (thousands) | Ton- <br> Miles <br> (millions) | Average <br> miles per <br> 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 |

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.

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Table 2 Percent of Freight Shipments by Mode 2007
Percent of Total (\%)

| Mode of transportation | Percent of Total (\%) |  |  |
| :--- | ---: | ---: | ---: |
|  | 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 |

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* <br> (\$millions) | Tons <br> (thousands) | Ton- <br> Miles <br> (millions) | Average <br> miles per <br> 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 | $1,938,884$ | 626,539 | 489,767 | 915 |
| Parcel, US Postal Service or | $1,597,931$ | 36,029 | 29,535 | 914 |
| courier | 197,748 | 213,411 | 188,547 | 1,053 |
| Truck and rail | 31,112 | 74,421 | 48,870 | 1,347 |
| Truck and water | 7,744 | 44,979 | 30,444 | 2,608 |
| Rail and water | 104,350 | 257,698 | 192,372 | 2,190 |
| Other multiple modes | 337,739 | 302,315 | 47,964 | 149 |
| Other and unknown modes** |  |  |  |  |

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

| Mode | Ton-miles <br> (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 |

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.

Table 5 Freight Shipments by Distance 2007

| Distance <br> Shipped (in <br> miles) | Value* $\mathbf{( \$}$ <br> millions) | Tons <br> (thousands) | Ton- <br> miles <br> (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 |

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

| Distance Shipped <br> (in miles) | Value | Tons | Ton- <br> 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 |

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

Table 7 Freight Shipments by Weight 2007

| Weight of <br> Shipment (in <br> pounds) | Value <br> (\$millions) | $c$ <br> Tons <br> (thousands) | Ton-miles <br> (millions) | Avg <br> 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 |

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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| Weight of Shipment (in pounds) | Percent of Total (\%) |  |  |
| :---: | :---: | :---: | :---: |
|  | Value | Tons | Tonmiles |
| 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 |

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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