

Commodity Movements Originating in Massachusetts Summary of 1993 CFS

In Massachusetts, the CFS measured \$112 billion of goods shipments weighing 73 million tons. Massachusetts accounted for approximately 2 percent of the value and 1 percent of the weight of total U.S. shipments. The CFS data cover shipments by establishments in mining, manufacturing, wholesale, and selected retail and service industries. The data exclude most shipments of crude oil; therefore, the totals and percentages do not fully reflect the contribution of pipeline shipments.

The major commodities shipped by establishments vary when measured by value and weight. The main commodities shipped from Massachusetts by value were: electrical machinery, equipment, or supplies; food or kindred products; chemicals or allied products; machinery, including computers; and instruments, photographic goods, optical, or clocks. The main commodities shipped by weight were: nonmetallic minerals; petroleum or coal products; food or kindred products; clay, concrete, glass, or stone products; and pulp, paper, or allied products.

Local transportation of freight is important to Massachusetts's commerce. The CFS shows that in 1993, about 34 percent of the value and 72 percent of the weight of total shipments from Massachusetts were shipped to destinations within the state. Approximately 35 percent of the weight and 77 percent of the value of all shipments were between places less than 50 miles apart. In comparison, about 30 percent of the value and 56 percent of the weight of total U.S. shipments were between places less than 50 miles apart. In Massachusetts, about 43 percent of the value of shipments and 85 percent of the weight of shipments were between places less than 100 miles apart.

About 66 percent of the value and 28 percent of the weight of all shipments from Massachusetts went to other states. Some of the most important destination states by value were: New York, Connecticut, California, New Jersey, and Pennsylvania. Important destination states by weight were: Rhode Island, New Hampshire, New York, Connecticut, and Pennsylvania.

Most commodities were moved by truck, approximately 72 percent of the value and 96 percent of the weight. Air was used to transport about 4 percent of the value of shipments. The CFS data confirm the rising importance of parcel, U.S. postal, and courier services that have emerged in recent years. In 1993, this mode of transport was used to ship 536,000 tons of goods worth about \$22 billion or 19 percent of the value of all shipments in Massachusetts. In comparison, about 9 percent of the value of total U.S. shipments were moved by this mode.

1993 Commodity Flow Survey State Summary: Massachusetts
 Tabulation by the Bureau of Transportation Statistics, U.S. Department of Transportation

Summary	Value	Weight
Total shipments originating in Massachusetts	\$111.7 billion	73.1 million tons
Percent of total U.S. shipments (preliminary U.S. estimate)	1.9	0.7

Commodity Shipments Originating in Massachusetts Ranked by Value		Commodity Shipments Originating in Massachusetts Ranked by Weight	
Commodity	Percent of value	Commodity	Percent of weight
Electrical machinery, equipment, or supplies	12.5	Nonmetallic minerals	35.2
Food or kindred products	11.0	Petroleum or coal products	20.0
Chemicals or allied products	8.4	Food or kindred products	13.0
Machinery, including computers	8.1	Clay, concrete, glass, or stone products	6.5
Instruments, photographic good, optical, or clocks	7.7	Pulp, paper, or allied products	4.6
Other commodities	52.3	Other commodities	20.8
Total	100.0	Total	100.0

Domestic Destinations of Shipments Originating in Massachusetts Ranked by Value		Domestic Destinations of Shipments Originating in Massachusetts Ranked by Weight	
State	Percent of value	State	Percent of weight
Massachusetts	33.5	Massachusetts	71.7
New York	6.9	Rhode Island	6.7
Connecticut	5.7	New Hampshire	3.8
California	5.4	New York	3.0
New Jersey	4.0	Connecticut	3.0
Pennsylvania	3.9	Pennsylvania	1.3
Other States	40.6	Other States	10.5
Total	100.0	Total	100.0

