

California

1997

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EC97TCF-CA

1997 Economic Census

Transportation

1997 Commodity Flow Survey



U.S. Department of Transportation
BUREAU OF TRANSPORTATION STATISTICS

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU



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Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are

published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

1997 Commodity Flow Survey

GENERAL

The 1997 Commodity Flow Survey (CFS) is undertaken through a partnership between the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Transportation Statistics, U.S. Department of Transportation. This survey produces data on the movement of goods in the United States. It provides information on commodities shipped, their value, weight, and mode of transportation, as well as the origin and destination of shipments of manufacturing, mining, wholesale, and selected retail establishments. The CFS was last conducted in 1993. See the Comparability With the 1993 Commodity Flow Survey table (Appendix A) for a comparison between the 1997 and 1993 surveys. The data from the CFS are used by public policy analysts and for transportation planning and decision-making to assess the demand for transportation facilities and services, energy use, and safety risk and environmental concerns.

This report presents data at the state level. Additional reports will include data for the United States, census regions, divisions, and selected metropolitan areas, as well as selected data on exports and hazardous material shipments.

INDUSTRY COVERAGE

The 1997 CFS covers business establishments in mining, manufacturing, wholesale trade, and selected retail industries. The survey also covers selected auxiliary establishments (e.g., warehouses) of in-scope multiunit and retail companies. The survey coverage excludes establishments classified as farms, forestry, fisheries, governments, construction, transportation, foreign establishments, services, and most establishments in retail.

The industries covered, as defined in the 1987 Standard Industrial Classification Manual (SIC), are listed in the following table:

SIC code	Title
10, ex. 108	Metal mining (excluding metal mining services)
12, ex. 124	Coal mining (excluding coal mining services)
13	Oil and gas extraction ¹
14, ex. 148	Mining and quarrying of nonmetallic minerals, except fuels (excluding nonmetallic minerals services)
20	Food and kindred products
21	Tobacco products
22	Textile mill products
23	Apparel and other finished products made from fabrics and similar materials
24	Lumber and wood products, except furniture
25	Furniture and fixtures
26	Paper and allied products
27, ex. 279	Printing, publishing, and allied industries (excluding service industries for the printing trade)
28	Chemicals and allied products
29	Petroleum refining and related industries
30	Rubber and miscellaneous plastics products
31	Leather and leather products
32	Stone, clay, glass, and concrete products
33	Primary metal industries
34	Fabricated metal products, except machinery and transportation equipment
35	Industrial and commercial machinery and computer equipment
36	Electronic and other electrical equipment and components, except computer equipment
37	Transportation equipment
38	Measuring, analyzing, and controlling instruments; photographic, medical and optical goods; watches and clocks
39	Miscellaneous manufacturing industries
50	Wholesale trade—durable goods
51	Wholesale trade—nondurable goods
596	Catalog and mail-order houses

¹We included establishments classified in SIC 13, Oil and Gas Extraction, in the initial coverage of the 1997 CFS. However, because of unresolved industry-wide reporting issues, we have removed shipments from these establishments from our 1997 CFS tabulations. The data collected from these establishments will be used as input to a special report at a later date.

Similarly, because establishments in SIC 13 are responsible for the overwhelming number of shipments classified in SCTG 16, Crude Petroleum, we have removed all shipments with SCTG 16 from the 1997 CFS publication results.

SHIPMENT COVERAGE

The CFS captures data on shipments originating from selected types of business establishments located in the 50 states and the District of Columbia. The data do not cover shipments originating from business establishments located in Puerto Rico and other U.S. possessions and territories. Shipments traversing the U.S. from a foreign location to another foreign location (e.g., from Canada to Mexico) are not included, nor are shipments from a foreign location to a U.S. location. Imported products are included in the CFS at the point that they left the importer's domestic location for shipment to another location. Shipments that are shipped through a foreign territory with both the origin and destination in the U.S. are included in the CFS data. The mileages calculated for these shipments exclude the international segments (e.g., shipments from New York to Michigan through Canada do not include any mileages for Canada). Export shipments are included, with the domestic destination defined as the port of exit from the U.S.

The "Industry Coverage" section of the text lists the SIC groups covered by the CFS. Other industry areas that are not covered, but may have significant shipping activity, include agriculture, government, and retail (other than warehouses and SIC 5961, Catalog and Mail-Order Houses). For agriculture specifically, this means that the CFS did not cover shipments of agricultural products from the farm site to the processing centers or terminal elevators (most likely short-distance local movements), but does cover the shipments of these products from the initial processing centers or terminal elevators onward.

MILEAGE CALCULATIONS

To compute shipment mileages for the 1997 CFS, The Center for Transportation Analysis (CTA) at Oak Ridge National Laboratory (ORNL) developed an integrated, intermodal transportation network modeling system. A secure data site was setup at ORNL to process census-supplied files containing data elements for individual CFS shipment records. Each record contained the ZIP Code of shipment origin and destination, and the mode or mode sequence reported. Each record also contained information on the type of commodity moved, its weight, dollar value and whether containerized or a hazardous material. Export shipments were also identified on the records, along with data on U.S. port of exit and foreign destination city and country. Encrypted data files were transmitted and returned from ORNL after processing, with turnaround of most files on a week-by-week basis. In this manner many shipment-specific data problems encountered by ORNL in their routing procedures were reported back to census in a timely fashion, allowing census to call back some shippers and thereby confirm, correct, or recover missing or otherwise unusable data. The ORNL system computed mileages, by mode, for all single modes and for any reported

multimodal sequence. This was done for any origin-destination pair of domestic ZIP Code locations, and for any internal ZIP Code of origin, via U.S. export port, to foreign (export) destination. Mileages between origin-destination ZIP Code centroids were computed by finding the minimum impedance path over mathematical representations of the highway, rail, waterway, air, and pipeline networks and then summing the lengths of individual links on these paths. Impedance is computed as a weighted combination of distance, time, and cost factors.

The ORNL multimodal network database is composed of individual modal-specific networks representing each of the major transportation modes—highway, rail, waterway, air, and pipeline. The links of these specific modal networks are the representation of line-haul transportation facilities. The nodes represent intersections and interchanges, and the access points to the transportation network. To simulate local access, test links are created from each five-digit ZIP Code centroid to nearby nodes on the network. For the truck network, local access is assumed to exist everywhere. For the other modes this is not true. Before any test links are created for these modes, a search procedure is used to determine if and where such networks are most likely to provide access to the ZIP Code. For shipments involving more than one mode, such as truck-rail or rail-water shipments, intermodal transfer links are added to the network database for the purpose of connecting the individual modal networks together for routing purposes. An intermodal terminals database and a number of terminal transfer models were developed at ORNL to identify likely transfer points for different classes of freight. A measure of link impedance was calculated for each access, line-haul, and intermodal transfer link traversed by a shipment. These impedances were mode specific and are based on various link characteristics. For example, the set of link characteristics for the highway network included speed impacting factors, such as the presence of divided or undivided roadway, the degree of access control, rural or urban setting, type of pavement, number of lanes, degree of urban congestion, and length of the link. Link impedance measures are also assigned to the local access links. Intermodal transfer link impedances are estimated in terms of the time it takes to move goods through such a transfer. In the case of rail and air freight, intercarrier transfer penalties are also considered in order to obtain proper route selections. A minimum path algorithm is used to find the minimum impedance path between a shipment's origin ZIP Code centroid and destination ZIP Code centroid. The cumulative length of the local access plus line-haul links on this path provides the estimated shipment distance. When rail was involved these shipment distances may be averaged over more than one path between an origin-destination pair.

Mileage Data for Pipeline Shipments

In the tables, we do not show ton-miles or average miles per shipment for pipeline shipments. For most of these shipments, the respondents reported the shipment

destination as a pipeline facility on the main pipeline network. Therefore, for the majority of these shipments, the resulting mileage represented only the access distance through feeder pipelines to the main pipeline network, and not the actual distance through the main pipeline network. Pipeline shipments are included in the U.S. totals for ton-miles and average miles per shipment.

DISCLOSURE RULES

In accordance with Federal law governing Census Bureau reports, no data are published that would disclose the operations of an individual firm or establishment.

EXPLANATION OF TERMS

Average miles per shipment. For the 1993 CFS, we excluded shipments of STCC 27, Printed Matter, from our calculation of average miles per shipment. We made this decision after determining that respondents in the 1993 CFS shipping newspapers, magazines, catalogs, etc., had used widely varying definitions of the term “shipment.”

For the 1997 CFS, we made numerous efforts throughout our data collection and editing to produce consistent results from establishments shipping SCTG 29, Printed Products. As a result, we have included printed products in the average miles per shipment calculations for the 1997 CFS.

Commodity. Products that an establishment produces, sells, or distributes. This does not include items that are considered as excess or byproducts of the establishment’s operation. Respondents reported the description and the five-digit SCTG code for the major commodity contained in the shipment, defined as the commodity with the greatest weight in the total shipment.

Distance shipped. In some tables, shipment data are presented for various “distance shipped” intervals. Shipments were categorized into these “distance shipped” intervals based on the great circle distance between their origin and destination ZIP Code centroids. All other distance-related data in this and other tables (i.e., ton-miles and average miles per shipment) are based on the mileage calculations produced by Oak Ridge National Laboratories. (See the “Mileage Calculations” section for more details.)

Great circle distance. The shortest distance between two points on the earth’s surface.

Mode of transportation. The type of transportation used for moving the shipment to its domestic destination. For exports, the domestic destination was the port of exit.

Mode Definitions

In the instructions to the respondent, we defined the possible modes as follows:

1. **Parcel delivery/courier/U.S. Postal Service.** Delivery services, parcels, packages, and other small shipments that typically weigh less than 100 pounds. Includes bus parcel delivery service.
2. **Private truck.** Trucks operated by a temporary or permanent employee of an establishment or the buyer/receiver of the shipment.
3. **For-hire truck.** Trucks that carry freight for a fee collected from the shipper, recipient of the shipment, or an arranger of the transportation.
4. **Railroad.** Any common carrier or private railroad.
5. **Shallow draft vessels.** Barges, ships, or ferries operating primarily on rivers and canals; in harbors, the Great Lakes, the Saint Lawrence Seaway; the Intracoastal Waterway, the Inside Passage to Alaska, major bays and inlets; or in the ocean close to the shoreline.
6. **Deep draft vessel.** Barges, ships, or ferries operating primarily in the open ocean. Shipping on the Great Lakes and the Saint Lawrence Seaway is classified with shallow draft vessels.
7. **Pipeline.** Movements of oil, petroleum, gas, slurry, etc., through pipelines that extend to other establishments or locations beyond the shipper’s establishment. Aqueducts for the movement of water are not included.
8. **Air.** Commercial or private aircraft, and all air service for shipments that typically weigh more than 100 pounds. Includes air freight and air express.
9. **Other mode.** Any mode not listed above.
10. **Unknown.** The shipment was not carried by a parcel delivery/courier/U.S. Postal Service, and the respondent could not determine what mode of transportation was used.

In the tables, we have used additional terms for mode, which we define as follows:

1. **Air (includes truck and air).** Shipments that used air or a combination of truck and air.
2. **Single modes.** Shipments using only one of the above-listed modes, except parcel or other and unknown.
3. **Multiple modes.** Parcel, U.S. Postal Service or courier shipments or shipments for which two or more of the following modes of transportation were used:
 - Private truck
 - For-hire truck
 - Rail
 - Shallow draft vessel
 - Deep draft vessel
 - Pipeline

We did not allow for multiple modes in combination with “parcel, U.S. Postal Service or courier,” “unknown,” or “other.” By their nature, these shipments may already include various kinds of multiple-mode activity. For example, if the respondent reported a shipment’s mode of transportation as parcel and air, we treated the shipment as parcel only.

4. **Other multiple modes.** Shipments using any other mode combinations not specifically listed in the tables.
5. **Other and unknown modes.** Shipments for which modes were not reported, or were reported by the respondent as “Other” or “Unknown.”
6. **Truck.** Shipments using for-hire truck only, private truck only, or a combination of for-hire truck and private truck.
7. **Water.** Shipments using shallow draft vessel only, deep draft vessel only, or Great Lakes vessel only. Combinations of these modes, such as shallow draft vessel and Great Lakes vessel are included as “Other multiple modes.”
8. **Great Lakes.** In the tables in this publication, “Great Lakes” appears as a single mode. ORNL’s transportation network and mileage calculation system allowed for separate mileage calculations for Great Lakes between the origin and destination ZIP Codes (see the “Mileage Calculations” section for more details).

Other Definitions and Terms

Shipment. A shipment (or delivery) is an individual movement of commodities from an establishment to a customer or to another location of the originating company (including a warehouse, distribution center, retail or wholesale outlet). A shipment uses one or more modes of transportation including parcel delivery, U.S. Postal Service, courier, private truck, for-hire truck, rail, water, pipeline, air, and other modes.

Standard Classification of Transported Goods (SCTG).

The commodities shown in this report are classified using the SCTG coding system. The SCTG coding system was developed jointly by agencies of the United States and Canadian governments based on the Harmonized System to address statistical needs in regard to products transported.

Ton-miles. The weight times the mileage for a shipment. The respondents reported shipment weight in pounds, as described below. Mileage was calculated as the distance between the shipment origin and destination ZIP Codes. For shipments by truck, rail, or shallow draft vessels, the mileage excludes international segments. For example, mileages from Alaska to the continental United States

exclude any mileages through Canada (see the “Mileage Calculations” section for more details). Aggregated pound-miles were converted to ton-miles. The ton-miles data are displayed in millions.

Tons shipped. The total weight of the entire shipment. Respondents reported the weight in pounds. Aggregated pounds were converted to short-tons (2,000 pounds). The tons data are displayed in thousands.

Total modal activity. The overall activity (e.g., ton-miles) of a specific mode of transportation, whether used in a single-mode shipment, or as part of a multiple-mode shipment. For example, the total modal activity for private truck is the total ton-miles carried by private truck in single-mode shipments, combined with the total ton-miles carried by private truck in all multiple-mode shipments that include private truck (private truck and for-hire truck, private truck and rail, private truck and air, etc.)

Value of shipments. The dollar value of the entire shipment. This was defined as the net selling value, f.o.b. plant, exclusive of freight charges and excise taxes. The value data are displayed in millions of dollars.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in the tables for this publication:

D	Denotes figures withheld to avoid disclosing data for individual companies.
–	Represents zero or less than 1 unit of measure.
S	Data do not meet publication standards due to high sampling variability or other reasons.
CFS	Commodity Flow Survey.
lb	Pounds.
n.e.c.	Not elsewhere classified.
NA	Not applicable.
n.o.s.	Not otherwise specified.

OTHER TRANSPORTATION DATA

Users of transportation data may be especially interested in the following reports:

Economic Census: Transportation Sector covers establishments that provide passenger and freight transportation to the general public, government, or other businesses.

Published data include kind of business, geographic location, total operating revenue, annual and first quarter payroll, and number of employees for pay period including March 12.

Vehicle Inventory and Use Survey covers state and U.S. level statistics on the physical and operational characteristics of the Nation’s truck, van, minivan, and sport utility vehicle population. Some of the types of data collected

include number of vehicles, major use, body type, annual miles, model year, vehicle size, fuel type, operator classification, engine size, range of operation, weeks operated, products carried, and hazardous materials carried. This survey shows comparative statistics reflecting percent changes in number of vehicles between 1997 and 1992 for most characteristics.

Transportation Annual Survey covers firms with paid employees that provide commercial motor freight transportation and public warehousing services. Data collected include operating revenue and operating revenue by

source, total expenses and expenses percentage of motor carrier freight revenue by commodity type, size of shipments handled, length of haul, and vehicle fleet inventory.

All results of the 1997 Economic Census are available on the Census Bureau Internet site <http://www.census.gov> and on compact discs (CD-ROM).

For more information on any Census Bureau product, including a description of electronic and printed reports being issued, see the web site or call Customer Services at 301-457-4100.

Table 1a. Shipment Characteristics by Mode of Transportation for State of Origin: 1997

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

Mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
All modes	802 192	100.0	778 805	100.0	133 347	100.0	678
Single modes	614 007	76.5	742 411	95.3	106 188	79.6	307
Truck ¹	542 698	67.7	644 261	82.7	83 265	62.4	227
For-hire truck	279 068	34.8	248 876	32.0	58 746	44.1	878
Private truck	257 326	32.1	338 264	43.4	21 584	16.2	69
Rail	7 059	.9	14 041	1.8	15 860	11.9	1 702
Water	S	S	S	S	S	S	1 740
Shallow draft	S	S	S	S	S	S	43
Great Lakes	-	-	-	-	-	-	-
Deep draft	S	S	S	S	S	S	1 872
Air (includes truck and air)	46 838	5.8	1 138	.1	2 005	1.5	1 949
Pipeline ²	14 127	1.8	62 990	8.1	S	S	S
Multiple modes	141 553	17.6	6 329	.8	11 484	8.6	1 177
Parcel, U.S. Postal Service or courier	134 569	16.8	2 910	.4	3 508	2.6	1 175
Truck and rail	5 361	.7	2 540	.3	5 452	4.1	2 237
Truck and water	1 616	.2	869	.1	2 507	1.9	2 419
Rail and water	-	-	-	-	-	-	-
Other multiple modes	S	S	S	S	S	S	937
Other and unknown modes	46 632	5.8	30 066	3.9	15 675	11.8	329

- Represents data cell equal to zero or less than 1 unit of measure.

D Denotes figures withheld to avoid disclosing data for individual companies.

S Data do not meet publication standards because of high sampling variability or other reasons. Some unpublished estimates can be derived from other data published in this table. However, figures obtained in this manner are subject to these same limitations.

¹"Truck" as a single mode includes shipments which went by private truck only, for-hire truck only, or a combination of private truck and for-hire truck.

²CFS data for pipeline exclude most shipments of crude oil. See "Mileage Calculations" section for details of CFS coverage.

Table 1b. Shipment Characteristics by Mode of Transportation for State of Origin: 1997 and 1993

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

Mode of transportation	Value			Tons			Ton-miles			Average miles per shipment		
	1997 (million dollars)	1993 (million dollars)	Percent change	1997 (thousands)	1993 (thousands)	Percent change	1997 (millions)	1993 (millions)	Percent change	1997	1993	Percent change
All modes	802 192	638 174	25.7	778 805	706 028	10.3	133 347	136 614	-2.4	678	644	5.1
Single modes	614 007	493 809	24.3	742 411	656 148	13.1	106 188	116 312	-8.7	307	363	-15.6
Truck ¹	542 698	432 726	25.4	644 261	526 400	22.4	83 265	75 059	10.9	227	212	7.0
For-hire truck	279 068	247 884	12.6	248 876	215 406	15.5	58 746	56 635	3.7	878	785	11.8
Private truck	257 326	182 837	40.7	338 264	305 081	10.9	21 584	18 056	19.5	69	57	21.3
Rail	7 059	11 019	-35.9	14 041	15 225	-7.8	15 860	19 483	-18.6	1 702	1 497	13.7
Water	S	3 127	S	S	12 997	S	S	7 529	S	1 740	1 764	-1.4
Shallow draft	S	S	S	S	S	S	S	S	S	43	2	S
Great Lakes	-	-	-	-	-	-	-	-	-	-	-	-
Deep draft	S	2 989	S	S	12 448	S	S	7 528	S	1 872	2 082	-10.1
Air (includes truck and air)	46 838	29 746	57.5	1 138	701	62.4	2 005	1 254	59.9	1 949	1 797	8.5
Pipeline ²	14 127	17 191	-17.8	62 990	100 825	-37.5	S	S	S	S	S	S
Multiple modes	141 553	96 261	47.1	6 329	7 919	-20.1	11 484	8 689	32.2	1 177	1 009	16.7
Parcel, U.S. Postal Service or courier	134 569	90 844	48.1	2 910	2 519	15.5	3 508	2 763	27.0	1 175	1 008	16.6
Truck and rail	5 361	4 389	22.1	2 540	1 674	51.7	5 452	3 739	45.8	2 237	1 690	32.3
Truck and water	1 616	929	73.9	869	S	S	2 507	S	S	2 419	2 794	-13.4
Rail and water	-	-	-	-	-	-	-	-	-	-	-	-
Other multiple modes	S	S	S	S	S	S	S	S	S	937	78	S
Other and unknown modes	46 632	48 104	-3.1	30 066	41 961	-28.3	15 675	11 612	35.0	329	353	-6.8

- Represents data cell equal to zero or less than 1 unit of measure.

D Denotes figures withheld to avoid disclosing data for individual companies.

S Data do not meet publication standards because of high sampling variability or other reasons. Some unpublished estimates can be derived from other data published in this table. However, figures obtained in this manner are subject to these same limitations.

¹"Truck" as a single mode includes shipments which went by private truck only, for-hire truck only, or a combination of private truck and for-hire truck.

²CFS data for pipeline exclude most shipments of crude oil. See "Mileage Calculations" section for details of CFS coverage.

Table 1c. Shipment Characteristics by Mode of Transportation for State of Origin: Percent of Total for 1997 and 1993

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

Mode of transportation	Value (percent)		Tons (percent)		Ton-miles (percent)	
	1997	1993	1997	1993	1997	1993
All modes	100.0	100.0	100.0	100.0	100.0	100.0
Single modes	76.5	77.4	95.3	92.9	79.6	85.1
Truck ¹	67.7	67.8	82.7	74.6	62.4	54.9
For-hire truck	34.8	38.8	32.0	30.5	44.1	41.5
Private truck	32.1	28.7	43.4	43.2	16.2	13.2
Rail .....	.9	1.7	1.8	2.2	11.9	14.3
Water	S	.5	S	1.8	S	5.5
Shallow draft	S	S	S	S	S	S
Great Lakes	—	—	—	—	—	—
Deep draft	S	.5	S	1.8	S	5.5
Air (includes truck and air)	5.8	4.7	.1	.1	1.5	.9
Pipeline ²	1.8	2.7	8.1	14.3	S	S
Multiple modes	17.6	15.1	.8	1.1	8.6	6.4
Parcel, U.S. Postal Service or courier	16.8	14.2	.4	.4	2.6	2.0
Truck and rail .....	.7	.7	.3	.2	4.1	2.7
Truck and water .....	.2	.1	.1	S	1.9	S
Rail and water	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S
Other and unknown modes	5.8	7.5	3.9	5.9	11.8	8.5

— Represents data cell equal to zero or less than 1 unit of measure.

D Denotes figures withheld to avoid disclosing data for individual companies.

S Data do not meet publication standards because of high sampling variability or other reasons. Some unpublished estimates can be derived from other data published in this table. However, figures obtained in this manner are subject to these same limitations.

¹"Truck" as a single mode includes shipments which went by private truck only, for-hire truck only, or a combination of private truck and for-hire truck.

²CFS data for pipeline exclude most shipments of crude oil. See "Mileage Calculations" section for details of CFS coverage.

Table 2. Shipment Characteristics by Total Modal Activity for State of Origin: 1997

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

Mode of transportation ¹	Ton-miles		Average miles per shipment
	Number (millions)	Percent	
Total	133 346	100.0	661
Truck	83 558	62.7	220
Rail	21 133	15.8	1 918
Shallow draft	S	S	S
Great Lakes	S	S	1 092
Deep draft	3 917	2.9	2 439
Air	1 945	1.5	1 873
Parcel, U.S. Postal Service or courier	3 508	2.6	1 175
Pipeline	S	S	S
Other and unknown modes	15 670	11.8	329

— Represents data cell equal to zero or less than 1 unit of measure.

D Denotes figures withheld to avoid disclosing data for individual companies.

S Data do not meet publication standards because of high sampling variability or other reasons. Some unpublished estimates can be derived from other data published in this table. However, figures obtained in this manner are subject to these same limitations.

¹Data represent activity for a given mode across single and multiple mode shipments. For example, "Truck" ton-miles includes total ton-miles for shipments moving by truck only plus ton-miles for truck segments only of multiple mode shipments.

Table 3. Shipment Characteristics by Mode of Transportation and Distance Shipped for State of Origin: 1997

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

Mode of transportation and distance shipped (based on Great Circle Distance)	Value		Tons		Ton-miles	
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent
All modes	802 192	100.0	778 805	100.0	133 347	100.0
Less than 50 miles	324 047	40.4	586 259	75.3	13 261	9.9
50 to 99 miles	65 733	8.2	54 542	7.0	5 085	3.8
100 to 249 miles	59 520	7.4	49 483	6.4	9 402	7.1
250 to 499 miles	76 811	9.6	39 256	5.0	15 936	12.0
500 to 749 miles	25 250	3.1	10 933	1.4	8 173	6.1
750 to 999 miles	25 525	3.2	6 604	.8	7 422	5.6
1,000 to 1,499 miles	44 751	5.6	6 838	.9	10 798	8.1
1,500 to 1,999 miles	70 353	8.8	10 573	1.4	23 312	17.5
2,000 miles or more	110 203	13.7	14 316	1.8	39 958	30.0
Single modes	614 007	100.0	742 411	100.0	106 188	100.0
Less than 50 miles	270 452	44.0	567 370	76.4	12 896	12.1
50 to 99 miles	56 278	9.2	53 273	7.2	4 971	4.7
100 to 249 miles	48 628	7.9	48 235	6.5	9 157	8.6
250 to 499 miles	57 852	9.4	35 975	4.8	14 617	13.8
500 to 749 miles	18 553	3.0	10 104	1.4	7 527	7.1
750 to 999 miles	17 786	2.9	4 971	.7	5 517	5.2
1,000 to 1,499 miles	29 788	4.9	5 490	.7	8 662	8.2
1,500 to 1,999 miles	44 505	7.2	7 546	1.0	16 411	15.5
2,000 miles or more	70 166	11.4	9 445	1.3	26 429	24.9
Truck¹	542 698	100.0	644 261	100.0	83 265	100.0
Less than 50 miles	254 718	46.9	493 027	76.5	11 817	14.2
50 to 99 miles	55 218	10.2	52 027	8.1	4 803	5.8
100 to 249 miles	47 216	8.7	43 717	6.8	8 237	9.9
250 to 499 miles	51 065	9.4	27 234	4.2	10 990	13.2
500 to 749 miles	15 091	2.8	6 838	1.1	5 043	6.1
750 to 999 miles	13 443	2.5	4 178	.6	4 544	5.5
1,000 to 1,499 miles	22 537	4.2	4 673	.7	7 151	8.6
1,500 to 1,999 miles	36 045	6.6	5 575	.9	11 650	14.0
2,000 miles or more	47 365	8.7	6 991	1.1	19 030	22.9
For-hire truck	279 068	100.0	248 876	100.0	58 746	100.0
Less than 50 miles	74 161	26.6	158 574	63.7	3 919	6.7
50 to 99 miles	21 638	7.8	22 666	9.1	2 151	3.7
100 to 249 miles	25 620	9.2	24 926	10.0	4 768	8.1
250 to 499 miles	40 378	14.5	18 968	7.6	7 782	13.2
500 to 749 miles	12 937	4.6	5 662	2.3	4 178	7.1
750 to 999 miles	11 330	4.1	3 326	1.3	3 635	6.2
1,000 to 1,499 miles	20 219	7.2	4 073	1.6	6 253	10.6
1,500 to 1,999 miles	31 401	11.3	4 883	2.0	10 207	17.4
2,000 miles or more	41 385	14.8	5 799	2.3	15 855	27.0
Private truck	257 326	100.0	338 264	100.0	21 584	100.0
Less than 50 miles	177 660	69.0	280 311	82.9	6 017	27.9
50 to 99 miles	33 233	12.9	27 948	8.3	2 509	11.6
100 to 249 miles	21 324	8.3	17 928	5.3	3 306	15.3
250 to 499 miles	9 925	3.9	7 921	2.3	3 070	14.2
500 to 749 miles	2 075	.8	1 101	.3	811	3.8
750 to 999 miles	1 831	.7	768	.2	818	3.8
1,000 to 1,499 miles	1 974	.8	563	.2	841	3.9
1,500 to 1,999 miles	4 366	1.7	664	.2	1 386	6.4
2,000 miles or more	4 938	1.9	1 060	.3	2 825	13.1
Rail	7 059	100.0	14 041	100.0	15 860	100.0
Less than 50 miles	425	6.0	3 128	22.3	186	1.2
50 to 99 miles	94	1.3	S	S	S	S
100 to 249 miles	144	2.0	614	4.4	200	1.3
250 to 499 miles	754	10.7	2 847	20.3	1 535	9.7
500 to 749 miles	527	7.5	1 460	10.4	1 210	7.6
750 to 999 miles	361	5.1	676	4.8	844	5.3
1,000 to 1,499 miles	703	10.0	687	4.9	1 252	7.9
1,500 to 1,999 miles	2 030	28.8	1 851	13.2	4 505	28.4
2,000 miles or more	2 022	28.6	1 923	13.7	5 986	37.7
Water	S	S	S	S	S	S
Less than 50 miles	S	S	S	S	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	112	3.4	59	.3	S	S
Shallow draft	S	S	S	S	S	S
Less than 50 miles	S	S	S	S	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—

See footnotes at end of table.

Table 3. Shipment Characteristics by Mode of Transportation and Distance Shipped for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

Mode of transportation and distance shipped (based on Great Circle Distance)	Value		Tons		Ton-miles	
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent
Single modes—Con.						
Great Lakes	—	—	—	—	—	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S
Less than 50 miles	S	S	S	S	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	112	3.6	59	.3	S	S
Air (includes truck and air)	46 838	100.0	1 138	100.0	2 005	100.0
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	879	1.9	42	3.7	5	.3
100 to 249 miles	683	1.5	S	S	S	S
250 to 499 miles	5 082	10.9	109	9.6	50	2.5
500 to 749 miles	2 573	5.5	27	2.4	27	1.3
750 to 999 miles	3 983	8.5	117	10.2	130	6.5
1,000 to 1,499 miles	6 543	14.0	129	11.3	258	12.9
1,500 to 1,999 miles	6 430	13.7	119	10.5	255	12.7
2,000 miles or more	20 666	44.1	472	41.5	1 262	62.9
Pipeline²	14 127	100.0	62 990	100.0	S	S
Less than 50 miles	12 373	87.6	52 961	84.1	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	—	—	—	—	S	S
1,000 to 1,499 miles	S	S	S	S	S	S
1,500 to 1,999 miles	—	—	—	—	S	S
2,000 miles or more	—	—	—	—	S	S
Multiple modes	141 553	100.0	6 329	100.0	11 484	100.0
Less than 50 miles	29 006	20.5	781	12.3	27	.2
50 to 99 miles	7 797	5.5	235	3.7	23	.2
100 to 249 miles	7 210	5.1	332	5.2	68	.6
250 to 499 miles	15 556	11.0	311	4.9	134	1.2
500 to 749 miles	5 467	3.9	198	3.1	159	1.4
750 to 999 miles	6 130	4.3	355	5.6	416	3.6
1,000 to 1,499 miles	11 723	8.3	475	7.5	803	7.0
1,500 to 1,999 miles	22 576	15.9	1 442	22.8	3 629	31.6
2,000 miles or more	36 086	25.5	2 199	34.8	6 224	54.2
Parcel, U.S. Postal Service or courier	134 569	100.0	2 910	100.0	3 508	100.0
Less than 50 miles	28 933	21.5	621	21.3	17	.5
50 to 99 miles	7 747	5.8	202	7.0	19	.5
100 to 249 miles	7 175	5.3	191	6.6	36	1.0
250 to 499 miles	15 280	11.4	275	9.5	114	3.2
500 to 749 miles	5 391	4.0	97	3.3	73	2.1
750 to 999 miles	5 946	4.4	166	5.7	179	5.1
1,000 to 1,499 miles	11 369	8.4	236	8.1	365	10.4
1,500 to 1,999 miles	19 323	14.4	512	17.6	1 053	30.0
2,000 miles or more	33 406	24.8	610	21.0	1 652	47.1
Truck and rail	5 361	100.0	2 540	100.0	5 452	100.0
Less than 50 miles	66	1.2	S	S	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	76	1.4	102	4.0	86	1.6
750 to 999 miles	184	3.4	187	7.4	234	4.3
1,000 to 1,499 miles	353	6.6	239	9.4	437	8.0
1,500 to 1,999 miles	S	S	877	34.5	2 136	39.2
2,000 miles or more	1 395	26.0	801	31.5	2 501	45.9
Truck and water	1 616	100.0	869	100.0	2 507	100.0
Less than 50 miles	S	S	S	S	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	S	S	S	S	S	S
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	S	S	S	S	S	S
2,000 miles or more	1 280	79.2	784	90.2	2 057	82.1

See footnotes at end of table.

Table 3. Shipment Characteristics by Mode of Transportation and Distance Shipped for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

Mode of transportation and distance shipped (based on Great Circle Distance)	Value		Tons		Ton-miles	
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent
Multiple modes—Con.						
Rail and water	—	—	—	—	—	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S
Less than 50 miles	S	S	S	S	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	S	S	S	S	S	S
1,500 to 1,999 miles	S	S	S	S	S	S
2,000 miles or more	S	S	S	S	S	S
Other and unknown modes	46 632	100.0	30 066	100.0	15 675	100.0
Less than 50 miles	24 589	52.7	18 108	60.2	338	2.2
50 to 99 miles	1 657	3.6	1 034	3.4	90	.6
100 to 249 miles	S	S	916	3.0	177	1.1
250 to 499 miles	3 403	7.3	S	S	S	S
500 to 749 miles	1 230	2.6	631	2.1	487	3.1
750 to 999 miles	1 608	3.4	S	S	S	S
1,000 to 1,499 miles	3 240	6.9	873	2.9	1 332	8.5
1,500 to 1,999 miles	3 271	7.0	1 586	5.3	3 272	20.9
2,000 miles or more	3 951	8.5	2 672	8.9	7 306	46.6

— Represents data cell equal to zero or less than 1 unit of measure.

D Denotes figures withheld to avoid disclosing data for individual companies.

S Data do not meet publication standards because of high sampling variability or other reasons. Some unpublished estimates can be derived from other data published in this table. However, figures obtained in this manner are subject to these same limitations.

¹"Truck" as a single mode includes shipments which went by private truck only, for-hire truck only, or a combination of private truck and for-hire truck.

²CFS data for pipeline exclude most shipments of crude oil. See "Mileage Calculations" section for details of CFS coverage.

Table 4. Shipment Characteristics by Mode of Transportation and Shipment Size for State of Origin: 1997

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

Mode of transportation and shipment size	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
All modes	802 192	100.0	778 805	100.0	133 347	100.0	678
Less than 50 lb	139 496	17.4	2 171	.3	1 576	1.2	843
50 to 99 lb	43 954	5.5	1 571	.2	786	.6	500
100 to 499 lb	111 424	13.9	8 919	1.1	3 286	2.5	372
500 to 749 lb	34 434	4.3	4 248	.5	1 411	1.1	329
750 to 999 lb	22 117	2.8	3 376	.4	1 085	.8	321
1,000 to 9,999 lb	187 647	23.4	57 358	7.4	19 538	14.7	340
10,000 to 49,999 lb	186 300	23.2	291 119	37.4	59 479	44.6	215
50,000 to 99,999 lb	37 593	4.7	212 645	27.3	15 205	11.4	70
100,000 lb or more	39 227	4.9	197 399	25.3	30 983	23.2	434
Single modes	614 007	100.0	742 411	100.0	106 188	100.0	307
Less than 50 lb	47 123	7.7	1 004	.1	334	.3	373
50 to 99 lb	23 808	3.9	1 044	.1	280	.3	267
100 to 499 lb	81 442	13.3	7 569	1.0	2 087	2.0	268
500 to 749 lb	29 311	4.8	3 794	.5	975	.9	256
750 to 999 lb	19 524	3.2	3 113	.4	822	.8	263
1,000 to 9,999 lb	168 255	27.4	52 170	7.0	14 555	13.7	280
10,000 to 49,999 lb	173 073	28.2	278 420	37.5	47 486	44.7	182
50,000 to 99,999 lb	36 106	5.9	208 846	28.1	13 667	12.9	64
100,000 lb or more	35 364	5.8	186 451	25.1	25 982	24.5	394
Truck¹	542 698	100.0	644 261	100.0	83 265	100.0	227
Less than 50 lb	30 740	5.7	945	.1	217	.3	240
50 to 99 lb	16 101	3.0	1 007	.2	204	.2	199
100 to 499 lb	70 917	13.1	7 397	1.1	1 744	2.1	224
500 to 749 lb	26 216	4.8	3 731	.6	881	1.1	235
750 to 999 lb	18 466	3.4	3 086	.5	777	.9	251
1,000 to 9,999 lb	163 440	30.1	51 795	8.0	13 945	16.7	269
10,000 to 49,999 lb	169 673	31.3	276 927	43.0	44 682	53.7	172
50,000 to 99,999 lb	35 864	6.6	208 306	32.3	13 242	15.9	63
100,000 lb or more	11 282	2.1	91 068	14.1	7 572	9.1	113
For-hire truck	279 068	100.0	248 876	100.0	58 746	100.0	878
Less than 50 lb	10 489	3.8	128	—	158	.3	1 191
50 to 99 lb	7 324	2.6	140	—	145	.2	1 046
100 to 499 lb	35 756	12.8	1 495	.6	1 290	2.2	875
500 to 749 lb	14 517	5.2	853	.3	673	1.1	789
750 to 999 lb	10 825	3.9	821	.3	619	1.1	749
1,000 to 9,999 lb	87 762	31.4	12 982	5.2	10 691	18.2	852
10,000 to 49,999 lb	90 107	32.3	102 860	41.3	32 624	55.5	365
50,000 to 99,999 lb	14 551	5.2	102 418	41.2	8 096	13.8	76
100,000 lb or more	7 738	2.8	27 180	10.9	4 450	7.6	278
Private truck	257 326	100.0	338 264	100.0	21 584	100.0	69
Less than 50 lb	20 187	7.8	814	.2	58	.3	69
50 to 99 lb	8 720	3.4	863	.3	57	.3	65
100 to 499 lb	34 682	13.5	5 859	1.7	433	2.0	71
500 to 749 lb	11 490	4.5	2 850	.8	201	.9	70
750 to 999 lb	7 436	2.9	2 244	.7	153	.7	68
1,000 to 9,999 lb	73 899	28.7	38 110	11.3	3 045	14.1	74
10,000 to 49,999 lb	76 935	29.9	156 346	46.2	10 834	50.2	72
50,000 to 99,999 lb	20 628	8.0	98 228	29.0	4 729	21.9	48
100,000 lb or more	3 349	1.3	32 950	9.7	2 075	9.6	78
Rail	7 059	100.0	14 041	100.0	15 860	100.0	1 702
Less than 50 lb	S	S	S	S	—	—	S
50 to 99 lb	S	S	S	S	S	S	575
100 to 499 lb	S	S	—	—	1	—	1 721
500 to 749 lb	S	S	S	S	S	S	2 265
750 to 999 lb	S	S	S	S	S	S	1 618
1,000 to 9,999 lb	152	2.2	34	.2	80	.5	2 234
10,000 to 49,999 lb	2 125	30.1	1 039	7.4	2 311	14.6	2 266
50,000 to 99,999 lb	169	2.4	331	2.4	333	2.1	979
100,000 lb or more	4 525	64.1	12 635	90.0	13 134	82.8	1 454
Water	S	S	S	S	S	S	1 740
Less than 50 lb	1	—	—	—	S	S	2 751
50 to 99 lb	S	S	S	S	S	S	602
100 to 499 lb	12	.4	2	—	4	.3	1 927
500 to 749 lb	S	S	S	S	S	S	1 561
750 to 999 lb	S	S	S	S	S	S	2 537
1,000 to 9,999 lb	82	2.5	12	—	S	S	964
10,000 to 49,999 lb	231	7.0	124	.6	137	9.4	1 133
50,000 to 99,999 lb	S	S	S	S	S	S	807
100,000 lb or more	S	S	S	S	S	S	158
Shallow draft	S	S	S	S	S	S	43
Less than 50 lb	S	S	S	S	S	S	18
50 to 99 lb	S	S	S	S	S	S	42
100 to 499 lb	S	S	S	S	S	S	26
500 to 749 lb	S	S	S	S	S	S	45
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	S	S	S	S	S	S	42
50,000 to 99,999 lb	S	S	S	S	S	S	92
100,000 lb or more	S	S	S	S	S	S	40

See footnotes at end of table.

Table 4. Shipment Characteristics by Mode of Transportation and Shipment Size for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

Mode of transportation and shipment size	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
Single modes—Con.							
Great Lakes	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	1 872
Less than 50 lb	S	—	—	—	S	S	2 785
50 to 99 lb	S	—	—	—	S	S	1 337
100 to 499 lb	12	.4	2	.2	4	.3	1 938
500 to 749 lb	S	—	—	—	S	S	2 324
750 to 999 lb	S	—	—	—	S	S	2 537
1,000 to 9,999 lb	82	2.7	12	—	S	S	964
10,000 to 49,999 lb	113	3.6	109	.6	136	9.4	1 436
50,000 to 99,999 lb	S	—	—	—	S	S	850
100,000 lb or more	S	—	—	—	S	S	170
Air (includes truck and air)	46 838	100.0	1 138	100.0	2 005	100.0	1 949
Less than 50 lb	16 310	34.8	59	5.2	117	5.8	1 949
50 to 99 lb	7 706	16.5	38	3.3	75	3.8	2 018
100 to 499 lb	10 505	22.4	169	14.9	339	16.9	1 986
500 to 749 lb	3 066	6.5	61	5.3	91	4.6	1 520
750 to 999 lb	1 047	2.2	25	2.2	41	2.0	1 577
1,000 to 9,999 lb	4 542	9.7	292	25.7	516	25.7	1 843
10,000 to 49,999 lb	1 003	2.1	188	16.5	355	17.7	1 928
50,000 to 99,999 lb	S	—	—	—	S	—	—
100,000 lb or more	S	—	—	—	S	—	2 310
Pipeline²	14 127	100.0	62 990	100.0	S	S	S
Less than 50 lb	S	—	—	—	S	S	S
50 to 99 lb	—	—	—	—	S	S	S
100 to 499 lb	S	—	—	—	S	S	S
500 to 749 lb	—	—	—	—	S	S	S
750 to 999 lb	—	—	—	—	S	S	S
1,000 to 9,999 lb	39	.3	36	—	S	S	S
10,000 to 49,999 lb	S	—	—	—	S	S	S
50,000 to 99,999 lb	S	—	—	—	S	S	S
100,000 lb or more	14 041	99.4	62 789	99.7	S	S	S
Multiple modes	141 553	100.0	6 329	100.0	11 484	100.0	1 177
Less than 50 lb	86 570	61.2	1 058	16.7	1 223	10.7	1 179
50 to 99 lb	17 654	12.5	444	7.0	494	4.3	1 105
100 to 499 lb	24 438	17.3	935	14.8	1 141	9.9	1 183
500 to 749 lb	3 773	2.7	265	4.2	340	3.0	1 268
750 to 999 lb	2 224	1.6	150	2.4	247	2.1	1 648
1,000 to 9,999 lb	S	—	—	—	S	—	—
10,000 to 49,999 lb	3 856	2.7	2 839	44.9	6 558	57.1	2 284
50,000 to 99,999 lb	42	—	45	.7	S	—	1 645
100,000 lb or more	124	—	381	6.0	987	8.6	1 917
Parcel, U.S. Postal Service or courier	134 569	100.0	2 910	100.0	3 508	100.0	1 175
Less than 50 lb	86 550	64.3	1 057	36.3	1 221	34.8	1 178
50 to 99 lb	17 601	13.1	442	15.2	488	13.9	1 097
100 to 499 lb	24 375	18.1	930	31.9	1 128	32.2	1 178
500 to 749 lb	3 727	2.8	258	8.9	324	9.2	1 237
750 to 999 lb	2 169	1.6	141	4.8	223	6.4	1 587
1,000 to 9,999 lb	S	—	—	—	S	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Truck and rail	5 361	100.0	2 540	100.0	5 452	100.0	2 237
Less than 50 lb	S	—	—	—	S	—	2 134
50 to 99 lb	S	—	—	—	S	—	2 406
100 to 499 lb	12	.2	1	—	S	—	2 511
500 to 749 lb	S	—	—	—	S	—	2 469
750 to 999 lb	11	.2	2	.1	6	.1	2 465
1,000 to 9,999 lb	S	—	—	—	S	—	2 269
10,000 to 49,999 lb	3 133	58.5	2 294	90.3	5 158	94.6	2 209
50,000 to 99,999 lb	31	.6	S	—	S	—	1 013
100,000 lb or more	71	1.3	180	7.1	181	3.3	924
Truck and water	1 616	100.0	869	100.0	2 507	100.0	2 419
Less than 50 lb	S	—	—	—	S	—	2 437
50 to 99 lb	S	—	—	—	S	—	2 625
100 to 499 lb	51	3.1	4	.5	10	.4	1 902
500 to 749 lb	39	2.4	5	.6	13	.5	2 625
750 to 999 lb	S	—	7	.8	18	.7	2 621
1,000 to 9,999 lb	634	39.3	96	11.0	224	9.0	2 313
10,000 to 49,999 lb	717	44.4	538	61.9	1 385	55.2	2 525
50,000 to 99,999 lb	S	—	—	—	S	—	2 788
100,000 lb or more	53	3.3	201	23.1	S	—	3 231

See footnotes at end of table.

Table 4. Shipment Characteristics by Mode of Transportation and Shipment Size for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

Mode of transportation and shipment size	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
Multiple modes—Con.							
Rail and water	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	937
Less than 50 lb	S	S	S	S	S	S	62
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	S	S	S	S	S	S	1 698
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	S	S	S	S	S	S	S
10,000 to 49,999 lb	S	S	S	S	S	S	2 487
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Other and unknown modes	46 632	100.0	30 066	100.0	15 675	100.0	329
Less than 50 lb	5 803	12.4	110	.4	18	.1	288
50 to 99 lb	2 492	5.3	82	.3	12	—	136
100 to 499 lb	5 544	11.9	414	1.4	57	.4	146
500 to 749 lb	1 350	2.9	190	.6	S	S	475
750 to 999 lb	370	.8	113	.4	16	.1	135
1,000 to 9,999 lb	16 519	35.4	4 976	16.5	S	S	884
10,000 to 49,999 lb	9 371	20.1	9 860	32.8	5 435	34.7	605
50,000 to 99,999 lb	1 445	3.1	S	S	1 464	9.3	432
100,000 lb or more	3 739	8.0	10 567	35.1	4 013	25.6	864

— Represents data cell equal to zero or less than 1 unit of measure.

D Denotes figures withheld to avoid disclosing data for individual companies.

S Data do not meet publication standards because of high sampling variability or other reasons. Some unpublished estimates can be derived from other data published in this table. However, figures obtained in this manner are subject to these same limitations.

¹"Truck" as a single mode includes shipments which went by private truck only, for-hire truck only, or a combination of private truck and for-hire truck.

²CFS data for pipeline exclude most shipments of crude oil. See "Mileage Calculations" section for details of CFS coverage.

Table 5. Shipment Characteristics by Two-Digit Commodity for State of Origin: 1997

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

SCTG code	Commodity description	Value		Tons		Ton-miles		Average miles per shipment
		Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
	All commodities	802 192	100.0	778 805	100.0	133 347	100.0	678
01	Live animals and live fish	S	S	S	S	S	S	1 149
02	Cereal grains	505	—	1 955	.3	S	S	S
03	Other agricultural products	16 629	2.1	16 275	2.1	10 377	7.8	198
04	Animal feed and products of animal origin, n.e.c.	4 126	.5	17 242	2.2	2 194	1.6	400
05	Meat, fish, seafood, and their preparations	20 097	2.5	7 928	1.0	1 715	1.3	103
06	Milled grain products and preparations, and bakery products	11 192	1.4	9 979	1.3	3 815	2.9	S
07	Other prepared foodstuffs and fats and oils	32 681	4.1	41 826	5.4	15 699	11.8	124
08	Alcoholic beverages	17 456	2.2	12 647	1.6	6 482	4.9	208
09	Tobacco products	1 280	.2	139	—	16	—	137
10	Monumental or building stone	S	S	S	S	S	S	S
11	Natural sands	420	—	38 693	5.0	1 252	.9	40
12	Gravel and crushed stone	1 038	.1	158 971	20.4	4 839	3.6	28
13	Nonmetallic minerals n.e.c.	S	S	3 474	.4	1 500	1.1	324
14	Metallic ores and concentrates	366	—	77	—	S	S	215
15	Coal	S	S	S	S	S	S	66
17	Gasoline and aviation turbine fuel	34 394	4.3	121 789	15.6	4 916	3.7	45
18	Fuel oils	10 400	1.3	39 183	5.0	4 113	3.1	33
19	Coal and petroleum products, n.e.c.	5 441	.7	47 339	6.1	3 730	2.8	S
20	Basic chemicals	6 544	.8	6 170	.8	1 976	1.5	513
21	Pharmaceutical products	16 442	2.0	675	—	384	.3	475
22	Fertilizers	1 193	.1	S	S	S	S	54
23	Chemical products and preparations, n.e.c.	20 343	2.5	7 006	.9	2 820	2.1	341
24	Plastics and rubber	19 867	2.5	5 764	.7	2 946	2.2	677
25	Logs and other wood in the rough	1 026	.1	9 419	1.2	946	.7	S
26	Wood products	10 320	1.3	19 556	2.5	6 092	4.6	234
27	Pulp, newsprint, paper, and paperboard	6 388	.8	6 255	.8	1 788	1.3	198
28	Paper or paperboard articles	9 978	1.2	12 657	1.6	1 978	1.5	310
29	Printed products	19 227	2.4	8 652	1.1	2 784	2.1	615
30	Textiles, leather, and articles of textiles or leather	48 464	6.0	3 610	.5	2 807	2.1	1 467
31	Nonmetallic mineral products	11 835	1.5	85 595	11.0	9 590	7.2	374
32	Base metal in primary or semifinished forms and in finished basic shapes	18 635	2.3	13 024	1.7	5 174	3.9	491
33	Articles of base metal	21 385	2.7	8 147	1.0	5 380	4.0	545
34	Machinery	32 789	4.1	2 548	.3	2 654	2.0	561
35	Electronic and other electrical equipment and components and office equipment	206 731	25.8	5 057	.6	5 523	4.1	894
36	Motorized and other vehicles (including parts)	25 042	3.1	3 742	.5	1 718	1.3	548
37	Transportation equipment, n.e.c.	22 247	2.8	130	—	120	—	979
38	Precision instruments and apparatus	27 553	3.4	402	—	350	.3	1 408
39	Furniture, mattresses and mattress supports, lamps, lighting fittings, and illuminated signs	9 924	1.2	1 783	.2	1 735	1.3	867
40	Miscellaneous manufactured products	66 466	8.3	S	S	S	S	1 294
41	Waste and scrap	3 845	.5	22 073	2.8	5 329	4.0	143
43	Mixed freight	33 735	4.2	14 804	1.9	1 943	1.5	476
--	Commodity unknown	4 635	.6	S	S	595	.4	492

— Represents data cell equal to zero or less than 1 unit of measure.