Modes of Transportation for Shipments Originating in Massachusetts		
Modes	Percent of value	Percent of weight
Parcel, U.S. Postal Service, or courier service	19.2	0.7
Truck (for-hire, private, and both private truck and for-hire truck)	72.0	95.6
Air (including truck and air)	3.6	-
Rail	0.3	0.8
Water (inland water, Great Lakes, deep sea, truck and water, and rail and water)	-	-
Pipeline*	-	-
Truck and rail intermodal combination	-	-
Other intermodal (truck and pipeline, inland and Gt. Lakes, inland and deep sea)	-	-
Other, unknown, and withheld for sampling and disclosure reasons	4.9	2.9
Total	100.0	100.0

Domestic Distance Shipped for Commodities Originating in Massachusetts		
Distance	Percent of value	Percent of weight
Less than 50 miles	34.5	77.2
50 to 99 miles	8.7	8.0
100 to 249 miles	14.5	6.6
250 to 499 miles	9.1	2.9
500 to 749 miles	7.2	1.3
750 to 999 miles	7.2	1.5
1,000 to 1,499 miles	7.0	1.3
1,500 to 1,999 miles	3.2	0.4
2,000 miles or more	8.5	0.9
Total	100.0	100.0

* CFS data for pipelines exclude most shipments of crude oil.

** Some or all data suppressed to avoid disclosure or because data are statistically unreliable.

- Represents zero or less than 1 unit of measurement.

NOTE: Data are estimates based on a sample and subject to error. See Appendix B, "Reliability of the Data," in source document.

SOURCE: U.S. Department of Commerce, Bureau of the Census, 1992 Census of Transportation, Communications, and Utilities, 1993 Commodity Flow Survey, TC92-CF (Washington, DC: 1996).

90-Percent Confidence Intervals for 1993 Commodity Flow Survey State Summary: Massachusetts

Tabulation by the Bureau of Transportation Statistics, U.S. Department of Transportation

Summary	Value	Weight
Total shipments originating in Massachusetts (in billion \$ and million tons)	107.84 - 115.56	59.87 - 86.33
Percent of total U.S. shipments (preliminary U.S. estimate)	1.77 - 1.93	0.60 - 0.88

Commodity Shipments Originating in Massachusetts Ranked by Value		Commodity Shipments Originating in Massachusetts Ranked by Weight	
Commodity	Percent of value	Commodity	Percent of weight
Electrical machinery, equipment, or supplies	10.7 - 14.3	Nonmetallic minerals	15.9 - 54.4
Food or kindred products	8.7 - 13.2	Petroleum or coal products	11.2 - 28.7
Chemicals or allied products	7.0 - 9.7	Food or kindred products	9.4 - 16.7
Machinery, including computers	7.0 - 9.2	Clay, concrete, glass, or stone products	4.4 - 8.7
Instruments, photographic good, optical, or clocks	6.1 - 9.3	Pulp, paper, or allied products	3.5 - 5.7
Other commodities	(NA)	Other commodities	(NA)
Total	(X)	Total	(X)

Domestic Destinations of Shipments Originating in Massachusetts Ranked by Value		Domestic Destinations of Shipments Originating in Massachusetts Ranked by Weight	
State	Percent of value	State	Percent of weight
Massachusetts	31.5 - 35.5	Massachusetts	67.8 - 75.7
New York	5.9 - 7.9	Rhode Island	3.7 - 9.7
Connecticut	4.6 - 6.9	New Hampshire	2.5 - 5.1
California	4.9 - 5.9	New York	2.3 - 3.7
New Jersey	3.2 - 4.8	Connecticut	2.5 - 3.5
Pennsylvania	3.1 - 4.7	Pennsylvania	0.8 - 1.8
Other States	(NA)	Other States	(NA)
Total	(X)	Total	(X)