D Denotes figures withheld to avoid disclosing data for individual companies.

S Data do not meet publication standards because of high sampling variability or other reasons. Some unpublished estimates can be derived from other data published in this table. However, figures obtained in this manner are subject to these same limitations.

Note: Data exclude shipments of SCTG 16, Crude Petroleum. See the section "Industry Coverage" for additional information.

Table 6. Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
ALL COMMODITIES							
Total	802 192	100.0	778 805	100.0	133 347	100.0	678
Single modes	614 007	76.5	742 411	95.3	106 188	79.6	307
Truck ¹	542 698	67.7	644 261	82.7	83 265	62.4	227
For-hire truck	279 068	34.8	248 876	32.0	58 746	44.1	878
Private truck	257 326	32.1	338 264	43.4	21 584	16.2	69
Rail	7 059	.9	14 041	1.8	15 860	11.9	1 702
Water	S	S	S	S	S	S	1 740
Shallow draft	S	S	S	S	S	S	43
Great Lakes	-	-	-	-	-	-	-
Deep draft	S	S	S	S	S	S	1 872
Air (includes truck and air)	46 838	5.8	1 138	.1	2 005	1.5	1 949
Pipeline ²	14 127	1.8	62 990	8.1	S	S	S
Multiple modes	141 553	17.6	6 329	.8	11 484	8.6	1 177
Parcel, U.S. Postal Service or courier	134 569	16.8	2 910	.4	3 508	2.6	1 175
Truck and rail	5 361	.7	2 540	.3	5 452	4.1	2 237
Truck and water	1 616	.2	869	.1	2 507	1.9	2 419
Rail and water	-	-	-	-	-	-	-
Other multiple modes	S	S	S	S	S	S	937
Other and unknown modes	46 632	5.8	30 066	3.9	15 675	11.8	329
SCTG 01, LIVE ANIMALS AND LIVE FISH							
Total	S	S	S	S	S	S	1 149
Single modes	S	S	S	S	S	S	1 236
Truck ¹	S	S	S	S	S	S	29
For-hire truck	-	-	-	-	-	-	-
Private truck	S	S	S	S	S	S	29
Rail	-	-	-	-	-	-	-
Water	-	-	-	-	-	-	-
Shallow draft	-	-	-	-	-	-	-
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	S	S	S	S	S	S	1 795
Pipeline ²	-	-	-	-	S	S	S
Multiple modes	S	S	S	S	S	S	261
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	261
Truck and rail	-	-	-	-	-	-	-
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	S	S	S	S	S	S	32
SCTG 02, CEREAL GRAINS							
Total	505	100.0	1 955	100.0	S	S	S
Single modes	487	96.3	1 911	97.8	S	S	133
Truck ¹	449	88.9	S	S	S	S	115
For-hire truck	176	34.8	716	36.6	215	25.7	473
Private truck	184	36.4	325	16.6	13	1.5	27
Rail	S	S	S	S	S	S	2 051
Water	-	-	-	-	-	-	-
Shallow draft	-	-	-	-	-	-	-
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	-	-	-	-	-	-	-
Pipeline ²	-	-	-	-	S	S	S
Multiple modes	S	S	S	S	S	S	2 386
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	1 038
Truck and rail	S	S	S	S	S	S	2 864
Truck and water	S	S	S	S	S	S	2 556
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	S	S	S	S	S	S	576

See footnotes at end of table.

Table 6. Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 03, OTHER AGRICULTURAL PRODUCTS							
Total	16 629	100.0	16 275	100.0	10 377	100.0	198
Single modes	14 653	88.1	14 828	91.1	8 641	83.3	143
Truck ¹	14 044	84.5	14 463	88.9	7 782	75.0	106
For-hire truck	7 369	44.3	6 441	39.6	5 559	53.6	1 206
Private truck	6 642	39.9	7 891	48.5	2 196	21.2	S
Rail	250	1.5	200	1.2	536	5.2	2 628
Water	S	S	S	S	S	S	774
Shallow draft	S	S	S	S	S	S	92
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	846
Air (includes truck and air)	319	1.9	S	S	S	S	2 214
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	748	4.5	415	2.5	1 058	10.2	1 934
Parcel, U.S. Postal Service or courier	162	1.0	S	S	S	S	1 906
Truck and rail	514	3.1	353	2.2	902	8.7	2 543
Truck and water	72	.4	S	S	S	S	2 600
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	1 228	7.4	1 032	6.3	678	6.5	S
SCTG 04, ANIMAL FEED AND PRODUCTS OF ANIMAL ORIGIN, N.E.C.							
Total	4 126	100.0	17 242	100.0	2 194	100.0	400
Single modes	3 823	92.7	16 682	96.8	2 014	91.8	229
Truck ¹	3 788	91.8	16 535	95.9	1 933	88.1	228
For-hire truck	1 459	35.4	6 201	36.0	1 250	57.0	758
Private truck	1 905	46.2	7 617	44.2	422	19.2	48
Rail	13	.3	77	.4	26	1.2	339
Water	S	S	S	S	S	S	737
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	737
Air (includes truck and air)	S	S	—	—	S	S	650
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	1 293
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	1 293
Truck and rail	S	S	S	S	S	S	940
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	511	3.0	S	S	S
SCTG 05, MEAT, FISH, SEAFOOD, AND THEIR PREPARATIONS							
Total	20 097	100.0	7 928	100.0	1 715	100.0	103
Single modes	19 392	96.5	7 731	97.5	1 509	88.0	84
Truck ¹	19 250	95.8	7 717	97.3	1 481	86.4	63
For-hire truck	4 605	22.9	1 525	19.2	967	56.4	573
Private truck	14 051	69.9	6 029	76.0	506	29.5	41
Rail	S	S	S	S	S	S	1 744
Water	S	S	S	S	S	S	2 520
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	2 520
Air (includes truck and air)	135	.7	11	.1	S	S	1 958
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	376	1.9	S	S	S	S	1 283
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	1 160
Truck and rail	S	S	S	S	S	S	522
Truck and water	S	S	S	S	S	S	2 518
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	329	1.6	103	1.3	21	1.2	S

See footnotes at end of table.

Table 6. **Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.**

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 06, MILLED GRAIN PRODUCTS AND PREPARATIONS, AND BAKERY PRODUCTS							
Total	11 192	100.0	9 979	100.0	3 815	100.0	S
Single modes	10 857	97.0	9 646	96.7	3 383	88.7	S
Truck ¹	10 562	94.4	9 220	92.4	2 510	65.8	S
For-hire truck	4 053	36.2	4 987	50.0	1 906	50.0	S
Private truck	6 476	57.9	4 147	41.6	585	15.3	S
Rail	267	2.4	378	3.8	830	21.7	2 336
Water	S	S	S	S	S	S	2 163
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	2 163
Air (includes truck and air)	S	S	S	S	S	S	2 662
Pipeline ²	—	—	—	—	—	—	S
Multiple modes	151	1.4	202	2.0	375	9.8	1 581
Parcel, U.S. Postal Service or courier	S	S	2	—	S	S	1 529
Truck and rail	109	1.0	135	1.4	212	5.5	1 606
Truck and water	34	.3	65	.7	161	4.2	2 583
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	184	1.6	131	1.3	57	1.5	S
SCTG 07, OTHER PREPARED FOODSTUFFS AND FATS AND OILS							
Total	32 681	100.0	41 826	100.0	15 699	100.0	124
Single modes	31 265	95.7	40 546	96.9	13 721	87.4	101
Truck ¹	29 739	91.0	38 783	92.7	9 402	59.9	89
For-hire truck	12 708	38.9	13 439	32.1	7 274	46.3	513
Private truck	16 971	51.9	25 187	60.2	2 113	13.5	44
Rail	1 467	4.5	1 744	4.2	4 284	27.3	2 383
Water	S	S	S	S	S	S	1 239
Shallow draft	S	S	S	S	S	S	21
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	1 375
Air (includes truck and air)	47	.1	9	—	19	.1	2 051
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	744	2.3	711	1.7	1 813	11.5	1 057
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	963
Truck and rail	516	1.6	559	1.3	1 439	9.2	2 570
Truck and water	98	.3	133	.3	359	2.3	1 582
Rail and water	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	S
Other and unknown modes	672	2.1	568	1.4	165	1.0	S
SCTG 08, ALCOHOLIC BEVERAGES							
Total	17 456	100.0	12 647	100.0	6 482	100.0	208
Single modes	16 084	92.1	11 749	92.9	4 608	71.1	135
Truck ¹	14 919	85.5	10 668	84.4	2 787	43.0	64
For-hire truck	5 805	33.3	3 726	29.5	2 291	35.3	367
Private truck	9 114	52.2	6 942	54.9	496	7.7	46
Rail	1 131	6.5	1 075	8.5	S	S	1 905
Water	S	S	S	S	S	S	2 663
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	2 663
Air (includes truck and air)	S	S	S	S	S	S	3 025
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	1 158	6.6	681	5.4	1 684	26.0	807
Parcel, U.S. Postal Service or courier	S	S	43	.3	S	S	754
Truck and rail	966	5.5	606	4.8	1 588	24.5	2 592
Truck and water	S	S	S	S	S	S	2 601
Rail and water	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	62
Other and unknown modes	214	1.2	217	1.7	S	S	678

See footnotes at end of table.

Table 6. Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 09, TOBACCO PRODUCTS							
Total	1 280	100.0	139	100.0	16	100.0	137
Single modes	1 209	94.4	136	97.8	15	89.2	75
Truck ¹	1 209	94.4	136	97.8	15	89.2	75
For-hire truck	S	S	S	S	S	S	S
Private truck	1 169	91.4	134	96.4	13	76.9	74
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	38	3.0	S	S	1	4.4	957
Parcel, U.S. Postal Service or courier	38	3.0	S	S	1	4.4	957
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	34	2.6	2	1.7	S	S	S
SCTG 10, MONUMENTAL OR BUILDING STONE							
Total	S	S	S	S	S	S	S
Single modes	S	S	S	S	S	S	61
Truck ¹	S	S	S	S	S	S	61
For-hire truck	34	8.7	355	23.4	22	18.3	60
Private truck	S	S	S	S	S	S	65
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	S
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	S
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	612
SCTG 11, NATURAL SANDS							
Total	420	100.0	38 693	100.0	1 252	100.0	40
Single modes	415	98.8	38 339	99.1	1 208	96.5	39
Truck ¹	415	98.6	38 296	99.0	1 182	94.4	38
For-hire truck	198	47.1	10 532	27.2	369	29.4	S
Private truck	152	36.1	14 655	37.9	479	38.2	32
Rail	S	S	S	S	S	S	608
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	2 361
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	2 361
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	5	1.2	S	S	S	S	247

See footnotes at end of table.

Table 6. **Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.**

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 12, GRAVEL AND CRUSHED STONE							
Total	1 038	100.0	158 971	100.0	4 839	100.0	28
Single modes	1 000	96.3	153 267	96.4	4 736	97.9	28
Truck ¹	975	93.9	150 776	94.8	4 361	90.1	28
For-hire truck	445	42.9	70 662	44.4	2 117	43.8	30
Private truck	385	37.1	55 122	34.7	1 292	26.7	22
Rail	S	S	S	S	376	7.8	254
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 13, NONMETALLIC MINERALS N.E.C.							
Total	S	S	3 474	100.0	1 500	100.0	324
Single modes	S	S	2 864	82.4	545	36.3	115
Truck ¹	S	S	2 839	81.7	483	32.2	106
For-hire truck	127	15.4	1 220	35.1	315	21.0	233
Private truck	S	S	1 325	38.1	123	8.2	45
Rail	S	S	S	S	S	S	2 488
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	2 627
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	30	3.6	49	1.4	122	8.1	922
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	796
Truck and rail	18	2.2	45	1.3	120	8.0	2 691
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	18	2.2	S	S	S	S	1 074
SCTG 14, METALLIC ORES AND CONCENTRATES							
Total	366	100.0	77	100.0	S	S	215
Single modes	334	91.2	66	84.9	12	39.0	62
Truck ¹	334	91.2	66	84.9	12	39.0	62
For-hire truck	248	67.9	24	30.9	9	28.2	S
Private truck	S	S	S	S	S	S	29
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	S
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	S
Truck and rail	S	S	S	S	S	S	2 721
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S

See footnotes at end of table.

Table 6. Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 15, COAL							
Total	\$	\$	\$	\$	\$	\$	66
Single modes	—	—	—	—	—	—	—
Truck ¹	—	—	—	—	—	—	—
For-hire truck	—	—	—	—	—	—	—
Private truck	—	—	—	—	—	—	—
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	\$	\$	\$
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	\$	\$	\$	\$	\$	\$	66
SCTG 17, GASOLINE AND AVIATION TURBINE FUEL							
Total	34 394	100.0	121 789	100.0	4 916	100.0	45
Single modes	34 316	99.8	121 527	99.8	4 913	99.9	46
Truck ¹	21 639	62.9	66 177	54.3	3 465	70.5	47
For-hire truck	6 133	17.8	18 014	14.8	1 807	36.8	113
Private truck	15 180	44.1	47 115	38.7	1 616	32.9	27
Rail	—	—	—	—	—	—	—
Water	\$	\$	\$	\$	\$	\$	96
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	\$	\$	\$	\$	\$	\$	96
Air (includes truck and air)	\$	\$	\$	\$	\$	\$	1 184
Pipeline ²	10 839	31.5	46 295	38.0	—	—	—
Multiple modes	\$	\$	\$	\$	\$	\$	\$
Parcel, U.S. Postal Service or courier	\$	\$	\$	\$	\$	\$	2 157
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	\$	\$	\$	\$	\$	\$	71
Other and unknown modes	\$	\$	\$	\$	\$	\$	8
SCTG 18, FUEL OILS							
Total	10 400	100.0	39 183	100.0	4 113	100.0	33
Single modes	9 892	95.1	38 533	98.3	4 105	99.8	39
Truck ¹	6 714	64.6	22 289	56.9	1 350	32.8	37
For-hire truck	2 722	26.2	10 781	27.5	916	22.3	88
Private truck	3 938	37.9	11 230	28.7	410	10.0	23
Rail	\$	\$	\$	\$	\$	\$	2 499
Water	\$	\$	\$	\$	\$	\$	181
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	\$	\$	\$	\$	\$	\$	181
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	2 907	27.9	14 161	36.1	—	—	—
Multiple modes	\$	\$	\$	\$	\$	\$	\$
Parcel, U.S. Postal Service or courier	\$	\$	\$	\$	\$	\$	1 706
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	\$	\$	\$	\$	\$	\$	72
Other and unknown modes	509	4.9	\$	\$	\$	\$	\$

See footnotes at end of table.

Table 6. Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 19, COAL AND PETROLEUM PRODUCTS, N.E.C.							
Total	5 441	100.0	47 339	100.0	3 730	100.0	S
Single modes	4 449	81.8	43 635	92.2	2 788	74.7	S
Truck ¹	3 101	57.0	31 738	67.0	1 388	37.2	35
For-hire truck	1 549	28.5	16 061	33.9	895	24.0	112
Private truck	1 316	24.2	7 614	16.1	281	7.5	27
Rail	175	3.2	784	1.7	506	13.6	564
Water	S	S	S	S	S	S	S
Shallow draft	S	S	S	S	S	S	40
Great Lakes	S	S	S	S	S	S	—
Deep draft	S	S	S	S	S	S	S
Air (includes truck and air)	S	S	S	S	S	S	2 559
Pipeline ²	379	7.0	2 435	5.1	S	S	S
Multiple modes	95	1.8	S	S	103	2.8	S
Parcel, U.S. Postal Service or courier	20	.4	4	—	1	—	S
Truck and rail	S	S	S	S	S	S	S
Truck and water	S	S	S	S	S	S	2 604
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 20, BASIC CHEMICALS							
Total	6 544	100.0	6 170	100.0	1 976	100.0	513
Single modes	5 116	78.2	5 631	91.3	1 874	94.9	157
Truck ¹	4 613	70.5	4 981	80.7	996	50.4	143
For-hire truck	2 563	39.2	1 778	28.8	720	36.4	624
Private truck	2 020	30.9	3 172	51.4	273	13.8	63
Rail	468	7.1	551	8.9	878	44.4	1 705
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 227
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	1 128	17.2	S	S	S	S	1 040
Parcel, U.S. Postal Service or courier	1 098	16.8	S	S	S	S	1 039
Truck and rail	29	.5	S	S	S	S	2 374
Truck and water	S	S	S	S	S	S	2 460
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	299	4.6	S	S	S	S	315
SCTG 21, PHARMACEUTICAL PRODUCTS							
Total	16 442	100.0	675	100.0	384	100.0	475
Single modes	10 042	61.1	581	86.1	327	85.2	219
Truck ¹	8 725	53.1	543	80.5	234	61.1	101
For-hire truck	2 136	13.0	157	23.2	194	50.6	487
Private truck	6 589	40.1	386	57.2	S	S	75
Rail	S	S	S	S	S	S	2 522
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	1 197	7.3	6	.9	12	3.2	2 038
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	5 845	35.6	70	10.4	32	8.2	619
Parcel, U.S. Postal Service or courier	5 842	35.5	69	10.3	30	7.7	618
Truck and rail	S	S	S	S	S	S	2 129
Truck and water	S	S	S	S	S	S	125
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	1 561

See footnotes at end of table.

Table 6. Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 22, FERTILIZERS							
Total	1 193	100.0	S	S	S	S	54
Single modes	1 173	98.3	S	S	S	S	54
Truck ¹	1 157	97.0	S	S	S	S	52
For-hire truck	292	24.5	1 308	13.1	189	27.4	180
Private truck	864	72.4	S	S	S	S	40
Rail	14	1.2	74	.7	32	4.7	433
Water	S	S	S	S	S	S	2 532
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	2 532
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	S
Parcel, U.S. Postal Service or courier	—	—	—	—	S	S	S
Truck and rail	—	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S	2 641
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 23, CHEMICAL PRODUCTS AND PREPARATIONS, N.E.C.							
Total	20 343	100.0	7 006	100.0	2 820	100.0	341
Single modes	15 822	77.8	6 583	94.0	2 620	92.9	207
Truck ¹	15 157	74.5	6 425	91.7	2 245	79.6	176
For-hire truck	9 012	44.3	3 824	54.6	1 998	70.8	575
Private truck	6 086	29.9	2 591	37.0	246	8.7	54
Rail	165	.8	134	1.9	328	11.6	2 476
Water	S	S	S	S	S	S	2 162
Shallow draft	S	S	S	S	S	S	2
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	2 449
Air (includes truck and air)	S	S	19	.3	39	1.4	1 675
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	2 447	12.0	138	2.0	142	5.0	546
Parcel, U.S. Postal Service or courier	2 341	11.5	110	1.6	66	2.3	542
Truck and rail	S	S	S	S	S	S	2 830
Truck and water	91	.4	21	.3	56	2.0	2 086
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	285	4.1	58	2.1	389
SCTG 24, PLASTICS AND RUBBER							
Total	19 867	100.0	5 764	100.0	2 946	100.0	677
Single modes	15 051	75.8	5 240	90.9	2 504	85.0	230
Truck ¹	14 571	73.3	4 994	86.6	2 323	78.9	193
For-hire truck	7 843	39.5	2 464	42.7	2 055	69.8	824
Private truck	6 628	33.4	2 486	43.1	249	8.4	57
Rail	297	1.5	S	S	151	5.1	1 608
Water	S	S	S	S	S	S	3 420
Shallow draft	S	S	S	S	S	S	38
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	5 321
Air (includes truck and air)	177	.9	S	S	S	S	2 028
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	3 822	19.2	239	4.1	376	12.7	1 273
Parcel, U.S. Postal Service or courier	3 664	18.4	177	3.1	216	7.3	1 272
Truck and rail	S	S	59	1.0	149	5.1	2 417
Truck and water	S	S	S	S	S	S	2 681
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	993	5.0	285	4.9	67	2.3	59

See footnotes at end of table.

Table 6. **Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.**

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 25, LOGS AND OTHER WOOD IN THE ROUGH							
Total	1 026	100.0	9 419	100.0	946	100.0	S
Single modes	1 010	98.4	9 388	99.7	925	97.7	69
Truck ¹	939	91.5	9 260	98.3	604	63.8	60
For-hire truck	745	72.6	7 905	83.9	515	54.4	63
Private truck	194	18.9	1 355	14.4	89	9.4	52
Rail	S	S	S	S	S	S	2 505
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	9	.9	S	S	14	1.4	S
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	686
Truck and rail	7	.7	4	—	11	1.1	2 624
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 26, WOOD PRODUCTS							
Total	10 320	100.0	19 556	100.0	6 092	100.0	234
Single modes	9 579	92.8	18 602	95.1	5 675	93.2	155
Truck ¹	9 084	88.0	17 596	90.0	4 244	69.7	147
For-hire truck	4 257	41.3	8 342	42.7	2 988	49.0	422
Private truck	4 783	46.3	9 173	46.9	1 210	19.9	84
Rail	492	4.8	1 006	5.1	1 431	23.5	1 542
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 905
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	199	1.9	67	.3	163	2.7	1 140
Parcel, U.S. Postal Service or courier	72	.7	7	—	8	.1	1 119
Truck and rail	124	1.2	59	.3	152	2.5	2 590
Truck and water	S	S	S	S	S	S	2 646
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	542	5.3	887	4.5	254	4.2	113
SCTG 27, PULP, NEWSPRINT, PAPER, AND PAPERBOARD							
Total	6 388	100.0	6 255	100.0	1 788	100.0	198
Single modes	5 384	84.3	5 768	92.2	1 413	79.1	111
Truck ¹	5 180	81.1	5 252	84.0	1 153	64.5	104
For-hire truck	1 809	28.3	2 386	38.2	915	51.2	282
Private truck	3 191	50.0	2 758	44.1	235	13.1	60
Rail	181	2.8	459	7.3	259	14.5	458
Water	S	S	S	S	S	S	5
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	5
Air (includes truck and air)	S	S	S	S	S	S	1 921
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	315	4.9	S	S	S	S	686
Parcel, U.S. Postal Service or courier	S	S	13	.2	5	.3	670
Truck and rail	S	S	S	S	S	S	1 915
Truck and water	S	S	S	S	S	S	2 607
Rail and water	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	1 357
Other and unknown modes	S	S	396	6.3	202	11.3	S

See footnotes at end of table.

Table 6. Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 28, PAPER OR PAPERBOARD ARTICLES							
Total	9 978	100.0	12 657	100.0	1 978	100.0	310
Single modes	9 232	92.5	12 341	97.5	1 831	92.6	102
Truck ¹	9 129	91.5	12 254	96.8	1 601	81.0	97
For-hire truck	4 261	42.7	5 795	45.8	1 274	64.4	389
Private truck	4 699	47.1	6 315	49.9	307	15.5	40
Rail	S	S	80	.6	216	10.9	2 838
Water	S	S	S	S	S	S	2 686
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	2 686
Air (includes truck and air)	S	S	S	S	1	—	1 552
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	437	4.4	86	.7	127	6.4	1 243
Parcel, U.S. Postal Service or courier	376	3.8	46	.4	43	2.2	1 243
Truck and rail	S	S	S	S	S	S	1 077
Truck and water	22	.2	13	.1	S	S	1 241
Rail and water	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	2 853
Other and unknown modes	310	3.1	S	S	19	1.0	S
SCTG 29, PRINTED PRODUCTS							
Total	19 227	100.0	8 652	100.0	2 784	100.0	615
Single modes	13 127	68.3	7 584	87.7	1 222	43.9	155
Truck ¹	12 789	66.5	7 475	86.4	1 086	39.0	S
For-hire truck	4 422	23.0	1 454	16.8	907	32.6	923
Private truck	8 331	43.3	6 015	69.5	179	6.4	32
Rail	S	S	S	S	S	S	745
Water	S	S	S	S	S	S	2 606
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	2 606
Air (includes truck and air)	329	1.7	52	.6	90	3.2	1 691
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	5 064	26.3	466	5.4	591	21.2	836
Parcel, U.S. Postal Service or courier	5 034	26.2	463	5.3	583	20.9	836
Truck and rail	—	—	—	—	—	—	—
Truck and water	S	S	3	—	8	.3	2 648
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	1 036	5.4	603	7.0	S	S	434
SCTG 30, TEXTILES, LEATHER, AND ARTICLES OF TEXTILES OR LEATHER							
Total	48 464	100.0	3 610	100.0	2 807	100.0	1 467
Single modes	35 545	73.3	3 168	87.8	2 187	77.9	1 203
Truck ¹	33 794	69.7	3 116	86.3	2 075	73.9	1 060
For-hire truck	24 268	50.1	1 368	37.9	1 581	56.3	1 672
Private truck	9 268	19.1	1 738	48.2	479	17.1	375
Rail	47	.1	9	.2	S	S	1 192
Water	S	S	S	S	S	S	2 393
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	2 393
Air (includes truck and air)	1 696	3.5	43	1.2	92	3.3	2 054
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	11 340	23.4	357	9.9	563	20.0	1 628
Parcel, U.S. Postal Service or courier	11 057	22.8	288	8.0	421	15.0	1 623
Truck and rail	S	S	S	S	S	S	1 526
Truck and water	S	S	S	S	S	S	2 622
Rail and water	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	5 094
Other and unknown modes	1 579	3.3	85	2.4	57	2.0	253

See footnotes at end of table.

Table 6. Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 31, NONMETALLIC MINERAL PRODUCTS							
Total	11 835	100.0	85 595	100.0	9 590	100.0	374
Single modes	10 561	89.2	83 324	97.3	8 443	88.0	255
Truck ¹	10 270	86.8	80 186	93.7	6 603	68.9	251
For-hire truck	4 681	39.6	21 205	24.8	4 164	43.4	411
Private truck	5 279	44.6	57 866	67.6	2 233	23.3	219
Rail	226	1.9	3 065	3.6	1 659	17.3	911
Water	S	S	S	S	S	S	2 401
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	2 401
Air (includes truck and air)	65	.6	S	S	S	S	1 107
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	696	5.9	228	.3	371	3.9	1 028
Parcel, U.S. Postal Service or courier	586	5.0	58	—	51	.5	1 021
Truck and rail	S	S	S	S	S	S	1 375
Truck and water	S	S	76	—	196	2.0	2 524
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	579	4.9	2 043	2.4	776	8.1	S
SCTG 32, BASE METAL IN PRIMARY OR SEMIFINISHED FORMS AND IN FINISHED BASIC SHAPES							
Total	18 635	100.0	13 024	100.0	5 174	100.0	491
Single modes	16 243	87.2	11 362	87.2	3 184	61.5	246
Truck ¹	15 835	85.0	10 927	83.9	2 772	53.6	181
For-hire truck	8 157	43.8	5 535	42.5	2 314	44.7	728
Private truck	7 544	40.5	5 310	40.8	392	7.6	43
Rail	133	.7	258	2.0	265	5.1	1 134
Water	S	S	S	S	S	S	1 191
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	1 191
Air (includes truck and air)	256	1.4	S	S	S	S	1 802
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	1 129	6.1	103	.8	134	2.6	1 347
Parcel, U.S. Postal Service or courier	1 074	5.8	41	.3	S	S	1 345
Truck and rail	21	.1	45	.3	44	.9	913
Truck and water	S	S	18	.1	38	.7	2 075
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	1 264	6.8	1 559	12.0	S	S	S
SCTG 33, ARTICLES OF BASE METAL							
Total	21 385	100.0	8 147	100.0	5 380	100.0	545
Single modes	13 915	65.1	6 244	76.6	2 729	50.7	241
Truck ¹	13 289	62.1	5 915	72.6	2 211	41.1	207
For-hire truck	8 498	39.7	3 391	41.6	1 938	36.0	654
Private truck	4 766	22.3	2 478	30.4	252	4.7	52
Rail	196	.9	188	2.3	317	5.9	2 105
Water	S	S	S	S	S	S	2 557
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	2 557
Air (includes truck and air)	427	2.0	138	1.7	S	S	1 522
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	5 416	25.3	232	2.8	S	S	747
Parcel, U.S. Postal Service or courier	5 367	25.1	161	2.0	148	2.8	747
Truck and rail	5	—	S	S	S	S	1 918
Truck and water	S	S	S	S	S	S	3 097
Rail and water	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	1 608
Other and unknown modes	2 054	9.6	1 670	20.5	2 018	37.5	253

See footnotes at end of table.

Table 6. Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 34, MACHINERY							
Total	32 789	100.0	2 548	100.0	2 654	100.0	561
Single modes	23 508	71.7	1 991	78.2	1 927	72.6	265
Truck ¹	21 068	64.3	1 866	73.2	1 645	62.0	185
For-hire truck	14 677	44.8	1 322	51.9	1 381	52.0	735
Private truck	6 282	19.2	522	20.5	S	S	55
Rail	87	.3	17	.6	46	1.7	2 780
Water	S	S	S	S	S	S	S
Shallow draft	S	S	S	S	S	S	45
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	4 825
Air (includes truck and air)	2 240	6.8	S	S	S	S	1 910
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	6 076	18.5	189	7.4	221	8.3	938
Parcel, U.S. Postal Service or courier	6 057	18.5	186	7.3	213	8.0	938
Truck and rail	S	S	S	S	S	S	3 140
Truck and water	16	—	S	S	S	S	2 768
Rail and water	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	31
Other and unknown modes	3 205	9.8	S	S	S	S	S
SCTG 35, ELECTRONIC AND OTHER ELECTRICAL EQUIPMENT AND COMPONENTS AND OFFICE EQUIPMENT							
Total	206 731	100.0	5 057	100.0	5 523	100.0	894
Single modes	132 620	64.2	4 274	84.5	4 638	84.0	566
Truck ¹	109 862	53.1	4 050	80.1	4 338	78.5	351
For-hire truck	78 259	37.9	2 796	55.3	3 818	69.1	1 082
Private truck	29 664	14.3	1 129	22.3	350	6.3	89
Rail	414	.2	S	S	68	1.2	1 937
Water	53	—	S	S	S	S	33
Shallow draft	S	S	S	S	S	S	18
Great Lakes	—	—	—	—	—	—	—
Deep draft	53	—	S	S	S	S	34
Air (includes truck and air)	22 291	10.8	148	2.9	233	4.2	1 928
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	57 088	27.6	396	7.8	490	8.9	1 233
Parcel, U.S. Postal Service or courier	56 595	27.4	383	7.6	468	8.5	1 232
Truck and rail	S	S	S	S	S	S	2 290
Truck and water	S	S	S	S	14	.2	2 303
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	17 023	8.2	387	7.6	395	7.2	495
SCTG 36, MOTORIZED AND OTHER VEHICLES (INCLUDING PARTS)							
Total	25 042	100.0	3 742	100.0	1 718	100.0	548
Single modes	18 499	73.9	2 971	79.4	1 234	71.8	183
Truck ¹	17 188	68.6	2 904	77.6	1 101	64.1	85
For-hire truck	11 678	46.6	1 120	29.9	573	33.3	377
Private truck	5 452	21.8	1 777	47.5	525	30.6	28
Rail	225	.9	25	.7	58	3.4	2 274
Water	S	S	S	S	S	S	2 545
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	2 545
Air (includes truck and air)	1 080	4.3	42	1.1	74	4.3	1 819
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	2 806	11.2	122	3.3	166	9.6	1 166
Parcel, U.S. Postal Service or courier	2 723	10.9	107	2.9	130	7.6	1 165
Truck and rail	S	S	S	S	S	S	2 139
Truck and water	S	S	S	S	S	S	2 621
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	3 738	14.9	649	17.3	319	18.5	248

See footnotes at end of table.

Table 6. **Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.**

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 37, TRANSPORTATION EQUIPMENT, N.E.C.							
Total	22 247	100.0	130	100.0	120	100.0	979
Single modes	16 256	73.1	107	82.3	79	66.0	635
Truck ¹	7 362	33.1	94	72.3	58	48.3	231
For-hire truck	5 480	24.6	S	S	52	43.6	839
Private truck	1 878	8.4	26	20.3	6	4.7	S
Rail	S	S	S	S	S	S	2 004
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	8 775	39.4	10	7.6	19	16.0	1 679
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	5 192	23.3	17	13.2	S	S	1 309
Parcel, U.S. Postal Service or courier	3 415	15.4	16	12.6	S	S	1 308
Truck and rail	S	S	S	S	S	S	2 408
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	6	4.5	6	4.8	1 862
SCTG 38, PRECISION INSTRUMENTS AND APPARATUS							
Total	27 553	100.0	402	100.0	350	100.0	1 408
Single modes	16 165	58.7	330	82.1	250	71.3	1 082
Truck ¹	12 086	43.9	301	75.0	191	54.5	336
For-hire truck	8 538	31.0	229	57.0	184	52.5	790
Private truck	3 547	12.9	72	18.0	7	1.9	69
Rail	S	S	S	S	S	S	2 827
Water	S	S	S	S	S	S	2 630
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	2 630
Air (includes truck and air)	4 068	14.8	28	7.0	57	16.4	1 939
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	10 087	36.6	56	14.0	83	23.5	1 527
Parcel, U.S. Postal Service or courier	10 042	36.4	55	13.7	79	22.4	1 527
Truck and rail	—	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S	2 625
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	1 302	4.7	16	3.9	S	S	S
SCTG 39, FURNITURE, MATTRESSES AND MATTRESS SUPPORTS, LAMPS, LIGHTING FITTINGS, AND ILLUMINATED SIGNS							
Total	9 924	100.0	1 783	100.0	1 735	100.0	867
Single modes	7 979	80.4	1 609	90.3	1 526	87.9	562
Truck ¹	7 910	79.7	1 581	88.7	1 455	83.8	530
For-hire truck	4 627	46.6	927	52.0	1 246	71.8	1 053
Private truck	3 210	32.3	638	35.8	188	10.8	181
Rail	45	.5	25	1.4	S	S	S
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	25	.3	3	.2	8	.4	2 126
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	1 290	13.0	97	5.4	165	9.5	1 405
Parcel, U.S. Postal Service or courier	1 132	11.4	68	3.8	94	5.4	1 388
Truck and rail	132	1.3	26	1.5	64	3.7	2 505
Truck and water	S	S	S	S	S	S	2 659
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	77	4.3	S	S	135

See footnotes at end of table.

Table 6. Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 40, MISCELLANEOUS MANUFACTURED PRODUCTS							
Total	66 466	100.0	S	S	S	S	1 294
Single modes	S	S	6 378	70.4	2 577	40.7	961
Truck ¹	S	S	6 272	69.3	2 345	37.0	878
For-hire truck	20 138	30.3	2 717	30.0	1 892	29.8	1 471
Private truck	S	S	3 460	38.2	404	6.4	210
Rail	134	.2	33	.4	75	1.2	2 113
Water	S	S	S	S	S	S	2 552
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	2 552
Air (includes truck and air)	2 577	3.9	S	S	S	S	2 017
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	16 230	24.4	466	5.2	755	11.9	1 494
Parcel, U.S. Postal Service or courier	15 983	24.0	432	4.8	661	10.4	1 494
Truck and rail	230	.3	31	.3	85	1.3	2 550
Truck and water	S	S	3	—	9	.1	2 632
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	2 120	3.2	S	S	S	S	618
SCTG 41, WASTE AND SCRAP							
Total	3 845	100.0	22 073	100.0	5 329	100.0	143
Single modes	2 982	77.6	18 277	82.8	3 091	58.0	S
Truck ¹	2 883	75.0	17 836	80.8	2 691	50.5	S
For-hire truck	1 063	27.6	5 362	24.3	1 475	27.7	204
Private truck	1 760	45.8	9 412	42.6	1 139	21.4	S
Rail	94	2.4	435	2.0	399	7.5	987
Water	S	S	S	S	S	S	124
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	124
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	74	1.9	143	.6	346	6.5	2 324
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	2 037
Truck and rail	61	1.6	48	.2	114	2.1	2 386
Truck and water	S	S	S	S	S	S	2 444
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	788	20.5	3 653	16.5	1 892	35.5	716
SCTG 43, MIXED FREIGHT							
Total	33 735	100.0	14 804	100.0	1 943	100.0	476
Single modes	32 780	97.2	14 549	98.3	1 634	84.1	130
Truck ¹	32 712	97.0	14 527	98.1	1 609	82.8	120
For-hire truck	1 815	5.4	243	1.6	155	8.0	822
Private truck	30 895	91.6	14 280	96.5	S	S	71
Rail	—	—	—	—	—	—	—
Water	S	S	S	S	S	S	307
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	307
Air (includes truck and air)	S	S	S	S	S	S	1 995
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	722	2.1	146	1.0	S	S	1 204
Parcel, U.S. Postal Service or courier	504	1.5	38	.3	50	2.6	1 200
Truck and rail	S	S	S	S	S	S	2 164
Truck and water	S	S	S	S	S	S	2 407
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	52

See footnotes at end of table.

Table 6. **Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.**

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
COMMODITY UNKNOWN							
Total	4 635	100.0	S	S	595	100.0	492
Single modes	3 809	82.2	S	S	541	90.9	337
Truck ¹	3 454	74.5	S	S	474	79.7	314
For-hire truck	S	S	S	S	309	51.9	644
Private truck	828	17.9	606	18.4	50	8.4	S
Rail	S	S	S	S	S	S	1 179
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	5	.2	S	S	1 965
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	598	12.9	S	S	20	3.4	591
Parcel, U.S. Postal Service or courier	587	12.7	13	.4	10	1.7	591
Truck and rail	S	S	S	S	S	S	S
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	42	1.3	S	S	S

— Represents data cell equal to zero or less than 1 unit of measure.

D Denotes figures withheld to avoid disclosing data for individual companies.

S Data do not meet publication standards because of high sampling variability or other reasons. Some unpublished estimates can be derived from other data published in this table. However, figures obtained in this manner are subject to these same limitations.

¹"Truck" as a single mode includes shipments which went by private truck only, for-hire truck only, or a combination of private truck and for-hire truck.

²CFS data for pipeline exclude most shipments of crude oil. See "About the Data" section for details of CFS coverage.

Note: Data exclude shipments of SCTG 16, Crude Petroleum. See the section "Industry Coverage" for additional information.

Table 7. Shipment Characteristics by State of Destination for State of Origin: 1997

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

State of destination	Value		Tons		Ton-miles	
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent
Total	802 192	100.0	778 805	100.0	133 347	100.0
NEW ENGLAND STATES						
Connecticut	2 630	.3	460	—	1 366	1.0
Maine	613	—	72	—	235	.2
Massachusetts	8 415	1.0	890	.1	2 726	2.0
New Hampshire	S	S	202	—	618	.5
Rhode Island	524	—	43	—	134	.1
Vermont	565	—	52	—	156	.1
MIDDLE ATLANTIC STATES						
New Jersey	12 044	1.5	2 088	.3	6 155	4.6
New York	14 936	1.9	1 787	.2	5 135	3.9
Pennsylvania	9 913	1.2	1 481	.2	4 069	3.1
EAST NORTH CENTRAL STATES						
Illinois	13 073	1.6	2 567	.3	5 763	4.3
Indiana	4 511	.6	720	—	1 589	1.2
Michigan	9 098	1.1	1 667	.2	4 114	3.1
Ohio	9 701	1.2	1 629	.2	3 944	3.0
Wisconsin	4 660	.6	892	.1	1 931	1.4
WEST NORTH CENTRAL STATES						
Iowa	1 581	.2	245	—	464	.3
Kansas	3 637	.5	407	—	671	.5
Minnesota	5 727	.7	999	.1	2 007	1.5
Missouri	7 271	.9	885	.1	1 690	1.3
Nebraska	1 305	.2	275	—	443	.3
North Dakota	224	—	S	S	S	S
South Dakota	792	.1	61	—	120	—
SOUTH ATLANTIC STATES						
Delaware	713	—	S	S	S	S
District of Columbia	526	—	24	—	65	—
Florida	17 755	2.2	1 620	.2	4 484	3.4
Georgia	10 893	1.4	1 089	.1	2 718	2.0
Maryland	4 357	.5	418	—	1 179	.9
North Carolina	5 320	.7	855	.1	2 342	1.8
South Carolina	2 737	.3	264	—	738	.6
Virginia	5 456	.7	390	—	1 076	.8
West Virginia	442	—	82	—	219	.2
EAST SOUTH CENTRAL STATES						
Alabama	3 000	.4	370	—	861	.6
Kentucky	5 974	.7	282	—	660	.5
Mississippi	1 780	.2	292	—	613	.5
Tennessee	4 476	.6	644	—	1 424	1.1
WEST SOUTH CENTRAL STATES						
Arkansas	3 730	.5	459	—	802	.6
Louisiana	2 804	.3	424	—	877	.7
Oklahoma	4 187	.5	698	—	1 021	.8
Texas	31 354	3.9	6 733	.9	8 980	6.7
MOUNTAIN STATES						
Arizona	20 425	2.5	9 520	1.2	4 322	3.2
Colorado	8 803	1.1	1 579	.2	1 790	1.3
Idaho	2 018	.3	625	—	525	.4
Montana	1 067	.1	373	—	465	.3
Nevada	16 713	2.1	7 610	1.0	2 123	1.6
New Mexico	2 563	.3	471	—	435	.3
Utah	5 603	.7	2 203	.3	1 543	1.2
Wyoming	232	—	33	—	36	—
PACIFIC STATES						
Alaska	764	.1	131	—	298	.2
California	489 246	61.0	710 378	91.2	37 224	27.9
Hawaii	3 729	.5	1 127	—	2 960	2.2
Oregon	13 270	1.7	6 810	.9	3 982	3.0
Washington	16 547	2.1	5 638	.7	5 649	4.2

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Table 8. Inbound Shipment Characteristics by State of Origin for State of Destination: 1997

[For explanation of terms and meaning of abbreviations and symbols, see introductory text. Detail may not add to total because of rounding]

State of origin	Value		Tons		Ton-miles	
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent
Total	777 276	100.0	823 934	100.0	232 294	100.0
NEW ENGLAND STATES						
Connecticut	4 243	.5	630	—	1 836	.8
Maine	597	—	178	—	553	.2
Massachusetts	8 354	1.1	502	—	1 523	.7
New Hampshire	2 870	.4	116	—	349	.2
Rhode Island	682	—	46	—	140	—
Vermont	855	.1	65	—	198	—
MIDDLE ATLANTIC STATES						
New Jersey	11 826	1.5	1 476	.2	4 392	1.9
New York	12 224	1.6	1 562	.2	4 381	1.9
Pennsylvania	10 459	1.3	1 965	.2	5 314	2.3
EAST NORTH CENTRAL STATES						
Illinois	16 110	2.1	4 461	.5	9 664	4.2
Indiana	6 166	.8	1 991	.2	4 582	2.0
Michigan	9 640	1.2	1 972	.2	4 677	2.0
Ohio	12 801	1.6	3 460	.4	8 389	3.6
Wisconsin	7 630	1.0	2 469	.3	5 343	2.3
WEST NORTH CENTRAL STATES						
Iowa	4 579	.6	4 814	.6	9 607	4.1
Kansas	4 905	.6	3 582	.4	6 100	2.6
Minnesota	7 439	1.0	2 270	.3	4 695	2.0
Missouri	8 657	1.1	2 377	.3	4 471	1.9
Nebraska	3 886	.5	4 990	.6	8 880	3.8
North Dakota	331	—	S	S	S	S
South Dakota	1 005	.1	191	—	313	.1
SOUTH ATLANTIC STATES						
Delaware	682	—	217	—	611	.3
District of Columbia	S	S	S	S	S	S
Florida	6 202	.8	851	.1	2 268	1.0
Georgia	8 375	1.1	1 727	.2	4 259	1.8
Maryland	2 673	.3	266	—	874	.4
North Carolina	7 946	1.0	1 384	.2	3 610	1.6
South Carolina	3 309	.4	578	—	1 460	.6
Virginia	3 979	.5	521	—	1 434	.6
West Virginia	994	.1	528	—	1 453	.6
EAST SOUTH CENTRAL STATES						
Alabama	2 734	.4	1 656	.2	4 046	1.7
Kentucky	6 023	.8	1 141	.1	2 601	1.1
Mississippi	1 834	.2	789	.1	1 654	.7
Tennessee	8 482	1.1	1 622	.2	3 574	1.5
WEST SOUTH CENTRAL STATES						
Arkansas	2 919	.4	1 759	.2	3 426	1.5
Louisiana	2 528	.3	2 767	.3	5 420	2.3
Oklahoma	3 662	.5	966	.1	1 566	.7
Texas	30 386	3.9	13 060	1.6	28 607	12.3
MOUNTAIN STATES						
Arizona	14 616	1.9	3 517	.4	1 726	.7
Colorado	6 656	.9	2 017	.2	2 545	1.1
Idaho	2 414	.3	1 141	.1	1 070	.5
Montana	467	—	1 073	.1	1 407	.6
Nevada	3 781	.5	3 529	.4	1 009	.4
New Mexico	829	.1	662	—	734	.3
Utah	5 285	.7	9 644	1.2	8 672	3.7
Wyoming	238	—	761	—	831	.4
PACIFIC STATES						
Alaska	S	S	S	S	S	S
California	489 246	62.9	710 378	86.2	37 224	16.0
Hawaii	234	—	146	—	388	.2
Oregon	11 076	1.4	9 988	1.2	7 488	3.2
Washington	14 353	1.8	9 137	1.1	10 232	4.4

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Appendix A.

Comparability With the 1993 Commodity Flow Survey

The Commodity Flow Survey (CFS) restores a data program on commodity flows that the Census Bureau conducted as a part of its 5-year economic census program from 1963 through 1977. The CFS was first conducted in

1993. For the 1997 CFS, the Census Bureau incorporated improvements identified from the evaluation of previous surveys and additional research. The following table shows a comparison of the 1993 and 1997 surveys.

Item	1993	1997
1. Industry coverage	Manufacturers (minor exceptions) Mining (except mining services and oil and gas extraction) All wholesale Video tape distributors Catalog mail-order houses Auxiliaries (e.g., warehouses)	Manufacturers (minor exceptions) Mining (except mining services) All wholesale Catalog mail-order houses Auxiliaries (e.g., warehouses)
2. Commodity classification system	Standard Transportation Commodity Classification (STCC), developed by the American Association of Railroads (AAR).	Standard Classification of Transported Goods (SCTG).
3. Sample size	Approximately 200,000 establishments were selected from a universe of about 800,000 in-scope establishments on the 1992 Standard Statistical Establishment List (SSEL).	Approximately 100,000 establishments were selected from a universe of about 800,000 in-scope establishments on the 1995 Standard Statistical Establishment List (SSEL).
4. Survey methodology	Respondents took a sample of their individual outbound shipments for a 2-week period during each of the four calendar quarters of 1993. Respondents reported key characteristics for each sampled shipment.	Respondents took a sample of their individual outbound shipments for a 1-week period during each of the four calendar quarters of 1997. Respondents reported key characteristics for each sampled shipment.
5. Reported mode of transportation	Rail For-hire truck Private truck Air Inland water and/or Great Lakes Deep sea water Pipeline Parcel, U.S. Postal Service, or courier Other Unknown	Rail For-hire truck Private truck Air Shallow draft vessel Deep draft vessel Pipeline Parcel, U.S. Postal Service, or courier Other Unknown

Item	1993	1997
6. Data items requested on questionnaire	<p>For each shipment:</p> <p>Total value</p> <p>Total weight</p> <p>Major commodity (STCC)</p> <p>All modes of transportation</p> <p>Multiple origins (respondents specifically requested to report all shipment origins for the sampled establishment and report the appropriate origin for each shipment; assumed to always be the mailing address if no other origins listed).</p> <p>Destination</p> <p>Containerized (Y/N)</p> <p>Hazardous material (Y/N)</p> <p>Export (Y/N)</p> <p>If export, mode of export, foreign country, and city of destination.</p>	<p>For each shipment:</p> <p>Total value</p> <p>Total weight</p> <p>Major commodity (SCTG)</p> <p>All modes of transportation</p> <p>Single origin (assumed to be the mailing address unless the respondent provided a different physical location address).</p> <p>Destination</p> <p>Containerized (Y/N)</p> <p>Hazardous material (UN/NA codes)</p> <p>Export (Y/N)</p> <p>If export, mode of export, foreign country, and city of destination.</p>

Appendix B.

Reliability of the Estimates

An estimate based on a sample survey potentially contains two types of errors—sampling and nonsampling. Sampling error occurs because characteristics differ among sampling units and because only a subset of the entire population is measured in a sample survey. Nonsampling error encompasses all other factors that contribute to the total error of a sample survey estimate. The accuracy of a survey result may be affected by these two types of errors.

Sampling and nonsampling errors are often measured by the quantities, bias and variance. The bias of an estimator of an unknown population value is the difference, averaged over all possible samples of the same size and design, between the estimator and the unknown population value. Any systematic error, or inaccuracy that affects all samples of a specified design in a similar way, may bias the resulting estimates. Variance is the squared difference, averaged over all possible samples of the same size and design, between an estimator and its average value. Descriptions of sampling and nonsampling errors for the 1997 Commodity Flow Survey (CFS) are provided in the following sections.

SAMPLING ERROR

Because the estimates are based on a sample, exact agreement with the results that would be obtained from a complete enumeration of all the shipments made in 1997 from all establishments included on the CFS sampling frame is not expected. However, because probability sampling was used at each stage of selection, it is possible to estimate the sampling variability of the survey estimates. For CFS estimates, sampling variability arises from each of the three stages of sampling. (See Appendix C for a description of the sample design.)