Modes of Transportation for Shipments Originating in Massachusetts		
Modes	Percent of value	Percent of weight
Parcel, U.S. Postal Service, or courier service	17.4 - 21.0	0.5 - 0.9
Truck (for-hire, private, and both private truck and for-hire truck)	69.0 - 75.1	90.9 - 100.3
Air (including truck and air)	2.6 - 4.6	(X)
Rail	0.1 - 0.5	0.3 - 1.3
Water (inland water, Great Lakes, deep sea, truck and water, and rail and water)	(X)	(X)
Pipeline*	(X)	(X)
Truck and rail intermodal combination	(X)	(X)
Other intermodal (truck and pipeline, inland and Gt. Lakes, inland and deep sea)	(X)	(X)
Other, unknown, and withheld for sampling and disclosure reasons	3.8 - 6.1	1.8 - 4.1
Total	(X)	(X)

Domestic Distance Shipped for Commodities Originating in Massachusetts		
Distance	Percent of value	Percent of weight
Less than 50 miles	32.5 - 36.5	73.3 - 81.2
50 to 99 miles	7.7 - 9.7	6.5 - 9.5
100 to 249 miles	13.2 - 15.8	5.3 - 7.9
250 to 499 miles	7.0 - 11.2	2.1 - 3.7
500 to 749 miles	6.2 - 8.2	0.8 - 1.8
750 to 999 miles	6.7 - 7.7	1.2 - 1.8
1,000 to 1,499 miles	6.0 - 8.0	0.6 - 2.0
1,500 to 1,999 miles	2.7 - 3.7	0.2 - 0.6
2,000 miles or more	7.5 - 9.5	0.6 - 1.2
Total	(X)	(X)

* CFS data for pipelines exclude most shipments of crude oil.

NA Not available.

X Not applicable.

NOTE: For explanation of 90-percent confidence intervals see Appendix B, "Reliability of the Data," in source document.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *1992 Census of Transportation, Communications, and Utilities, 1993 Commodity Flow Survey*, TC92-CF (Washington, DC: 1996).

The Commodity Flow Survey (CFS) is a comprehensive effort to learn where and how goods are shipped in the U.S. The CFS measures shipments of commodities by establishments with paid employees and engaged in manufacturing, mining, wholesale trade, or selected retail and services industries. Prior commodity surveys covered shipments only by manufacturing firms. Commodity flows are estimated for a universe of approximately 900,000 establishments.

Data collected on individual shipments include total value, total weight, commodity type, modes of transport, domestic origin and destination; data for export shipments include the city and country of destination, mode and port of exit. Information is also obtained on whether shipments are containerized or a hazardous material. Some firms provided data concerning on-site shipping facilities and access to shipping facilities, plus data on ownership and leasing of transportation equipment.

The CFS is conducted by the Bureau of the Census as part of the Economic Census. Funding and technical guidance is provided by the U.S. Department of Transportation. Initiated for 1993, the CFS is scheduled for 1997 and every 5 years thereafter for years ending in 2 and 7. Commodity surveys were conducted between 1963 and 1982, but data for 1982 were not published. No data were collected for 1987. Participants will report for a sample of shipments during a 2-week period each quarter during the reporting year.

The CFS is a mail-out/mail-back survey of 200,000 sampled employer establishments in selected industries. Establishments were selected by stratified sample, with strata based on geographic location and industry. Geographic strata are the 89 National Transportation Analysis Regions (NTARs), which provide nationwide coverage and are aggregations of Bureau of Economic Analysis economic areas. Within the strata, all establishments with annualized employment above a specified cutoff were selected with certainty, and the remaining smaller establishments were sampled with probability proportional to annualized payroll.

For 1993, each sampled establishment reported on a sample of individual shipments during a 2 week period in each calendar quarter. In addition, about 20,000 establishments will provide information on transportation facilities and arrangements in their final reporting period.

For further information about survey design and printed products, contact the Commodity Flow Survey Branch, Services Division, Bureau of the Census, Washington, DC 20233, or by calling 301/457-2805 or 2114. For information on related data programs and studies, contact the Bureau of Transportation Statistics at 202/366-DATA for voice, 202/366-3640 for fax, or CFS@BTS.GOV for e-mail.