The particular sample used in this survey is one of a large number of samples of the same size and design that could have been selected. If all possible samples had been surveyed, under the same conditions, an estimate of an unknown population value could have been obtained from each sample. The estimates obtained from these samples give rise to a distribution of estimates for the unknown population value. A statistical measure of the variability among these estimates is the standard error, which can be approximated from any one sample. The coefficient of variation (or relative standard error) of an estimate is the standard error of the estimate divided by the estimate. Measures of sampling variability, such as the standard error or coefficient of variation, are estimated from the

sample and are also subject to sampling variability. (Technically, we should refer to the estimated standard error or the estimated coefficient of variation of an estimator. However, we have omitted this detail for the sake of brevity.) It is important to note that the standard error and coefficient of variation only measure sampling variability. They do not measure any biases in the estimates. All coefficients of variation are expressed as percents. Standard errors for the corresponding percentage estimates are also provided.

An estimate of an unknown population value and its approximate standard error can be used to construct a confidence interval. A confidence interval is a range about a given estimator that has a specified probability, or confidence, of containing the unknown population value. If, for each possible sample, an estimate of an unknown population value and the estimate's approximate standard error were obtained, then:

1. For approximately 90 percent of the possible samples, the interval from 1.65 standard errors below to 1.65 standard errors above the estimate would include the unknown population value.
2. For approximately 95 percent of the possible samples, the interval from two standard errors below to two standard errors above the estimate would include the unknown population value.

NONSAMPLING ERROR

Nonsampling error encompasses all other factors that contribute to the total error of a sample survey estimate and may also occur in censuses. It is often helpful to think of nonsampling error as arising from deficiencies or mistakes in the survey process. In the CFS, nonsampling error can be attributed to many sources: (1) nonresponse, (2) response errors, (3) differences in the interpretation of the questions, (4) mistakes in coding or keying the data obtained, and (5) other errors of collection, response, coverage, and processing. Although no direct measurement of the potential biases because of nonsampling error has been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize its influence.

A potentially large source of bias in the estimates is due to nonresponse. Nonresponse is defined as the inability to obtain all the intended measurements or responses from all the selected establishments. Four levels of nonresponse can occur in the CFS: item, shipment, quarter (reporting week), and establishment. Item nonresponse

occurs either when a question is unanswered or the response to the question fails computer or analyst edits. Item nonresponse is corrected by imputation. (Imputation is the procedure by which a missing value is replaced by a predicted value obtained from an appropriate model.) Shipment, quarter, and establishment nonresponse are used to describe the inability to obtain sufficient information about a sampled shipment, quarter, or establishment, respectively, that prevents it from contributing to tabulations. Shipment and quarter nonresponse are corrected during the estimation procedure by reweighting. Reweighting allocates characteristics to the nonrespondents in proportion to the characteristics observed for the respondents. The amount of bias introduced by this nonresponse adjustment procedure depends on the extent to which the nonrespondents differ, characteristically, from the respondents. Establishment nonresponse is corrected during the estimation procedure by the SIC-level adjustment weight. (See Appendix C for a description of the estimation procedure.) In most cases of establishment nonresponse, none of the four questionnaires have been

returned to the Census Bureau, after several attempts to elicit a response. Approximately 67 percent of the sampled establishments provided at least one quarter of data that contributed to tabulations.

Some possible sources of bias that are attributed to respondent-conducted sampling include misunderstanding the definition of a shipment, constructing an incomplete frame of shipments from which to sample, ordering the shipment sampling frame by selected shipment characteristics, and selecting shipment records by a method other than the one specified in the questionnaire's instructions. We often contacted respondents who reported shipments having atypically large value or weight when compared to the rest of their reported shipments. Upon contact, if we are able to collect information on all of a given respondent's large shipments made either for a particular reporting week or for the entire quarter, then we identify these large shipments as certainty shipments. (See Appendix C for a description of how certainty shipments are used in the estimation process.)

Table B-1a. Measures of Reliability for Shipment Characteristics by Mode of Transportation for State of Origin: 1997

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

Mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
All modes	4.6	—	7.5	—	5.5	—	5.3
Single modes	5.8	1.2	7.9	.9	4.2	2.3	12.8
Truck	6.0	1.4	8.2	1.8	3.4	2.4	14.9
For-hire truck	6.2	1.0	13.7	2.9	4.1	2.1	7.8
Private truck	7.1	1.3	8.5	2.6	8.7	1.7	10.1
Rail	7.1	—	11.3	.3	11.5	1.3	4.5
Water	S	S	S	S	S	S	13.9
Shallow draft	S	S	S	S	S	S	29.9
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	13.4
Air (includes truck and air)	14.3	.7	16.9	—	15.5	.2	2.0
Pipeline	13.9	.2	11.7	.9	S	S	S
Multiple modes	4.3	.9	8.4	—	11.8	.8	3.9
Parcel, U.S. Postal Service or courier	4.9	1.0	6.7	—	11.2	.2	3.9
Truck and rail	31.0	.2	15.3	—	21.1	.8	5.1
Truck and water	15.1	—	15.6	—	18.4	.3	5.3
Rail and water	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	35.6
Other and unknown modes	7.9	.4	20.2	.8	26.0	2.4	19.6

— Represents data cell equal to zero or less than 1 unit of measure.
D Denotes figures withheld to avoid disclosing data for individual companies.
S Data do not meet publication standards because of high sampling variability or other reasons.

Note: For description of development and uses of measures of reliability, see Appendix B, Reliability of the Estimates.

Table B-1b. Measures of Reliability for Shipment Characteristics by Mode of Transportation for State of Origin: 1997 and 1993

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

Mode of transportation	Value			Tons			Ton-miles			Average miles per shipment		
	Coefficient of variation of number		Standard error of percent change	Coefficient of variation of number		Standard error of percent change	Coefficient of variation of number		Standard error of percent change	Coefficient of variation		Standard error of percent change
	1997	1993		1997	1993		1997	1993		1997	1993	
All modes	4.6	3.3	7.0	7.5	8.5	12.5	5.5	4.3	6.8	5.3	5.9	8.3
Single modes	5.8	2.5	7.9	7.9	7.2	12.1	4.2	2.7	4.6	12.8	16.5	17.6
Truck	6.0	2.5	8.1	8.2	3.2	10.7	3.4	3.0	5.1	14.9	5.0	16.8
For-hire truck	6.2	3.4	7.9	13.7	5.1	16.9	4.1	4.4	6.2	7.8	3.3	9.5
Private truck	7.1	3.2	10.9	8.5	4.4	10.6	8.7	5.0	12.0	10.1	5.2	13.8
Rail	7.1	13.1	9.6	11.3	9.8	13.8	11.5	10.2	12.5	4.5	6.7	9.2
Water	S	27.6	S	S	28.2	S	S	27.0	S	13.9	15.2	20.3
Shallow draft	S	S	S	S	S	S	S	S	S	29.9	29.8	833.1
Great Lakes	—	—	—	—	—	—	—	—	—	—	—	—
Deep draft	S	30.1	S	S	30.2	S	S	27.0	S	13.4	10.3	15.2
Air (includes truck and air)	14.3	10.3	27.8	16.9	24.9	48.9	15.5	21.5	42.3	2.0	6.2	7.1
Pipeline	13.9	28.8	26.3	11.7	39.6	25.8	S	S	S	S	S	S
Multiple modes	4.3	7.9	13.2	8.4	41.1	33.5	11.8	14.2	24.4	3.9	5.6	7.9
Parcel, U.S. Postal Service or courier	4.9	7.9	13.8	6.7	12.1	16.0	11.2	11.3	20.2	3.9	5.6	7.9
Truck and rail	31.0	23.5	47.5	15.3	21.5	40.0	21.1	19.7	42.1	5.1	15.8	22.0
Truck and water	15.1	30.2	58.7	15.6	S	S	18.4	S	S	5.3	2.8	5.2
Rail and water	—	—	—	—	—	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	S	S	S	35.6	31.6	571.4
Other and unknown modes	7.9	16.2	17.5	20.2	31.6	26.9	26.0	28.2	51.7	19.6	32.1	35.0

— Represents data cell equal to zero or less than 1 unit of measure.
D Denotes figures withheld to avoid disclosing data for individual companies.
S Data do not meet publication standards because of high sampling variability or other reasons.

Note: For description of development and uses of measures of reliability, see Appendix B, Reliability of the Estimates.

Table B-1c. Standard Error of Percentage for Shipment Characteristics by Mode of Transportation for State of Origin: Percent of Total for 1997 and 1993

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

Mode of transportation	Value (percent)		Tons (percent)		Ton-miles (percent)	
	1997	1993	1997	1993	1997	1993
All modes	-	-	-	-	-	-
Single modes	1.2	1.4	.9	1.5	2.3	2.1
Truck	1.4	1.1	1.8	3.9	2.4	2.5
For-hire truck	1.0	.9	2.9	1.0	2.1	2.4
Private truck	1.3	1.0	2.6	3.1	1.7	.7
Rail	-	.2	.3	.3	1.3	1.6
Water	S	.1	S	.5	S	1.4
Shallow draft	S	S	S	S	S	S
Great Lakes	-	-	-	-	-	-
Deep draft	S	.1	S	.5	S	1.4
Air (includes truck and air) .....	.7	.4	-	-	.2	.2
Pipeline .....	.2	.8	.9	3.0	S	S
Multiple modes .....	.9	.9	-	.2	.8	.6
Parcel, U.S. Postal Service or courier	1.0	.8	-	-	.2	.2
Truck and rail .....	.2	.2	-	-	.8	.5
Truck and water	-	-	-	S	.3	S
Rail and water	-	-	-	-	-	-
Other multiple modes	S	S	S	S	S	S
Other and unknown modes .....	.4	1.0	.8	1.3	2.4	1.8

- Represents data cell equal to zero or less than 1 unit of measure.
D Denotes figures withheld to avoid disclosing data for individual companies.
S Data do not meet publication standards because of high sampling variability or other reasons.

Note: For description of development and uses of measures of reliability, see Appendix B, Reliability of the Estimates.

Table B-2. Measures of Reliability for Shipment Characteristics by Total Modal Activity for the State of Origin: 1997

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

Mode of transportation	Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	
Total	5.5	-	5.1
Truck	3.4	2.4	14.6
Rail	12.1	1.7	5.1
Shallow draft	S	S	S
Great Lakes	S	S	31.6
Deep draft	27.0	.7	4.6
Air	15.3	.2	2.0
Parcel, U.S. Postal Service or courier	11.2	.2	3.9
Pipeline	S	S	S
Other and unknown modes	26.0	2.4	19.6

- Represents data cell equal to zero or less than 1 unit of measure.
D Denotes figures withheld to avoid disclosing data for individual companies.
S Data do not meet publication standards because of high sampling variability or other reasons.

Note: For description of development and uses of measures of reliability, see Appendix B, Reliability of the Estimates.

Table B-3. Measures of Reliability for Shipment Characteristics by Mode of Transportation and Distance Shipped for State of Origin: 1997

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

Mode of transportation and distance shipped (based on Great Circle Distance)	Value		Tons		Ton-miles	
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage
All modes	4.6	—	7.5	—	5.5	—
Less than 50 miles	3.2	1.3	9.8	2.0	10.7	.9
50 to 99 miles	14.3	.8	7.1	.6	7.8	.3
100 to 249 miles	15.1	.8	9.2	.8	8.9	.7
250 to 499 miles	7.5	.4	9.4	.7	8.8	1.3
500 to 749 miles	5.6	.1	16.8	.2	16.0	.5
750 to 999 miles	8.2	.2	11.3	—	12.2	.4
1,000 to 1,499 miles	7.1	.4	9.7	—	9.4	.4
1,500 to 1,999 miles	4.9	.3	8.6	.1	8.9	1.3
2,000 miles or more	8.1	.9	6.2	.1	6.2	.6
Single modes	5.8	—	7.9	—	4.2	—
Less than 50 miles	3.8	1.7	10.2	2.1	11.1	1.2
50 to 99 miles	16.8	1.0	7.3	.7	8.0	.3
100 to 249 miles	19.1	1.0	9.5	.8	9.2	.7
250 to 499 miles	9.3	.4	6.6	.6	5.9	1.0
500 to 749 miles	6.9	.2	19.0	.2	18.2	.9
750 to 999 miles	14.0	.3	4.6	—	4.7	.3
1,000 to 1,499 miles	9.6	.5	6.8	—	6.7	.3
1,500 to 1,999 miles	3.9	.2	6.2	.1	6.6	1.3
2,000 miles or more	11.8	1.1	8.3	.1	8.4	1.4
Truck	6.0	—	8.2	—	3.4	—
Less than 50 miles	3.4	1.9	10.4	2.0	12.3	1.4
50 to 99 miles	17.2	1.0	6.6	.7	6.9	.3
100 to 249 miles	19.8	1.1	7.4	.8	7.7	.8
250 to 499 miles	11.3	.6	6.9	.4	7.1	.8
500 to 749 miles	6.4	.2	4.9	—	5.1	.3
750 to 999 miles	11.8	.3	4.6	—	4.8	.3
1,000 to 1,499 miles	10.0	.5	7.3	—	7.3	.5
1,500 to 1,999 miles	4.3	.3	4.9	—	4.7	1.1
2,000 miles or more	14.3	.9	8.1	.1	8.2	1.5
For-hire truck	6.2	—	13.7	—	4.1	—
Less than 50 miles	7.7	2.1	21.5	3.8	18.1	1.0
50 to 99 miles	16.0	.8	8.7	1.0	9.3	.4
100 to 249 miles	20.2	1.5	10.3	1.8	10.0	.9
250 to 499 miles	12.2	1.1	9.9	.9	9.9	1.0
500 to 749 miles	7.1	.4	5.6	.2	5.7	.2
750 to 999 miles	13.5	.5	5.1	.1	5.1	.4
1,000 to 1,499 miles	10.6	.8	9.3	.2	9.3	.8
1,500 to 1,999 miles	6.2	.7	6.1	.3	5.8	1.4
2,000 miles or more	16.4	1.6	8.7	.3	9.0	1.7
Private truck	7.1	—	8.5	—	8.7	—
Less than 50 miles	4.7	2.6	9.6	1.4	11.7	2.1
50 to 99 miles	25.4	2.0	9.4	.7	9.1	1.1
100 to 249 miles	23.3	1.2	11.6	.7	14.8	1.8
250 to 499 miles	11.5	.4	9.5	.3	9.8	1.2
500 to 749 miles	14.3	.1	10.0	—	10.0	.4
750 to 999 miles	15.9	.1	15.9	—	15.6	.8
1,000 to 1,499 miles	13.1	.1	18.0	—	17.4	.7
1,500 to 1,999 miles	19.3	.4	16.8	—	16.5	1.0
2,000 miles or more	20.5	.5	37.8	.1	36.7	2.9
Rail	7.1	—	11.3	—	11.5	—
Less than 50 miles	20.9	1.1	44.2	6.7	47.4	.6
50 to 99 miles	36.8	.6	S	S	S	S
100 to 249 miles	17.2	.3	15.5	.4	18.2	.3
250 to 499 miles	20.1	2.4	27.5	4.9	25.9	2.2
500 to 749 miles	17.5	1.0	11.8	1.3	11.9	.6
750 to 999 miles	13.8	.6	14.5	.8	12.9	.8
1,000 to 1,499 miles	22.1	2.1	27.6	1.0	25.9	1.6
1,500 to 1,999 miles	12.7	3.0	17.5	2.4	17.8	3.3
2,000 miles or more	15.4	3.3	17.8	2.8	18.0	4.4
Water	S	S	S	S	S	S
Less than 50 miles	S	S	S	S	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	25.9	10.4	25.8	8.0	S	S
Shallow draft	S	S	S	S	S	S
Less than 50 miles	S	S	S	S	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—

See footnotes at end of table.

Table B-3. Measures of Reliability for Shipment Characteristics by Mode of Transportation and Distance Shipped for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

Mode of transportation and distance shipped (based on Great Circle Distance)	Value		Tons		Ton-miles	
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage
Single modes—Con.						
Great Lakes	—	—	—	—	—	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S
Less than 50 miles	S	S	S	S	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	25.9	12.0	25.8	9.2	S	S
Air (includes truck and air)	14.3	—	16.9	—	15.5	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	31.9	1.1	28.3	1.7	30.2	.1
100 to 249 miles	21.8	.6	S	S	S	S
250 to 499 miles	14.1	2.1	28.4	2.1	26.0	.5
500 to 749 miles	23.9	1.3	25.2	1.1	26.0	.6
750 to 999 miles	32.7	1.8	33.1	3.3	32.8	2.0
1,000 to 1,499 miles	23.4	2.2	27.9	2.8	28.5	3.5
1,500 to 1,999 miles	20.8	2.4	12.6	2.3	12.1	2.6
2,000 miles or more	20.4	4.7	25.0	5.9	24.4	5.9
Pipeline	13.9	—	11.7	—	S	S
Less than 50 miles	18.6	9.9	17.5	10.0	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	—	—	—	—	S	S
1,000 to 1,499 miles	S	S	S	S	S	S
1,500 to 1,999 miles	—	—	—	—	S	S
2,000 miles or more	—	—	—	—	S	S
Multiple modes	4.3	—	8.4	—	11.8	—
Less than 50 miles	6.6	.6	14.9	2.3	23.5	—
50 to 99 miles	10.0	.5	11.6	.4	13.0	—
100 to 249 miles	13.0	.8	33.9	1.6	37.2	.2
250 to 499 miles	3.7	.5	9.7	.8	10.6	.2
500 to 749 miles	8.7	.3	18.0	.6	18.4	.3
750 to 999 miles	5.5	.3	12.2	.5	12.0	.4
1,000 to 1,499 miles	5.9	.4	16.4	.8	17.4	.6
1,500 to 1,999 miles	9.0	1.4	18.5	2.6	20.8	3.8
2,000 miles or more	7.4	.9	11.1	1.9	11.5	3.7
Parcel, U.S. Postal Service or courier	4.9	—	6.7	—	11.2	—
Less than 50 miles	6.6	.7	8.7	2.0	8.4	—
50 to 99 miles	10.1	.5	11.3	.8	11.3	.1
100 to 249 miles	13.0	.8	14.5	1.0	14.2	.2
250 to 499 miles	4.0	.6	7.1	.7	7.0	.2
500 to 749 miles	8.8	.3	7.4	.3	7.2	.3
750 to 999 miles	5.1	.3	17.2	.5	16.1	.3
1,000 to 1,499 miles	6.4	.4	9.0	.5	8.9	.9
1,500 to 1,999 miles	8.2	.8	16.7	2.0	16.4	2.1
2,000 miles or more	7.5	.8	11.7	1.1	11.2	1.5
Truck and rail	31.0	—	15.3	—	21.1	—
Less than 50 miles	44.9	1.1	S	S	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	24.7	.8	33.0	1.5	32.4	.6
750 to 999 miles	20.6	1.4	18.1	1.5	17.7	1.2
1,000 to 1,499 miles	33.6	3.0	26.1	1.7	26.4	1.2
1,500 to 1,999 miles	S	S	25.6	3.8	25.5	3.5
2,000 miles or more	19.0	5.7	22.1	3.1	22.2	3.0
Truck and water	15.1	—	15.6	—	18.4	—
Less than 50 miles	S	S	S	S	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	S	S	S	S	S	S
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	S	S	S	S	S	S
2,000 miles or more	15.9	9.4	18.1	6.8	18.5	9.0

See footnotes at end of table.

Table B-3. Measures of Reliability for Shipment Characteristics by Mode of Transportation and Distance Shipped for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

Mode of transportation and distance shipped (based on Great Circle Distance)	Value		Tons		Ton-miles	
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage
Multiple modes—Con.						
Rail and water	—	—	—	—	—	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S
Less than 50 miles	S	S	S	S	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	S	S	S	S	S	S
1,500 to 1,999 miles	S	S	S	S	S	S
2,000 miles or more	S	S	S	S	S	S
Other and unknown modes	7.9	—	20.2	—	26.0	—
Less than 50 miles	9.4	3.0	23.8	5.3	26.0	.6
50 to 99 miles	17.8	.6	26.2	1.2	25.7	.3
100 to 249 miles	S	S	15.4	.9	15.2	.3
250 to 499 miles	23.6	2.2	S	S	S	S
500 to 749 miles	19.3	.5	22.3	.8	22.9	.9
750 to 999 miles	36.6	1.1	S	S	S	S
1,000 to 1,499 miles	18.9	1.7	44.2	1.1	42.5	1.9
1,500 to 1,999 miles	30.4	2.1	34.0	1.4	33.5	3.0
2,000 miles or more	27.9	1.5	24.5	1.8	24.8	5.4

— Represents data cell equal to zero or less than 1 unit of measure.
D Denotes figures withheld to avoid disclosing data for individual companies.
S Data do not meet publication standards because of high sampling variability or other reasons.

Note: For description of development and uses of measures of reliability, see Appendix B, Reliability of the Estimates.

Table B-4. Measures of Reliability for Shipment Characteristics by Mode of Transportation and Shipment Size for State of Origin: 1997

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

Mode of transportation and shipment size	Value		Tons		Ton-miles		Average miles per shipment— coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
All modes	4.6	—	7.5	—	5.5	—	5.3
Less than 50 lb	5.6	.9	5.1	—	6.3	.1	5.3
50 to 99 lb	7.9	.5	4.6	—	6.9	—	9.1
100 to 499 lb	3.9	.9	4.9	.1	2.8	.1	5.9
500 to 749 lb	4.7	.3	5.4	—	8.5	—	8.3
750 to 999 lb	7.1	.2	4.3	—	6.3	—	9.4
1,000 to 9,999 lb	5.9	.9	4.3	.7	15.9	1.5	10.9
10,000 to 49,999 lb	12.6	1.8	9.0	1.9	4.0	1.7	7.1
50,000 to 99,999 lb	8.7	.3	11.8	2.0	4.8	.8	10.0
100,000 lb or more	8.0	.4	16.8	3.0	11.1	1.5	18.2
Single modes	5.8	—	7.9	—	4.2	—	12.8
Less than 50 lb	12.0	.6	5.4	—	18.9	—	17.0
50 to 99 lb	12.8	.6	6.8	—	13.8	—	15.6
100 to 499 lb	5.3	1.0	5.0	—	6.2	.1	8.6
500 to 749 lb	5.2	.4	5.1	—	7.0	—	9.0
750 to 999 lb	7.8	.2	3.7	—	7.8	—	11.3
1,000 to 9,999 lb	5.7	1.1	4.6	.7	13.9	1.6	9.4
10,000 to 49,999 lb	13.3	2.0	9.6	2.0	4.4	2.0	6.5
50,000 to 99,999 lb	9.3	.3	12.1	2.0	6.7	.9	10.3
100,000 lb or more	7.8	.4	18.0	3.2	14.7	2.7	19.9
Truck	6.0	—	8.2	—	3.4	—	14.9
Less than 50 lb	5.7	.4	5.8	—	25.5	—	23.5
50 to 99 lb	8.3	.3	7.4	—	11.4	—	12.9
100 to 499 lb	4.6	1.0	5.2	.1	3.9	—	7.1
500 to 749 lb	4.4	.3	5.1	—	8.2	—	10.1
750 to 999 lb	7.8	.3	3.8	—	7.5	—	11.1
1,000 to 9,999 lb	6.0	1.2	4.5	.8	13.4	2.1	9.3
10,000 to 49,999 lb	13.5	2.1	9.6	2.2	4.7	1.5	6.5
50,000 to 99,999 lb	9.4	.4	12.1	2.3	6.9	.9	9.9
100,000 lb or more	21.1	.5	34.7	3.7	21.5	1.8	29.7
For-hire truck	6.2	—	13.7	—	4.1	—	7.8
Less than 50 lb	9.5	.3	19.5	—	35.8	—	10.8
50 to 99 lb	18.1	.5	8.2	—	15.6	—	7.0
100 to 499 lb	8.9	1.3	5.4	—	5.6	.1	4.0
500 to 749 lb	7.1	.5	7.8	—	10.5	.1	5.8
750 to 999 lb	11.6	.4	12.3	—	9.5	.1	12.3
1,000 to 9,999 lb	9.3	1.8	6.9	.7	17.1	2.6	9.2
10,000 to 49,999 lb	10.7	1.9	12.9	.8	4.5	1.8	7.4
50,000 to 99,999 lb	9.0	.4	18.7	2.5	7.6	.9	17.4
100,000 lb or more	26.5	.7	23.4	2.7	26.1	1.8	24.8
Private truck	7.1	—	8.5	—	8.7	—	10.1
Less than 50 lb	5.6	.7	6.7	—	18.4	—	19.4
50 to 99 lb	3.1	.3	8.5	—	20.1	—	16.5
100 to 499 lb	4.6	1.2	7.1	.2	8.0	.2	8.7
500 to 749 lb	6.0	.3	7.2	—	7.2	.1	8.5
750 to 999 lb	8.8	.3	6.9	—	8.1	—	10.1
1,000 to 9,999 lb	8.1	1.5	6.6	.9	8.2	1.2	4.0
10,000 to 49,999 lb	18.1	3.0	12.8	2.7	13.4	2.3	10.7
50,000 to 99,999 lb	12.0	.8	10.1	2.2	10.4	2.4	9.3
100,000 lb or more	10.4	.2	18.9	1.8	20.1	1.7	32.7
Rail	7.1	—	11.3	—	11.5	—	4.5
Less than 50 lb	S	S	S	S	37.0	—	S
50 to 99 lb	S	S	S	S	S	S	31.6
100 to 499 lb	S	S	33.5	—	44.7	—	21.3
500 to 749 lb	S	S	S	S	S	S	26.9
750 to 999 lb	S	S	S	S	S	S	28.3
1,000 to 9,999 lb	28.9	.9	32.5	—	35.1	.2	4.5
10,000 to 49,999 lb	9.5	3.9	12.3	1.3	13.9	3.4	3.5
50,000 to 99,999 lb	33.9	.8	27.7	.7	27.8	.4	16.0
100,000 lb or more	12.6	4.2	12.4	1.5	13.4	3.4	7.5
Water	S	S	S	S	S	S	13.9
Less than 50 lb	43.5	.6	49.6	—	S	S	27.4
50 to 99 lb	S	S	S	S	S	S	46.7
100 to 499 lb	46.2	1.4	44.7	.3	39.0	1.8	22.9
500 to 749 lb	S	S	S	S	S	S	30.6
750 to 999 lb	S	S	S	S	S	S	29.8
1,000 to 9,999 lb	33.3	7.5	36.5	1.5	S	S	44.4
10,000 to 49,999 lb	43.0	12.5	25.5	11.3	27.3	16.6	28.3
50,000 to 99,999 lb	S	S	S	S	S	S	31.2
100,000 lb or more	S	S	S	S	S	S	32.6
Shallow draft	S	S	S	S	S	S	29.9
Less than 50 lb	S	S	S	S	S	S	31.6
50 to 99 lb	S	S	S	S	S	S	31.6
100 to 499 lb	S	S	S	S	S	S	31.6
500 to 749 lb	S	S	S	S	S	S	31.6
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	S	S	S	S	S	S	32.6
50,000 to 99,999 lb	S	S	S	S	S	S	31.6
100,000 lb or more	S	S	S	S	S	S	31.6

See footnote at end of table.

Table B-4. Measures of Reliability for Shipment Characteristics by Mode of Transportation and Shipment Size for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

Mode of transportation and shipment size	Value		Tons		Ton-miles		Average miles per shipment— coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
Single modes—Con.							
Great Lakes	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	13.4
Less than 50 lb	43.5	.6	49.9	.1	S	S	27.4
50 to 99 lb	S	S	S	S	S	S	33.0
100 to 499 lb	46.7	2.1	44.8	.4	39.0	1.9	22.9
500 to 749 lb	S	S	S	S	S	S	29.8
750 to 999 lb	S	S	S	S	S	S	29.8
1,000 to 9,999 lb	33.3	8.5	36.5	1.6	S	S	44.4
10,000 to 49,999 lb	31.9	12.4	29.3	13.4	27.5	17.7	21.3
50,000 to 99,999 lb	S	S	S	S	S	S	31.6
100,000 lb or more	S	S	S	S	S	S	32.6
Air (includes truck and air)	14.3	—	16.9	—	15.5	—	2.0
Less than 50 lb	27.7	4.2	13.7	.9	14.8	1.0	2.3
50 to 99 lb	36.3	3.9	23.5	1.5	25.9	1.7	3.8
100 to 499 lb	14.4	2.8	21.1	4.6	22.7	4.6	4.1
500 to 749 lb	13.7	1.3	33.0	1.7	20.7	1.4	12.7
750 to 999 lb	19.8	.4	22.9	.5	16.8	.6	14.3
1,000 to 9,999 lb	22.5	1.9	29.9	3.3	33.7	6.6	6.2
10,000 to 49,999 lb	39.6	1.4	25.5	3.6	29.9	3.2	8.0
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	S	S	S	S	S	S	23.7
Pipeline	13.9	—	11.7	—	S	S	S
Less than 50 lb	S	S	S	S	S	S	S
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	S	S	S	S	S	S	S
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	49.0	.4	46.5	—	S	S	S
10,000 to 49,999 lb	S	S	S	S	S	S	S
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	13.9	.4	11.7	.2	S	S	S
Multiple modes	4.3	—	8.4	—	11.8	—	3.9
Less than 50 lb	5.6	1.3	6.6	1.3	5.5	1.3	4.1
50 to 99 lb	5.0	.6	5.2	.5	7.1	.5	4.9
100 to 499 lb	6.3	.9	5.8	1.1	8.9	1.3	3.8
500 to 749 lb	12.6	.2	19.1	.5	35.3	.6	12.5
750 to 999 lb	11.6	.2	23.1	.4	26.3	.4	5.9
1,000 to 9,999 lb	S	S	33.6	.7	30.8	.8	9.3
10,000 to 49,999 lb	14.1	.4	14.2	2.9	17.1	4.4	4.0
50,000 to 99,999 lb	35.7	—	49.1	.4	S	S	22.6
100,000 lb or more	27.0	—	27.1	1.7	42.7	3.1	41.7
Parcel, U.S. Postal Service or courier	4.9	—	6.7	—	11.2	—	3.9
Less than 50 lb	5.6	1.1	6.7	2.8	5.5	3.0	4.1
50 to 99 lb	5.0	.6	5.3	.7	7.0	1.0	4.8
100 to 499 lb	6.4	.8	5.7	1.2	8.9	1.4	3.9
500 to 749 lb	12.9	.3	19.1	1.1	36.0	1.6	13.0
750 to 999 lb	11.1	.2	25.1	.9	29.9	1.2	7.9
1,000 to 9,999 lb	S	S	S	S	S	S	26.4
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Truck and rail	31.0	—	15.3	—	21.1	—	5.1
Less than 50 lb	S	S	S	S	S	S	27.6
50 to 99 lb	S	S	S	S	S	S	25.8
100 to 499 lb	49.9	.3	43.7	—	S	S	17.8
500 to 749 lb	S	S	S	S	S	S	22.2
750 to 999 lb	39.1	.1	42.1	—	46.4	—	19.4
1,000 to 9,999 lb	S	S	16.9	.2	20.0	.4	5.3
10,000 to 49,999 lb	16.8	11.0	17.7	4.0	22.1	1.3	6.0
50,000 to 99,999 lb	36.6	.4	S	S	S	S	27.7
100,000 lb or more	34.7	.9	42.9	4.1	48.7	1.4	47.5
Truck and water	15.1	—	15.6	—	18.4	—	5.3
Less than 50 lb	S	S	S	S	S	S	17.7
50 to 99 lb	S	S	S	S	S	S	21.1
100 to 499 lb	37.0	1.2	30.1	.2	29.4	.2	13.4
500 to 749 lb	42.5	.7	37.8	.3	37.4	.3	10.6
750 to 999 lb	S	S	44.4	.5	44.6	.5	10.7
1,000 to 9,999 lb	28.4	6.8	24.4	2.6	23.2	2.8	4.7
10,000 to 49,999 lb	23.8	7.2	17.1	6.2	19.1	8.0	5.3
50,000 to 99,999 lb	S	S	S	S	S	S	27.9
100,000 lb or more	48.8	1.4	34.9	6.4	S	S	28.0

See footnote at end of table.

Table B-4. Measures of Reliability for Shipment Characteristics by Mode of Transportation and Shipment Size for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

Mode of transportation and shipment size	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
Multiple modes—Con.							
Rail and water	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	35.6
Less than 50 lb	S	S	S	S	S	S	31.6
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	S	S	S	S	S	S	31.6
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	S	S	S	S	S	S	S
10,000 to 49,999 lb	S	S	S	S	S	S	28.6
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Other and unknown modes	7.9	—	20.2	—	26.0	—	19.6
Less than 50 lb	12.4	1.4	7.1	.1	28.2	—	30.3
50 to 99 lb	28.9	1.3	17.2	.1	31.3	—	26.6
100 to 499 lb	26.1	1.8	16.6	.5	26.7	.1	16.4
500 to 749 lb	40.4	.8	30.1	.2	S	S	26.9
750 to 999 lb	14.7	.1	29.0	.2	31.9	—	34.3
1,000 to 9,999 lb	16.0	3.7	31.1	4.6	S	S	13.4
10,000 to 49,999 lb	11.3	2.4	31.9	4.2	33.4	4.5	10.0
50,000 to 99,999 lb	39.7	1.3	S	S	32.3	4.2	43.3
100,000 lb or more	28.8	2.8	25.3	5.1	23.4	6.6	13.8

— Represents data cell equal to zero or less than 1 unit of measure.
D Denotes figures withheld to avoid disclosing data for individual companies.
S Data do not meet publication standards because of high sampling variability or other reasons.

Note: For description of development and uses of measures of reliability, see Appendix B, Reliability of the Estimates.

Table B-5. Measures of Reliability for Shipment Characteristics by Two-Digit Commodity for State of Origin: 1997

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

SCTG code	Commodity description	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
		Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
	All commodities	4.6	—	7.5	—	5.5	—	5.3
01	Live animals and live fish	S	S	S	S	S	S	23.9
02	Cereal grains	36.0	—	46.1	—	S	S	S
03	Other agricultural products	7.8	.2	13.9	.3	11.6	.9	46.6
04	Animal feed and products of animal origin, n.e.c.	18.7	.1	17.4	.4	21.7	.3	29.4
05	Meat, fish, seafood, and their preparations	10.3	.2	16.6	.2	25.1	.3	47.5
06	Milled grain products and preparations, and bakery products	9.8	.2	20.5	.4	16.0	.5	S
07	Other prepared foodstuffs and fats and oils	5.9	.3	13.3	.8	10.8	1.5	13.3
08	Alcoholic beverages	8.3	.2	9.4	.2	25.5	1.2	30.3
09	Tobacco products	22.1	—	37.6	—	34.9	—	36.0
10	Monumental or building stone	S	S	S	S	S	S	S
11	Natural sands	17.8	—	30.4	1.2	25.5	.2	25.3
12	Gravel and crushed stone	17.8	—	22.6	3.0	22.7	.8	10.5
13	Nonmetallic minerals n.e.c.	S	S	25.4	.1	48.6	.6	33.3
14	Metallic ores and concentrates	28.7	—	36.6	—	S	S	18.5
15	Coal	S	S	S	S	S	S	31.6
17	Gasoline and aviation turbine fuel	11.9	.4	10.8	1.6	16.5	.6	35.0
18	Fuel oils	7.6	—	9.5	.7	29.1	.7	18.9
19	Coal and petroleum products, n.e.c.	18.4	.1	20.3	1.2	20.1	.6	S
20	Basic chemicals	15.5	.1	19.0	.1	20.9	.3	20.9
21	Pharmaceutical products	9.7	.2	21.0	—	23.7	—	13.9
22	Fertilizers	14.5	—	S	S	S	S	11.4
23	Chemical products and preparations, n.e.c.	9.1	.3	14.6	—	9.3	.2	15.8
24	Plastics and rubber	7.0	.2	11.5	.1	12.0	.3	15.6
25	Logs and other wood in the rough	12.5	—	24.1	.3	27.1	.2	S
26	Wood products	7.0	.1	9.6	.4	8.9	.4	11.4
27	Pulp, newsprint, paper, and paperboard	12.3	.1	9.2	—	18.8	.3	40.4
28	Paper or paperboard articles	10.6	.1	34.9	.4	17.1	.3	22.9
29	Printed products	6.3	.2	14.8	.1	31.1	.4	18.6
30	Textiles, leather, and articles of textiles or leather	12.3	.7	12.9	—	11.4	.3	4.6
31	Nonmetallic mineral products	7.2	.1	12.5	.7	8.8	.6	19.4
32	Base metal in primary or semifinished forms and in finished basic shapes	10.0	.2	13.6	.2	35.4	1.5	21.0
33	Articles of base metal	6.8	.2	11.3	.1	15.1	.6	15.7
34	Machinery	9.8	.4	24.9	—	35.0	.4	14.3
35	Electronic and other electrical equipment and components and office equipment	8.9	1.8	17.0	.1	31.7	1.2	7.5
36	Motorized and other vehicles (including parts)	10.8	.4	19.8	—	18.1	.3	11.2
37	Transportation equipment, n.e.c.	23.0	.7	28.6	—	25.3	—	9.9
38	Precision instruments and apparatus	5.6	.3	16.2	—	15.6	—	4.9
39	Furniture, mattresses and mattress supports, lamps, lighting fittings, and illuminated signs	11.7	.1	10.7	—	15.4	.2	11.1
40	Miscellaneous manufactured products	38.7	2.6	S	S	S	S	7.8
41	Waste and scrap	20.7	.1	23.4	.8	18.4	.8	49.1
43	Mixed freight	33.1	1.1	42.8	.9	45.5	.7	21.2
--	Commodity unknown	25.6	.2	S	S	28.4	.1	22.6

— Represents data cell equal to zero or less than 1 unit of measure.
D Denotes figures withheld to avoid disclosing data for individual companies.
S Data do not meet publication standards because of high sampling variability or other reasons.

Note: For description of development and uses of measures of reliability, see Appendix B, Reliability of the Estimates.

Table B-6. Measures of Reliability for Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
ALL COMMODITIES							
Total	4.6	—	7.5	—	5.5	—	5.3
Single modes	5.8	1.2	7.9	.9	4.2	2.3	12.8
Truck	6.0	1.4	8.2	1.8	3.4	2.4	14.9
For-hire truck	6.2	1.0	13.7	2.9	4.1	2.1	7.8
Private truck	7.1	1.3	8.5	2.6	8.7	1.7	10.1
Rail	7.1	—	11.3	.3	11.5	1.3	4.5
Water	S	S	S	S	S	S	13.9
Shallow draft	S	S	S	S	S	S	29.9
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	13.4
Air (includes truck and air)	14.3	.7	16.9	—	15.5	.2	2.0
Pipeline	13.9	.2	11.7	.9	S	S	S
Multiple modes	4.3	.9	8.4	—	11.8	.8	3.9
Parcel, U.S. Postal Service or courier	4.9	1.0	6.7	—	11.2	.2	3.9
Truck and rail	31.0	.2	15.3	—	21.1	.8	5.1
Truck and water	15.1	—	15.6	—	18.4	.3	5.3
Rail and water	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	35.6
Other and unknown modes	7.9	.4	20.2	.8	26.0	2.4	19.6
SCTG 01, LIVE ANIMALS AND LIVE FISH							
Total	S	S	S	S	S	S	23.9
Single modes	S	S	S	S	S	S	23.8
Truck	S	S	S	S	S	S	28.2
For-hire truck	—	—	—	—	—	—	—
Private truck	S	S	S	S	S	S	28.2
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	19.8
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	31.6
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	31.6
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	31.6
SCTG 02, CEREAL GRAINS							
Total	36.0	—	46.1	—	S	S	S
Single modes	36.7	1.9	47.1	1.4	S	S	41.5
Truck	39.8	7.2	S	S	S	S	24.0
For-hire truck	40.7	10.8	40.5	11.0	49.3	14.6	28.0
Private truck	45.4	13.9	33.5	15.0	47.5	16.8	21.1
Rail	S	S	S	S	S	S	29.9
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	29.3
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	30.3
Truck and rail	S	S	S	S	S	S	29.9
Truck and water	S	S	S	S	S	S	29.8
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	31.5

See footnote at end of table.

Table B-6. Measures of Reliability for Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 03, OTHER AGRICULTURAL PRODUCTS							
Total	7.8	—	13.9	—	11.6	—	46.6
Single modes	7.6	1.2	13.9	1.3	12.5	2.5	38.3
Truck	7.3	1.2	13.8	1.2	13.6	3.1	49.2
For-hire truck	12.1	4.4	18.0	4.1	21.5	6.2	9.6
Private truck	12.9	4.7	18.3	4.2	32.7	6.5	S
Rail	32.3	.5	27.8	.4	26.7	1.8	12.0
Water	S	S	S	S	S	S	36.6
Shallow draft	S	S	S	S	S	S	31.6
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	35.5
Air (includes truck and air)	30.4	.6	S	S	S	S	7.2
Pipeline	—	—	—	—	S	S	S
Multiple modes	14.2	.7	22.6	.4	22.4	2.1	8.7
Parcel, U.S. Postal Service or courier	36.1	.4	S	S	S	S	10.3
Truck and rail	24.3	.8	27.6	.5	27.1	2.1	11.2
Truck and water	40.3	.2	S	S	S	S	21.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	17.1	.9	21.9	1.5	33.3	2.2	S
SCTG 04, ANIMAL FEED AND PRODUCTS OF ANIMAL ORIGIN, N.E.C.							
Total	18.7	—	17.4	—	21.7	—	29.4
Single modes	18.1	2.5	17.5	2.1	23.1	4.3	35.8
Truck	18.1	2.6	17.4	2.3	23.2	5.0	36.0
For-hire truck	17.2	5.7	25.1	6.2	35.7	9.0	25.2
Private truck	24.7	5.2	20.1	6.3	22.0	7.7	17.3
Rail	47.1	.3	47.1	.4	47.5	.9	21.2
Water	S	S	S	S	S	S	31.0
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	31.0
Air (includes truck and air)	S	S	45.2	—	S	S	28.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	22.8
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	23.5
Truck and rail	S	S	S	S	S	S	30.9
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	44.8	2.1	S	S	S
SCTG 05, MEAT, FISH, SEAFOOD, AND THEIR PREPARATIONS							
Total	10.3	—	16.6	—	25.1	—	47.5
Single modes	10.3	1.0	16.5	.8	23.8	3.7	42.5
Truck	10.2	1.1	16.5	.8	23.8	3.7	27.7
For-hire truck	26.2	5.0	26.9	5.7	30.9	6.8	18.3
Private truck	8.7	4.8	23.4	5.9	18.7	8.4	14.3
Rail	S	S	S	S	S	S	29.9
Water	S	S	S	S	S	S	31.6
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	31.6
Air (includes truck and air)	46.9	.2	45.1	—	S	S	21.1
Pipeline	—	—	—	—	S	S	S
Multiple modes	47.4	.8	S	S	S	S	25.8
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	30.4
Truck and rail	S	S	S	S	S	S	30.3
Truck and water	S	S	S	S	S	S	15.0
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	39.8	.8	45.4	.3	34.5	.4	S

See footnote at end of table.

Table B-6. Measures of Reliability for Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 06, MILLED GRAIN PRODUCTS AND PREPARATIONS, AND BAKERY PRODUCTS							
Total	9.8	—	20.5	—	16.0	—	S
Single modes	10.0	.5	20.8	.8	16.7	2.5	S
Truck	9.8	.8	20.9	1.8	15.9	6.0	S
For-hire truck	19.1	5.4	36.0	7.5	19.2	5.4	S
Private truck	11.6	5.0	15.8	7.0	25.0	4.2	S
Rail	38.5	.6	34.7	1.0	34.2	5.4	13.6
Water	S	S	S	S	S	S	27.2
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	27.2
Air (includes truck and air)	S	S	S	S	S	S	25.8
Pipeline	—	—	—	—	S	S	S
Multiple modes	24.9	.4	19.2	.6	21.3	2.4	10.6
Parcel, U.S. Postal Service or courier	S	S	41.0	—	S	S	25.5
Truck and rail	31.6	.4	23.6	.5	26.8	1.7	16.0
Truck and water	27.3	—	30.2	.2	30.6	1.3	3.7
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	28.0	.4	31.7	.3	29.4	.5	S
SCTG 07, OTHER PREPARED FOODSTUFFS AND FATS AND OILS							
Total	5.9	—	13.3	—	10.8	—	13.3
Single modes	6.3	.7	13.2	.5	10.4	2.0	12.7
Truck	6.9	1.1	13.8	1.1	11.1	4.4	11.0
For-hire truck	9.6	2.9	17.2	5.3	15.3	4.2	18.9
Private truck	8.9	2.9	22.9	5.5	23.1	4.1	10.1
Rail	16.5	.9	15.4	.9	16.9	3.7	4.5
Water	S	S	S	S	S	S	29.2
Shallow draft	S	S	S	S	S	S	49.7
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	29.3
Air (includes truck and air)	43.6	—	42.6	—	49.6	—	18.4
Pipeline	—	—	—	—	S	S	S
Multiple modes	14.8	.4	19.6	.4	21.8	2.0	17.5
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	23.4
Truck and rail	21.7	.4	21.5	.4	22.3	2.0	2.6
Truck and water	19.6	—	33.8	.1	39.5	.6	25.3
Rail and water	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	S
Other and unknown modes	31.4	.8	43.8	.3	30.7	.2	S
SCTG 08, ALCOHOLIC BEVERAGES							
Total	8.3	—	9.4	—	25.5	—	30.3
Single modes	7.9	1.7	8.1	1.6	22.7	5.1	37.7
Truck	8.1	3.0	6.9	3.0	15.3	7.8	7.9
For-hire truck	12.8	3.1	10.5	2.9	14.8	6.9	32.7
Private truck	7.9	3.0	8.2	2.8	24.1	2.1	12.3
Rail	37.4	2.1	32.1	2.0	S	S	18.2
Water	S	S	S	S	S	S	31.6
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	31.6
Air (includes truck and air)	S	S	S	S	S	S	17.5
Pipeline	—	—	—	—	S	S	S
Multiple modes	31.3	1.6	40.4	1.5	40.1	5.4	48.5
Parcel, U.S. Postal Service or courier	S	S	48.2	.2	S	S	26.9
Truck and rail	39.1	1.7	45.0	1.6	43.6	5.8	6.9
Truck and water	S	S	S	S	S	S	10.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	31.6
Other and unknown modes	36.6	.4	47.5	.7	S	S	36.8

See footnote at end of table.

Table B-6. Measures of Reliability for Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 09, TOBACCO PRODUCTS							
Total	22.1	—	37.6	—	34.9	—	36.0
Single modes	23.3	4.8	38.3	4.7	35.2	6.4	15.1
Truck	23.3	4.8	38.3	4.7	35.2	6.4	15.1
For-hire truck	S	S	S	S	S	S	S
Private truck	22.9	4.5	38.7	4.5	34.2	6.5	15.0
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	49.2	2.0	S	S	48.1	4.6	31.6
Parcel, U.S. Postal Service or courier	49.2	2.0	S	S	48.1	4.6	31.6
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	41.8	4.6	46.8	4.6	S	S	S
SCTG 10, MONUMENTAL OR BUILDING STONE							
Total	S	S	S	S	S	S	S
Single modes	S	S	S	S	S	S	31.7
Truck	S	S	S	S	S	S	31.7
For-hire truck	46.6	18.6	47.5	17.4	43.9	17.9	34.7
Private truck	S	S	S	S	S	S	27.2
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	S
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	S
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	33.5
SCTG 11, NATURAL SANDS							
Total	17.8	—	30.4	—	25.5	—	25.3
Single modes	18.1	.7	30.6	.7	23.9	1.2	26.8
Truck	18.2	.7	30.6	.7	24.4	2.1	27.0
For-hire truck	34.9	9.7	24.6	8.6	24.9	7.7	S
Private truck	22.8	8.6	16.6	9.8	12.0	8.4	13.5
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	31.6
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	31.6
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	38.1	.7	S	S	S	S	40.7

See footnote at end of table.

Table B-6. Measures of Reliability for Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 12, GRAVEL AND CRUSHED STONE							
Total	17.8	—	22.6	—	22.7	—	10.5
Single modes	18.9	2.4	24.0	3.1	23.8	2.8	10.2
Truck	19.2	2.8	24.4	3.6	25.6	5.0	10.1
For-hire truck	35.9	7.9	44.0	7.8	37.6	6.5	32.3
Private truck	27.2	7.0	28.3	7.0	28.3	7.3	20.4
Rail	S	S	S	S	49.1	4.0	33.3
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 13, NONMETALLIC MINERALS N.E.C.							
Total	S	S	25.4	—	48.6	—	33.3
Single modes	S	S	25.2	6.7	21.3	16.2	34.7
Truck	S	S	25.3	6.7	20.9	15.5	34.4
For-hire truck	14.4	11.0	20.1	9.0	22.2	11.9	41.3
Private truck	S	S	37.5	7.7	39.3	5.5	18.4
Rail	S	S	S	S	S	S	24.0
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	31.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	34.4	3.0	41.4	1.5	41.0	5.1	36.9
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	27.1
Truck and rail	43.4	3.1	41.7	1.5	41.3	5.1	25.9
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	47.3	4.8	S	S	S	S	30.9
SCTG 14, METALLIC ORES AND CONCENTRATES							
Total	28.7	—	36.6	—	S	S	18.5
Single modes	31.4	8.8	33.5	7.3	31.9	16.1	38.5
Truck	31.4	8.8	33.5	7.3	31.9	16.1	38.5
For-hire truck	46.2	16.5	39.7	14.4	42.1	17.2	S
Private truck	S	S	S	S	S	S	21.6
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	S
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	S
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S

See footnote at end of table.

Table B-6. Measures of Reliability for Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 15, COAL							
Total	S	S	S	S	S	S	31.6
Single modes	-	-	-	-	-	-	-
Truck	-	-	-	-	-	-	-
For-hire truck	-	-	-	-	-	-	-
Private truck	-	-	-	-	-	-	-
Rail	-	-	-	-	-	-	-
Water	-	-	-	-	-	-	-
Shallow draft	-	-	-	-	-	-	-
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	-	-	-	-	-	-	-
Pipeline	-	-	-	-	S	S	S
Multiple modes	-	-	-	-	-	-	-
Parcel, U.S. Postal Service or courier	-	-	-	-	-	-	-
Truck and rail	-	-	-	-	-	-	-
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	S	S	S	S	S	S	31.6
SCTG 17, GASOLINE AND AVIATION TURBINE FUEL							
Total	11.9	-	10.8	-	16.5	-	35.0
Single modes	11.9	.2	10.8	.1	16.5	-	33.3
Truck	13.4	5.7	10.1	6.1	19.5	8.1	34.2
For-hire truck	20.0	2.9	20.0	2.9	39.8	9.0	29.7
Private truck	17.1	5.1	15.0	5.4	19.1	8.5	12.0
Rail	-	-	-	-	-	-	-
Water	S	S	S	S	S	S	31.6
Shallow draft	-	-	-	-	-	-	-
Great Lakes	-	-	-	-	-	-	-
Deep draft	S	S	S	S	S	S	31.6
Air (includes truck and air)	S	S	S	S	S	S	31.6
Pipeline	17.2	3.9	14.9	4.3	S	S	S
Multiple modes	S	S	S	S	S	S	S
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	31.6
Truck and rail	-	-	-	-	-	-	-
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	S	S	S	S	S	S	31.6
Other and unknown modes	S	S	S	S	S	S	32.5
SCTG 18, FUEL OILS							
Total	7.6	-	9.5	-	29.1	-	18.9
Single modes	8.2	2.3	9.0	.7	29.1	-	15.3
Truck	16.3	6.3	18.9	7.2	29.6	15.3	14.7
For-hire truck	35.1	5.5	30.2	6.6	41.8	11.1	24.5
Private truck	14.4	5.3	14.7	3.4	18.3	8.6	8.5
Rail	S	S	S	S	S	S	31.6
Water	S	S	S	S	S	S	36.7
Shallow draft	-	-	-	-	-	-	-
Great Lakes	-	-	-	-	-	-	-
Deep draft	S	S	S	S	S	S	36.7
Air (includes truck and air)	-	-	-	-	-	-	-
Pipeline	18.3	5.5	19.1	7.8	S	S	S
Multiple modes	S	S	S	S	S	S	S
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	31.6
Truck and rail	-	-	-	-	-	-	-
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	S	S	S	S	S	S	31.6
Other and unknown modes	44.5	2.3	S	S	S	S	S

See footnote at end of table.

Table B-6. Measures of Reliability for Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 19, COAL AND PETROLEUM PRODUCTS, N.E.C.							
Total	18.4	—	20.3	—	20.1	—	S
Single modes	17.8	6.6	22.1	4.4	11.1	8.6	S
Truck	19.4	7.3	25.2	7.2	12.3	7.4	20.5
For-hire truck	25.4	6.0	34.3	7.5	14.8	5.7	37.2
Private truck	22.4	3.8	26.3	4.3	17.7	2.3	18.7
Rail	13.1	1.0	14.0	1.0	25.2	5.1	22.2
Water	S	S	S	S	S	S	S
Shallow draft	S	S	S	S	S	S	31.6
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	S
Air (includes truck and air)	S	S	S	S	S	S	27.2
Pipeline	37.8	4.0	42.0	3.9	S	S	S
Multiple modes	36.2	1.3	S	S	41.6	2.0	S
Parcel, U.S. Postal Service or courier	44.3	.3	49.1	—	38.5	—	S
Truck and rail	S	S	S	S	S	S	S
Truck and water	S	S	S	S	S	S	25.8
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 20, BASIC CHEMICALS							
Total	15.5	—	19.0	—	20.9	—	20.9
Single modes	17.5	6.4	15.4	3.3	21.3	1.7	28.9
Truck	17.1	6.5	17.0	3.7	24.2	8.0	27.9
For-hire truck	23.6	5.2	11.3	6.0	30.4	5.4	13.2
Private truck	17.6	5.8	26.2	5.8	32.2	5.3	26.4
Rail	29.9	2.0	21.4	2.3	26.4	8.8	17.7
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	20.6
Pipeline	S	S	S	S	S	S	S
Multiple modes	46.9	6.2	S	S	S	S	14.4
Parcel, U.S. Postal Service or courier	47.7	6.1	S	S	S	S	14.5
Truck and rail	48.8	.3	S	S	S	S	26.0
Truck and water	S	S	S	S	S	S	29.8
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	42.6	1.3	S	S	S	S	33.5
SCTG 21, PHARMACEUTICAL PRODUCTS							
Total	9.7	—	21.0	—	23.7	—	13.9
Single modes	14.6	5.0	25.0	4.3	27.0	4.8	15.7
Truck	16.8	5.4	25.9	4.9	11.2	8.5	13.5
For-hire truck	11.5	3.1	12.2	5.5	15.6	9.8	14.9
Private truck	23.0	5.4	38.6	6.9	S	S	15.8
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	24.3	2.3	29.2	.3	28.2	.6	4.2
Pipeline	—	—	—	—	S	S	S
Multiple modes	19.7	4.6	23.9	3.3	21.4	1.8	19.1
Parcel, U.S. Postal Service or courier	19.7	4.6	23.8	3.2	23.5	1.5	19.1
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	S	S	S	S	S	S	31.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	27.8

See footnote at end of table.

Table B-6. Measures of Reliability for Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 22, FERTILIZERS							
Total	14.5	—	S	S	S	S	11.4
Single modes	14.5	.9	S	S	S	S	11.0
Truck	14.9	.9	S	S	S	S	9.9
For-hire truck	17.7	3.2	16.4	5.7	23.1	8.4	18.9
Private truck	16.4	3.1	S	S	S	S	11.1
Rail	46.4	.7	45.9	.8	49.8	3.4	24.9
Water	S	S	S	S	S	S	29.8
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	29.8
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	S
Parcel, U.S. Postal Service or courier	39.9	—	48.3	—	S	S	S
Truck and rail	—	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S	31.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 23, CHEMICAL PRODUCTS AND PREPARATIONS, N.E.C.							
Total	9.1	—	14.6	—	9.3	—	15.8
Single modes	7.8	3.4	15.8	2.0	9.5	1.1	14.9
Truck	7.3	3.4	16.3	2.3	11.0	4.9	17.5
For-hire truck	12.4	4.0	18.2	2.7	11.8	5.0	6.8
Private truck	11.0	3.1	15.5	2.8	16.9	1.3	15.0
Rail	34.2	.4	46.9	1.0	46.6	4.9	13.1
Water	S	S	S	S	S	S	29.9
Shallow draft	S	S	S	S	S	S	31.6
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	29.8
Air (includes truck and air)	S	S	47.5	.2	38.5	.8	7.3
Pipeline	—	—	—	—	S	S	S
Multiple modes	12.4	1.7	12.2	.4	14.3	.7	26.8
Parcel, U.S. Postal Service or courier	12.4	1.6	14.1	.4	17.3	.4	27.0
Truck and rail	S	S	S	S	S	S	23.6
Truck and water	41.2	.2	34.2	.2	33.6	.7	15.2
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	49.0	1.9	27.8	.6	27.1
SCTG 24, PLASTICS AND RUBBER							
Total	7.0	—	11.5	—	12.0	—	15.6
Single modes	8.8	3.5	13.2	2.5	15.5	3.6	24.3
Truck	9.2	3.4	13.4	2.5	16.9	4.4	25.3
For-hire truck	8.2	3.2	11.8	4.9	17.5	4.3	10.0
Private truck	15.7	3.5	20.7	4.4	26.0	2.2	28.9
Rail	38.8	.6	S	S	29.3	1.9	21.6
Water	S	S	S	S	S	S	30.0
Shallow draft	S	S	S	S	S	S	31.6
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	30.4
Air (includes truck and air)	25.3	.2	S	S	S	S	4.7
Pipeline	—	—	—	—	S	S	S
Multiple modes	19.6	3.4	15.4	1.0	15.7	3.2	7.6
Parcel, U.S. Postal Service or courier	19.8	3.2	19.7	.8	23.2	2.4	7.6
Truck and rail	S	S	27.7	.5	29.1	2.2	15.3
Truck and water	S	S	S	S	S	S	14.9
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	18.4	1.1	38.6	2.3	21.1	.8	47.0

See footnote at end of table.

Table B-6. Measures of Reliability for Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 25, LOGS AND OTHER WOOD IN THE ROUGH							
Total	12.5	—	24.1	—	27.1	—	S
Single modes	12.7	.7	24.2	.2	27.7	1.6	16.3
Truck	12.7	4.2	24.7	1.3	19.2	10.1	18.3
For-hire truck	18.9	6.9	29.6	5.8	23.7	8.4	16.7
Private truck	26.3	6.0	26.7	5.5	27.3	5.4	30.8
Rail	S	S	S	S	S	S	27.9
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	34.7	.6	S	S	37.6	1.3	S
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	43.2
Truck and rail	42.5	.6	43.8	—	46.7	1.2	26.0
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 26, WOOD PRODUCTS							
Total	7.0	—	9.6	—	8.9	—	11.4
Single modes	7.4	2.0	10.0	1.2	9.2	1.5	10.8
Truck	7.8	2.3	10.1	1.2	9.3	1.7	11.1
For-hire truck	9.2	2.8	14.9	4.5	8.9	3.0	11.2
Private truck	9.5	2.2	12.7	3.5	20.7	2.5	14.1
Rail	16.1	.9	14.8	.7	14.0	2.4	7.4
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	21.8
Pipeline	—	—	—	—	S	S	S
Multiple modes	18.2	.3	27.6	.1	32.2	.8	11.6
Parcel, U.S. Postal Service or courier	18.7	.2	23.3	—	18.6	—	11.9
Truck and rail	29.9	.3	31.7	.1	34.3	.8	12.3
Truck and water	S	S	S	S	S	S	27.9
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	39.6	2.2	26.8	1.2	29.5	1.3	48.3
SCTG 27, PULP, NEWSPRINT, PAPER, AND PAPERBOARD							
Total	12.3	—	9.2	—	18.8	—	40.4
Single modes	8.1	4.8	9.2	2.0	19.1	4.5	9.0
Truck	8.6	4.6	10.5	2.4	22.1	5.4	8.0
For-hire truck	20.1	4.5	22.6	5.5	24.8	5.5	26.1
Private truck	8.0	4.8	9.4	4.8	22.6	3.6	12.2
Rail	25.0	1.1	22.8	2.4	31.5	4.7	27.9
Water	S	S	S	S	S	S	31.6
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	31.6
Air (includes truck and air)	S	S	S	S	S	S	25.5
Pipeline	—	—	—	—	S	S	S
Multiple modes	38.2	1.1	S	S	S	S	30.5
Parcel, U.S. Postal Service or courier	S	S	24.0	—	19.1	.1	31.4
Truck and rail	S	S	S	S	S	S	29.5
Truck and water	S	S	S	S	S	S	24.0
Rail and water	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	31.6
Other and unknown modes	S	S	39.8	2.1	36.2	3.9	S

See footnote at end of table.

Table B-6. Measures of Reliability for Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 28, PAPER OR PAPERBOARD ARTICLES							
Total	10.6	—	34.9	—	17.1	—	22.9
Single modes	10.8	1.3	35.8	1.3	17.0	1.8	13.6
Truck	11.0	1.4	36.1	1.3	17.7	4.9	13.8
For-hire truck	16.7	3.5	37.1	5.2	20.6	4.4	9.9
Private truck	11.0	3.3	38.0	4.2	20.0	3.3	14.3
Rail	S	S	46.9	.5	46.4	4.7	23.6
Water	S	S	S	S	S	S	29.8
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	29.8
Air (includes truck and air)	S	S	S	S	42.1	—	20.5
Pipeline	—	—	—	—	S	S	S
Multiple modes	41.4	1.5	31.2	.3	30.6	1.8	10.4
Parcel, U.S. Postal Service or courier	49.8	1.5	45.2	.3	41.2	1.1	10.7
Truck and rail	S	S	S	S	S	S	32.8
Truck and water	47.6	—	48.6	—	S	S	36.2
Rail and water	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	31.6
Other and unknown modes	34.4	1.0	S	S	25.9	.3	S
SCTG 29, PRINTED PRODUCTS							
Total	6.3	—	14.8	—	31.1	—	18.6
Single modes	4.6	3.0	12.9	1.9	17.4	11.1	43.8
Truck	5.0	2.9	13.2	2.1	19.4	10.7	S
For-hire truck	7.9	2.5	10.4	3.8	22.7	9.7	12.2
Private truck	9.6	3.3	16.8	4.4	10.8	2.7	34.8
Rail	S	S	S	S	S	S	46.7
Water	S	S	S	S	S	S	27.9
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	27.9
Air (includes truck and air)	26.7	.5	48.9	.5	38.4	1.8	9.4
Pipeline	—	—	—	—	S	S	S
Multiple modes	18.1	2.9	22.2	.9	32.1	5.5	17.9
Parcel, U.S. Postal Service or courier	18.2	2.9	22.4	.9	32.6	5.5	17.9
Truck and rail	—	—	—	—	—	—	—
Truck and water	S	S	30.1	—	30.1	.1	14.9
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	22.4	1.2	48.7	1.7	S	S	47.7
SCTG 30, TEXTILES, LEATHER, AND ARTICLES OF TEXTILES OR LEATHER							
Total	12.3	—	12.9	—	11.4	—	4.6
Single modes	12.4	3.8	14.4	2.1	11.7	1.7	8.8
Truck	13.5	4.3	14.8	2.4	12.5	2.5	10.7
For-hire truck	16.8	4.2	7.2	4.1	11.9	3.5	9.3
Private truck	11.7	2.6	25.0	5.0	30.1	3.3	30.8
Rail	46.0	—	49.6	.1	S	S	35.6
Water	S	S	S	S	S	S	31.0
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	31.0
Air (includes truck and air)	33.5	1.3	44.0	.5	43.7	1.1	4.7
Pipeline	S	S	S	S	S	S	S
Multiple modes	25.3	3.4	15.6	1.7	15.0	1.5	3.9
Parcel, U.S. Postal Service or courier	25.0	3.4	11.9	1.5	11.6	2.0	3.9
Truck and rail	S	S	S	S	S	S	26.6
Truck and water	S	S	S	S	S	S	21.1
Rail and water	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	31.6
Other and unknown modes	14.7	.6	14.3	.6	22.6	.6	32.8

See footnote at end of table.

Table B-6. Measures of Reliability for Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 31, NONMETALLIC MINERAL PRODUCTS							
Total	7.2	—	12.5	—	8.8	—	19.4
Single modes	7.7	1.4	12.4	.7	9.6	3.5	33.2
Truck	8.0	1.6	13.5	1.6	6.2	4.2	33.8
For-hire truck	9.9	3.9	6.8	3.3	5.3	3.1	13.5
Private truck	16.5	4.8	19.3	4.0	18.3	3.7	44.6
Rail	31.4	.7	30.2	1.5	37.9	4.8	18.2
Water	S	S	S	S	S	S	31.6
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	31.6
Air (includes truck and air)	47.7	.3	S	S	S	S	26.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	18.1	1.2	43.4	.1	42.8	1.3	12.2
Parcel, U.S. Postal Service or courier	19.0	1.2	20.3	—	20.9	.1	12.4
Truck and rail	S	S	S	S	S	S	27.9
Truck and water	S	S	40.9	—	40.9	.7	18.3
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	25.7	1.2	33.1	.7	36.8	2.8	S
SCTG 32, BASE METAL IN PRIMARY OR SEMIFINISHED FORMS AND IN FINISHED BASIC SHAPES							
Total	10.0	—	13.6	—	35.4	—	21.0
Single modes	11.1	3.1	13.3	3.1	18.7	7.9	23.6
Truck	11.3	3.1	13.6	3.1	18.4	7.9	18.2
For-hire truck	15.3	3.6	21.0	4.9	21.6	7.6	13.9
Private truck	10.8	3.4	16.9	4.5	19.8	1.9	15.0
Rail	36.3	.3	35.6	.6	42.3	1.9	24.0
Water	S	S	S	S	S	S	34.4
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	34.4
Air (includes truck and air)	48.7	.6	S	S	S	S	10.4
Pipeline	—	—	—	—	S	S	S
Multiple modes	43.7	2.2	21.0	.2	23.0	1.1	10.4
Parcel, U.S. Postal Service or courier	46.2	2.3	43.8	.2	S	S	10.5
Truck and rail	48.6	—	47.6	.1	43.9	.3	25.8
Truck and water	S	S	46.7	.1	44.2	.7	24.0
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	34.0	2.2	37.7	3.1	S	S	S
SCTG 33, ARTICLES OF BASE METAL							
Total	6.8	—	11.3	—	15.1	—	15.7
Single modes	12.5	5.7	12.2	4.0	11.1	6.4	9.9
Truck	13.3	5.9	13.3	4.5	11.4	5.8	9.0
For-hire truck	15.1	4.5	9.7	3.6	11.9	5.0	14.4
Private truck	12.8	2.3	19.7	3.2	23.8	1.3	10.3
Rail	34.4	.3	30.3	1.0	39.1	3.3	20.3
Water	S	S	S	S	S	S	29.8
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	29.8
Air (includes truck and air)	32.2	.6	48.2	.7	S	S	6.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	18.0	5.3	23.3	1.0	S	S	15.1
Parcel, U.S. Postal Service or courier	18.3	5.4	18.3	1.0	15.2	1.4	15.1
Truck and rail	48.1	—	S	S	S	S	27.8
Truck and water	S	S	S	S	S	S	19.4
Rail and water	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	31.2
Other and unknown modes	25.4	1.9	28.9	4.3	27.2	5.5	19.1

See footnote at end of table.

Table B-6. Measures of Reliability for Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 34, MACHINERY							
Total	9.8	—	24.9	—	35.0	—	14.3
Single modes	9.5	2.7	21.3	3.3	25.7	5.6	11.1
Truck	6.7	3.2	18.8	3.7	18.9	6.8	12.4
For-hire truck	10.1	3.6	26.5	3.6	23.6	6.8	9.4
Private truck	14.3	2.7	18.0	4.4	S	S	20.3
Rail	38.5	.1	42.4	.3	45.2	1.3	21.6
Water	S	S	S	S	S	S	S
Shallow draft	S	S	S	S	S	S	31.6
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	31.6
Air (includes truck and air)	43.3	1.9	S	S	S	S	3.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	16.5	2.0	15.7	2.0	27.8	4.6	10.6
Parcel, U.S. Postal Service or courier	16.5	2.0	15.7	2.0	28.9	4.6	10.6
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	41.2	—	S	S	S	S	21.1
Rail and water	—	—	—	—	—	—	—
Other multiple modes	S	S	S	S	S	S	31.6
Other and unknown modes	27.0	2.1	S	S	S	S	S
SCTG 35, ELECTRONIC AND OTHER ELECTRICAL EQUIPMENT AND COMPONENTS AND OFFICE EQUIPMENT							
Total	8.9	—	17.0	—	31.7	—	7.5
Single modes	13.1	3.7	20.0	3.8	36.5	5.2	13.3
Truck	11.8	3.0	21.6	4.6	39.4	6.0	12.0
For-hire truck	15.2	3.0	26.9	5.6	41.7	6.1	10.7
Private truck	6.9	1.1	14.5	3.4	24.3	1.6	19.9
Rail	35.7	.1	S	S	39.2	1.0	19.6
Water	43.3	—	S	S	S	S	29.6
Shallow draft	S	S	S	S	S	S	31.6
Great Lakes	—	—	—	—	—	—	—
Deep draft	43.5	—	S	S	S	S	30.3
Air (includes truck and air)	23.4	1.6	32.9	.9	29.0	1.5	3.0
Pipeline	S	S	S	S	S	S	S
Multiple modes	11.2	2.7	12.3	1.4	17.0	2.6	6.0
Parcel, U.S. Postal Service or courier	11.5	2.8	13.0	1.5	17.5	2.6	6.0
Truck and rail	S	S	S	S	S	S	23.8
Truck and water	S	S	S	S	39.7	.1	21.8
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	26.2	1.6	30.5	2.9	44.8	4.0	29.2
SCTG 36, MOTORIZED AND OTHER VEHICLES (INCLUDING PARTS)							
Total	10.8	—	19.8	—	18.1	—	11.2
Single modes	11.2	3.3	21.5	4.3	18.3	5.1	22.6
Truck	11.4	3.1	21.9	4.2	19.7	5.2	31.4
For-hire truck	14.2	3.0	18.3	6.1	19.0	6.5	19.4
Private truck	15.3	2.6	34.6	7.8	41.3	7.5	24.2
Rail	39.9	.3	38.8	.3	41.3	1.2	22.2
Water	S	S	S	S	S	S	31.6
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	31.6
Air (includes truck and air)	35.2	1.6	38.7	.7	38.4	3.3	3.1
Pipeline	—	—	—	—	S	S	S
Multiple modes	17.6	2.7	11.3	1.2	15.7	2.5	6.4
Parcel, U.S. Postal Service or courier	17.8	2.7	13.0	1.2	17.1	2.3	6.3
Truck and rail	S	S	S	S	S	S	26.0
Truck and water	S	S	S	S	S	S	23.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	27.2	2.7	34.4	4.2	39.1	4.0	35.2

See footnote at end of table.

Table B-6. Measures of Reliability for Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 37, TRANSPORTATION EQUIPMENT, N.E.C.							
Total	23.0	—	28.6	—	25.3	—	9.9
Single modes	27.8	6.1	34.3	5.9	31.4	8.6	21.3
Truck	22.7	7.6	36.5	5.8	34.5	8.7	36.9
For-hire truck	33.1	7.0	S	S	38.1	9.0	16.5
Private truck	20.1	2.7	30.2	5.0	49.5	2.3	S
Rail	S	S	S	S	S	S	30.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	45.7	9.5	32.1	1.9	31.9	4.3	4.3
Pipeline	—	—	—	—	S	S	S
Multiple modes	37.2	6.5	41.6	6.3	S	S	8.5
Parcel, U.S. Postal Service or courier	16.0	3.5	44.0	4.9	S	S	8.6
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	42.0	1.7	41.3	3.5	22.7
SCTG 38, PRECISION INSTRUMENTS AND APPARATUS							
Total	5.6	—	16.2	—	15.6	—	4.9
Single modes	8.9	3.3	18.9	2.7	18.1	3.7	12.7
Truck	6.9	2.4	20.8	3.6	17.1	4.1	17.9
For-hire truck	8.7	2.2	22.3	5.7	18.2	4.6	15.0
Private truck	21.2	2.6	34.5	5.5	27.8	1.4	25.5
Rail	S	S	S	S	S	S	31.6
Water	S	S	S	S	S	S	31.6
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	31.6
Air (includes truck and air)	21.9	2.8	28.6	2.3	34.4	3.9	2.2
Pipeline	—	—	—	—	S	S	S
Multiple modes	11.3	3.6	11.2	1.9	14.1	4.2	5.2
Parcel, U.S. Postal Service or courier	11.3	3.6	10.4	1.9	12.1	4.4	5.2
Truck and rail	—	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S	29.8
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	29.4	1.4	41.1	1.9	S	S	S
SCTG 39, FURNITURE, MATTRESSES AND MATTRESS SUPPORTS, LAMPS, LIGHTING FITTINGS, AND ILLUMINATED SIGNS							
Total	11.7	—	10.7	—	15.4	—	11.1
Single modes	9.1	4.8	12.7	2.7	18.1	3.2	12.9
Truck	9.2	4.7	13.0	2.6	19.7	3.7	10.7
For-hire truck	14.1	4.5	18.4	4.4	22.1	5.5	10.3
Private truck	8.9	3.5	10.7	2.9	32.5	3.0	19.2
Rail	41.8	.3	44.6	.7	S	S	S
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	37.0	—	24.4	—	25.3	.1	12.0
Pipeline	—	—	—	—	S	S	S
Multiple modes	36.7	3.6	27.9	1.6	24.3	3.1	10.2
Parcel, U.S. Postal Service or courier	41.8	3.6	38.3	1.5	37.6	2.8	10.6
Truck and rail	41.4	.6	33.3	.5	32.4	1.3	16.0
Truck and water	S	S	S	S	S	S	21.1
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	36.2	1.7	S	S	33.0

See footnote at end of table.

Table B-6. Measures of Reliability for Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 40, MISCELLANEOUS MANUFACTURED PRODUCTS							
Total	38.7	—	S	S	S	S	7.8
Single modes	S	S	38.3	6.2	21.7	11.7	17.4
Truck	S	S	38.5	6.1	20.5	11.2	19.5
For-hire truck	39.0	1.4	29.5	8.1	16.4	10.2	9.6
Private truck	S	S	48.0	6.7	45.1	1.8	40.9
Rail	35.2	.2	41.6	.4	43.1	1.3	19.3
Water	S	S	S	S	S	S	31.9
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	31.9
Air (includes truck and air)	22.8	1.1	S	S	S	S	3.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	16.8	5.5	27.6	1.2	33.6	2.9	4.5
Parcel, U.S. Postal Service or courier	17.2	5.4	28.9	1.1	36.1	2.2	4.5
Truck and rail	25.5	.2	26.9	.2	27.2	1.1	14.0
Truck and water	S	S	49.1	—	49.1	.1	23.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	32.3	.6	S	S	S	S	22.3
SCTG 41, WASTE AND SCRAP							
Total	20.7	—	23.4	—	18.4	—	49.1
Single modes	21.9	7.2	25.2	7.3	25.0	10.9	S
Truck	22.6	7.0	25.6	7.4	27.3	11.0	S
For-hire truck	25.8	7.0	36.5	5.3	38.0	8.8	26.2
Private truck	35.0	8.5	30.0	7.1	39.0	8.2	S
Rail	27.6	1.2	32.9	.8	31.8	3.1	16.9
Water	S	S	S	S	S	S	31.6
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	31.6
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	31.6	.7	41.1	.6	41.4	4.0	15.0
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	29.8
Truck and rail	36.1	.6	31.5	.2	32.7	1.6	21.1
Truck and water	S	S	S	S	S	S	27.9
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	42.6	7.1	47.8	7.3	43.9	11.5	26.0
SCTG 43, MIXED FREIGHT							
Total	33.1	—	42.8	—	45.5	—	21.2
Single modes	33.6	1.0	43.2	.9	43.8	3.7	18.8
Truck	33.7	1.1	43.2	.9	44.6	3.5	19.8
For-hire truck	48.4	2.1	28.6	2.3	36.3	6.8	18.1
Private truck	35.3	2.2	44.1	2.5	S	S	19.5
Rail	—	—	—	—	—	—	—
Water	S	S	S	S	S	S	36.3
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	36.3
Air (includes truck and air)	S	S	S	S	S	S	22.1
Pipeline	—	—	—	—	S	S	S
Multiple modes	32.2	.9	41.9	.3	S	S	18.6
Parcel, U.S. Postal Service or courier	35.2	1.0	31.2	.4	35.1	3.2	18.7
Truck and rail	S	S	S	S	S	S	30.3
Truck and water	S	S	S	S	S	S	23.5
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	24.7

See footnote at end of table.

Table B-6. **Measures of Reliability for Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997—Con.**

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
COMMODITY UNKNOWN							
Total	25.6	—	S	S	28.4	—	22.6
Single modes	29.0	4.4	S	S	32.2	5.4	26.1
Truck	31.7	4.7	S	S	32.8	7.3	27.8
For-hire truck	S	S	S	S	41.1	10.0	12.4
Private truck	24.3	7.2	22.4	10.9	25.3	4.8	S
Rail	S	S	S	S	S	S	32.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	49.6	.3	S	S	19.4
Pipeline	—	—	—	—	S	S	S
Multiple modes	27.8	4.3	S	S	35.8	2.9	34.5
Parcel, U.S. Postal Service or courier	28.3	4.3	29.7	.9	26.9	2.2	34.5
Truck and rail	S	S	S	S	S	S	S
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	45.0	2.8	S	S	S

— Represents data cell equal to zero or less than 1 unit of measure.
D Denotes figures withheld to avoid disclosing data for individual companies.
S Data do not meet publication standards because of high sampling variability or other reasons.

Note: For description of development and uses of measures of reliability, see Appendix B, Reliability of the Estimates.

Table B-7. **Measures of Reliability for Shipment Characteristics by State of Destination for State of Origin: 1997**

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

State of destination	Value		Tons		Ton-miles	
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage
Total	4.6	—	7.5	—	5.5	—
NEW ENGLAND STATES						
Connecticut	9.1	—	38.4	—	38.3	.4
Maine	21.5	—	26.5	—	27.4	—
Massachusetts	12.7	.2	20.9	—	20.6	.4
New Hampshire	S	S	35.8	—	35.6	.2
Rhode Island	29.3	—	32.3	—	32.2	—
Vermont	24.9	—	31.0	—	31.1	—
MIDDLE ATLANTIC STATES						
New Jersey	19.6	.3	18.3	—	18.4	.8
New York	16.1	.2	11.4	—	11.2	.5
Pennsylvania	17.7	.2	24.5	—	23.5	.4
EAST NORTH CENTRAL STATES						
Illinois	10.2	.1	17.9	—	16.7	.7
Indiana	11.0	—	28.5	—	28.3	.2
Michigan	11.7	.2	11.2	—	11.6	.3
Ohio	12.4	.1	20.6	—	20.3	.6
Wisconsin	16.0	.1	14.6	—	14.1	.2
WEST NORTH CENTRAL STATES						
Iowa	11.9	—	10.8	—	11.2	—
Kansas	21.7	—	18.6	—	19.8	.1
Minnesota	8.3	—	31.1	—	31.5	.3
Missouri	33.1	.2	15.4	—	16.0	.2
Nebraska	18.3	—	20.8	—	21.4	—
North Dakota	26.8	—	S	S	S	S
South Dakota	35.7	—	31.0	—	34.6	—
SOUTH ATLANTIC STATES						
Delaware	25.9	—	S	S	S	S
District of Columbia	15.7	—	20.8	—	20.8	—
Florida	11.3	.3	10.7	—	11.4	.5
Georgia	25.1	.3	12.5	—	13.8	.3
Maryland	20.4	—	11.0	—	10.7	.1
North Carolina	7.4	—	16.8	—	16.9	.3
South Carolina	27.4	.1	11.4	—	13.0	—
Virginia	14.2	—	12.6	—	12.6	.1
West Virginia	17.7	—	46.0	—	49.0	—
EAST SOUTH CENTRAL STATES						
Alabama	13.3	—	19.8	—	19.9	.1
Kentucky	35.7	.2	15.2	—	15.8	—
Mississippi	32.4	—	25.9	—	25.9	.1
Tennessee	9.0	—	11.3	—	11.2	.1
WEST SOUTH CENTRAL STATES						
Arkansas	33.6	.2	20.0	—	16.8	.1
Louisiana	8.1	—	20.0	—	20.1	.2
Oklahoma	23.5	.1	21.9	—	21.8	.1
Texas	6.5	.3	31.6	.2	20.4	.8
MOUNTAIN STATES						
Arizona	13.7	.3	16.2	.3	13.0	.5
Colorado	16.8	.1	6.3	—	6.0	—
Idaho	14.7	—	10.5	—	10.8	—
Montana	26.0	—	23.8	—	25.2	—
Nevada	33.6	.5	15.8	.2	17.8	.2
New Mexico	15.0	—	16.3	—	17.6	—
Utah	11.1	—	8.4	—	9.3	.1
Wyoming	17.7	—	24.9	—	25.3	—
PACIFIC STATES						
Alaska	20.7	—	43.4	—	47.1	.1
California	4.2	1.3	8.1	.7	5.5	1.7
Hawaii	24.6	.1	12.8	—	12.9	.3
Oregon	23.4	.3	14.6	.2	15.5	.5
Washington	6.9	.2	12.4	—	15.1	.4

— Represents data cell equal to zero or less than 1 unit of measure.
D Denotes figures withheld to avoid disclosing data for individual companies.
S Data do not meet publication standards because of high sampling variability or other reasons.

Note: For description of development and uses of measures of reliability, see Appendix B, Reliability of the Estimates.

Table B-8. Measures of Reliability for Inbound Shipment Characteristics by State of Origin for State of Destination: 1997

[For explanation of terms and meaning of abbreviations and symbols, see introductory text]

State of origin	Value		Tons		Ton-miles	
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage
Total	3.1	—	7.0	—	7.0	—
NEW ENGLAND STATES						
Connecticut	9.2	—	22.1	—	21.5	.2
Maine	9.7	—	18.7	—	18.5	—
Massachusetts	11.8	.1	22.6	—	21.4	.2
New Hampshire	18.7	—	23.4	—	23.4	—
Rhode Island	18.5	—	25.0	—	25.5	—
Vermont	29.4	—	27.5	—	27.7	—
MIDDLE ATLANTIC STATES						
New Jersey	8.6	.1	20.9	—	24.0	.5
New York	10.2	.1	10.1	—	10.3	.2
Pennsylvania	15.4	.2	13.4	—	13.6	.4
EAST NORTH CENTRAL STATES						
Illinois	3.2	.1	10.3	—	10.5	.5
Indiana	16.5	.2	11.4	—	11.4	.3
Michigan	13.7	.2	8.3	—	8.7	.2
Ohio	13.8	.3	17.2	.1	16.6	.8
Wisconsin	7.1	—	10.9	—	10.3	.3
WEST NORTH CENTRAL STATES						
Iowa	14.6	—	37.5	.3	37.6	1.5
Kansas	13.4	—	27.0	.2	28.3	.9
Minnesota	9.5	—	15.9	—	15.3	.2
Missouri	11.3	.1	12.9	—	12.7	.3
Nebraska	13.8	—	48.8	.2	49.9	1.6
North Dakota	42.7	—	S	S	S	S
South Dakota	30.2	—	21.1	—	21.5	—
SOUTH ATLANTIC STATES						
Delaware	24.5	—	33.7	—	33.3	—
District of Columbia	S	S	S	S	S	S
Florida	14.1	.1	16.2	—	17.1	.2
Georgia	21.6	.2	9.8	—	10.0	.2
Maryland	21.8	—	14.6	—	15.3	—
North Carolina	4.0	—	14.3	—	15.2	.3
South Carolina	12.1	—	7.5	—	8.0	—
Virginia	14.3	—	9.9	—	10.5	—
West Virginia	24.8	—	29.5	—	30.2	.1
EAST SOUTH CENTRAL STATES						
Alabama	8.5	—	30.3	—	32.7	.5
Kentucky	14.2	.1	9.5	—	9.4	.1
Mississippi	17.8	—	14.0	—	14.2	.1
Tennessee	22.0	.2	8.7	—	8.4	.2
WEST SOUTH CENTRAL STATES						
Arkansas	6.4	—	6.6	—	7.4	.1
Louisiana	17.8	—	20.2	—	19.2	.3
Oklahoma	30.0	.1	12.2	—	12.6	.1
Texas	18.1	.6	22.5	.4	35.0	2.8
MOUNTAIN STATES						
Arizona	19.3	.3	22.3	.1	24.9	.2
Colorado	6.8	—	26.4	—	27.7	.4
Idaho	29.6	.1	12.2	—	13.9	—
Montana	15.1	—	29.6	—	29.0	.2
Nevada	10.3	—	16.6	—	16.3	—
New Mexico	19.8	—	37.5	—	40.5	.1
Utah	13.3	.1	23.8	.4	25.0	1.0
Wyoming	30.0	—	30.5	—	30.6	.1
PACIFIC STATES						
Alaska	S	S	S	S	S	S
California	4.2	1.1	8.1	1.1	5.5	1.1
Hawaii	22.8	—	43.9	—	44.0	—
Oregon	8.5	.1	6.3	.1	7.1	.3
Washington	17.7	.3	17.2	.2	20.5	1.0

— Represents data cell equal to zero or less than 1 unit of measure.
D Denotes figures withheld to avoid disclosing data for individual companies.
S Data do not meet publication standards because of high sampling variability or other reasons.

Note: For description of development and uses of measures of reliability, see Appendix B, Reliability of the Estimates.

Appendix C.

Sample Design, Data Collection, and Estimation

INTRODUCTION

The primary goal for the 1997 Commodity Flow Survey (CFS) is to estimate shipping volumes (value, tons, and ton-miles) by commodity and mode of transportation at varying levels of geographic detail. A detailed description of the sample design for the 1997 CFS is provided below.

SAMPLE DESIGN

The sample for the 1997 CFS is selected using a stratified three-stage design in which the first-stage sampling units are establishments, the second-stage sampling units are groups of four 1-week periods (reporting weeks) within the survey year, and the third-stage sampling units are shipments.

First Stage

To create the first-stage sampling frame, we extracted a subset of establishment records from the 1995 Standard Statistical Establishment List (SSEL). The SSEL is a database, maintained by the Bureau of the Census, that contains a record for each establishment with employees. (An establishment is a single physical location where business transactions take place.) Establishments having nonzero payroll in 1994 and classified in the mining, manufacturing, wholesale, or selected retail industries, as defined by the 1987 Standard Industrial Classification (SIC) Manual, are included on the sampling frame. Auxiliary establishments (e.g. warehouses and central administrative offices) with shipping activity are also included. Auxiliary establishments are establishments that are primarily involved in rendering support services for other establishments within the same company, instead of for the public, government, or other business firms. All other establishments contained on the sampling frame are referred to as nonauxiliary establishments. For each establishment we extracted sales, payroll, number of employees, name and address information, as well as a primary identifier. We also computed a measure of size for each establishment. The measure of size for a particular establishment is designed to approximate the establishment's total value of shipments for 1994.

To reduce the amount of sampling variability and because estimates are desired for each commodity, we used a stratified design with a certainty component for each three-digit SIC. To accomplish this, each establishment on the sampling frame is classified into a three-digit

SIC grouping. For each group of establishments, a boundary (or cutoff) that divides the certainty establishments from the noncertainty establishments is determined using the Lavallee-Hidiroglou algorithm. If an establishment's measure of size is greater than the cutoff, the establishment is selected "with certainty". Establishments selected "with certainty" were assured of being selected and represented only themselves (i.e., have a selection probability of one and a sampling weight of one). No certainty cutoffs are set for auxiliary establishments because they only make up a small portion of the estimated total value of shipments for all establishments on the sampling frame.

Establishments not selected with certainty make up the noncertainty universe. We stratify the noncertainty universe by SIC recode, National Transportation Analysis Region (NTAR), and a flag used to differentiate auxiliary establishments from nonauxiliary establishments. Each SIC recode is constructed from a group of related three-digit SIC codes. The NTARs, developed by the Department of Transportation as combinations of Bureau of Economic Analysis (BEA) Areas, collectively provide a mutually exclusive and exhaustive coverage of the United States. Finally, the auxiliary stratification came about because establishments with different types of operation may have different shipping practices. We refer to a particular SIC recode-NTAR-auxiliary flag combination as a primary stratum.

We further stratify the noncertainty establishments within each primary stratum using the measure of size previously described. We refer to these measure-of-size strata as substrata of the primary strata. The measure of size stratification increases the efficiency of the sample design. The Dalenius-Hodges cumulative rule is used to set the substratum boundaries. We then use Neyman allocation to determine the sample size required within each substratum to meet a coefficient of variation constraint on the primary stratum total measure of size. Within each substratum, a simple random sample of establishments is selected without replacement.

To arrive at the final sample size, we allocated additional establishments to some of the strata so that the probability of selecting any establishment is no less than 1 in 100. In total, the first-stage sample comprises 102,739 establishments.

Second Stage

The frame for the second stage of sampling consists of 52 one-week reporting periods (reporting weeks) during the interval from December 29, 1996, to December 26,

1997. Each establishment selected for the 1997 CFS was systematically assigned to report for a group of four reporting weeks throughout the survey year. The four reporting weeks in a given group are separated by 12 weeks. For example, an establishment might be requested to report data for the 5th, 18th, 31st, and 44th weeks of the survey year.

Third Stage

For each of the four reporting weeks in which an establishment is asked to report, we request the respondent to construct a sampling frame that consists of all shipments made by their establishment in each particular reporting week. For any particular reporting week, if an establishment makes 40 or fewer shipments during that week, we ask the respondent to provide information about all of their establishment's shipments from that week, i.e., no sampling is required. For establishments making more than 40 shipments in a given reporting week, we ask the respondent to select a systematic sample of these shipments and to provide us with information only about the selected shipments. The size of a particular respondent's sample for a given reporting week should be between 20 and 40 shipments, depending on the total number of shipments the establishment made during that reporting week.

DATA COLLECTION

Each establishment selected into the CFS sample is mailed a questionnaire for each of its four reporting weeks. For a given establishment, we request the respondent to provide the following information about their establishment's shipments: domestic destination or port of exit, commodity, value, weight, mode(s) of transportation, the date on which the shipment was made, and an indication of whether the shipment was an export, hazardous material, or containerized. For shipments that include more than one commodity, respondents are instructed to report the commodity that makes up the greatest percentage of the shipment's weight. For exports, we also ask the respondent to provide the mode of export and the foreign destination city and country.

We used two versions of the questionnaire to collect data from the sampled establishments—the CFS-1000 and the CFS-2000. Each establishment received the CFS-1000 in each of its first three reporting weeks. However, for the fourth reporting week, a subsample of approximately 25,000 establishments received the CFS-2000, while the remaining establishments received the CFS-1000. The CFS-2000 requests the respondent to provide additional information about their establishment's access to on-site and off-site shipping facilities, as well as transportation equipment. See Appendix E for a copy of each questionnaire.

ESTIMATION

Each shipment has associated with it a single tabulation weight, that is used in computing all estimates to which

the shipment contributes. The tabulation weight is a product of seven different weights. A description of each weight follows.

CFS respondents provide data for a sample of shipments made by their respective establishments in the survey year. For each establishment, we produce an estimate of that establishment's total value of shipments for the entire survey year. To do this, we use four different weights, the shipment weight, the shipment nonresponse weight, the quarter weight, and the quarter nonresponse weight.

Like establishments, we identify shipments as either certainty or noncertainty. (See the Nonsampling Error section in Appendix B for a description of how certainty shipments are identified.) For noncertainty shipments, the shipment weight is defined as the ratio of the total number of noncertainty shipments (as reported by the respondent) made by an establishment in a reporting week to the number of sampled noncertainty shipments for the same week. This weight uses the data from the sampled shipments to represent all the establishment's shipments made in the reporting week. However, some respondents fail to provide sufficient information about a sampled shipment. For example, a respondent may not be able to provide value, weight, or a destination ZIP Code for some of the sampled shipments. If these data items cannot be imputed, then these shipments would not contribute to tabulations and are deemed "unusable." (A usable shipment is one that has valid entries for value, weight, and origin and destination ZIP Codes.) To account for these "unusable" shipments, we apply the shipment nonresponse weight. For noncertainty shipments from a particular establishment's reporting week, this weight is equal to the ratio of the number of sampled shipments for the reporting week to the number of "usable" shipments for the same week. The shipment weight and shipment nonresponse weight for certainty shipments from a particular establishment's reporting week are both equal to one.

The quarter weight inflates an establishment's estimate for a particular reporting week to an estimate for the corresponding quarter. For noncertainty shipments, the quarter weight is equal to 13. The quarter weight for most certainty shipments is also equal to 13. However, if a respondent is able to provide information about all large (or certainty) shipments made in the quarter containing the reporting week, then the quarter weight for each of these shipments would be one. For each establishment, the quarterly estimates are added to produce an estimate of the establishment's value of shipments for the entire survey year. Whenever an establishment does not provide the Census Bureau with a response for each of its four reporting weeks, we compute a quarter nonresponse weight. The quarter nonresponse weight for a particular establishment is defined as the ratio of the number of

quarters for which the establishment was in business in the survey year to the total number of quarters (reporting weeks) for which we received usable shipment data from the establishment.

Using these four component weights, we compute an estimate of each establishment's value of shipments for the entire survey year. We then multiply this estimate by a weight that adjusts the estimate using value of shipments and sales data obtained from other Census Bureau surveys and preliminary results of the 1997 Economic Census. This weight, called the establishment-level adjustment weight, attempts to correct for any sampling or nonsampling errors that occur during the sampling of shipments by the respondent.

The adjusted value of shipments estimate for an establishment is then weighted by the establishment weight. This weight is equal to the inverse of the establishment's probability of being selected into the sample.

A final adjustment weight, called the SIC-level adjustment weight, uses preliminary results of the 1997 Economic Census to account for establishments from which we did not receive a response (including establishments from which we did not receive any usable shipment data) and for changes in the population of establishments between the time the first-stage sampling frame was constructed (1995) and the year in which the data were collected (1997). Separate SIC-level adjustment weights are determined for nonauxiliary and auxiliary establishments.

Appendix D.

Standard Classification of Transported Goods Code Information

The commodities shown in this report are classified using the Standard Classification of Transported Goods (SCTG) coding system. The SCTG coding system was created jointly by agencies of the United States and Canadian governments based on the Harmonized System (HS) of product classification which is used worldwide. The purpose of the SCTG coding system was to specifically address statistical needs in regard to products transported.

In the past, Commodity Flow Survey (CFS) data have been collected and reported using product classifications found in the Standard Transportation Commodity Classification (STCC) system. These classifications were developed in the early 1960s by the American Association of Railroads (AAR) to analyze commodity movements by rail. The original purpose of the STCC was for identification of commodities for purposes of assigning rates for Interstate Commerce Commission (ICC) regulated rail carriers. The STCC continues to be used by the AAR as a tariff mechanism.

At the time that the Commodity Transportation Survey (CTS) (the CTS—the predecessor of the CFS) was first conducted in 1963, STCC codes were still useful for analyzing most important aspects of the U.S. transportation system. Since then, many changes have taken place that have gradually made the STCC code less useful for tracking domestic product movements across all modes (although

it remains perfectly functional for tracking rail-only movements). These include the deregulation of trucking, the enactment of North American Free Trade Agreement (NAFTA), changes in logistics practices, the emergence of plastics and composite materials to replace metals and glass, the obsolescence of many categories of wood products, and the very rapid recent development of high-tech electronic goods. Because the CFS is a shipper survey, the CFS collects information about shipments moving on all modes. As a consequence, STCC classifications frequently provide inadequate detail for identifying products that are significant for modes, such as truck and air. It is for these reasons that the Bureau of Transportation Statistics (BTS) has sponsored the development of a new product code to collect and report CFS data.

In 1997 the CFS provided respondents with a listing of SCTG codes and descriptions at the five-digit level to use in assigning a commodity code for each shipment. For shipments of more than one commodity, we instructed respondents to use the five-digit code for the major commodity, defined as the commodity of greatest total weight in the shipment.

Additional information on the SCTG system can be found on the Internet through the BTS web page at <http://www.bts.gov>. Comments or questions on the SCTG should be directed to [http://cfs@bts.gov](mailto:cfs@bts.gov).

Appendix E.

Sample Report Forms and Instructions

The sample report forms and instructions are shown on the following pages.

Note: The CFS-2000 was sent to a subsample of establishments to obtain additional information about the use of transportation equipment and facilities.

**1997 COMMODITY FLOW SURVEY
CENSUS OF TRANSPORTATION**

Reporting period:

Please return by:

RETURN TO

**BUREAU OF THE CENSUS
1201 East 10th Street
Jeffersonville IN 47132-0001**

(Please correct any error in name, address, and ZIP Code)

BEFORE COMPLETING YOUR REPORT, please read the accompanying instruction guide. If book figures are not available for requested data, please provide estimates. If you have any questions, please call 1-800-772-7851.

Through this survey, we are requesting data on a representative sample of your outbound shipments, to help us produce key statistics used by transportation planners and managers. We greatly appreciate your assistance in this program.

Item C Is this establishment's physical location the same as the address shown in the label? (PO boxes or rural routes are not physical locations.)

- 1 Yes
- 2 No — *Enter physical location below.* ↗

Number and street		
City, town, village, etc.	State	ZIP Code

NOTE — The rest of this questionnaire requests information about shipments (or deliveries) from the establishment located at the address in the mailing label.

If you entered a different address in item C — *Please complete the form for shipments originating from the location listed in item C.*

Item D Please enter the **total number** of outbound shipments (or deliveries), including customer pick-up, for the one-week reporting period shown above. If book figures are not available, please provide your best estimate.

	This number should reflect all shipments and deliveries leaving this location during the one-week reporting period. <i>Please see Instruction Guide for a definition of "shipment."</i>
--	---

Item A Is the establishment name shown in the mailing address correct?

- 1 Yes
- 2 No — *Enter correct name.* ↗

Item B Mark (X) the **ONE** box which best describes this establishment during the one-week period shown above.

- 1 In operation
- 2 Temporarily or seasonally inactive
- 3 Ceased operation — *Give date* →

Month	Day	Year

DO NOT PROCEED UNTIL YOU HAVE COMPLETED ITEM D.

YOUR RESPONSE IS REQUIRED BY LAW. Title 13, United States Code, requires businesses and other organizations that receive this questionnaire to answer the questions and return the report to the Census Bureau. By the same law, **YOUR CENSUS REPORT IS CONFIDENTIAL.** It may be seen only by Census Bureau employees and may be used only for statistical purposes. Further, copies retained in respondents' files are immune from legal process.

Item E SAMPLING INSTRUCTIONS

Our goal in this section is to identify a sample of your shipments that you will provide data on. Through the use of a sample, we can avoid asking you for information on all of your shipments, while still obtaining statistically accurate information.

FINDING YOUR SELECTION RATE

If you reported 40 or fewer shipments in item D, please enter "1" as your selection rate in the box below, then go directly to item F and enter the information for each of your shipments.

If you reported 41 or more shipments in item D, we will now ask you to select and report on a sample of your shipments. Following the steps below will result in a sample of 20 to 40 shipments to report on in item F.

In the table at right, identify the selection rate that corresponds to the number you entered in item D, and enter it in the box below.

Please enter your selection rate. →

Number of shipments entered in item D	Selection rate
1— 40	1
41— 80	2
81— 100	3
101— 200	5
201— 400	10
401— 800	20
801— 1600	40
1601— 3200	80
3201— 6400	160
6401— 12800	320
More than 12800	Call Census at 1-800-772-7851

CONTINUE ON NEXT PAGE. ↗

Item F SHIPMENT CHARACTERISTICS

Line No. (a)	Shipment ID Number (b)	Shipment date (c)		Shipment value (excluding shipping costs) in whole dollars (d)	Shipment weight in pounds (e)	Commodity code from SCTG Manual (f)	Commodity description (g)	If a hazardous material, enter the "UN" or "NA" number (h)
		Month	Day					
0	123-5	4	26	4,235	140	3 | 5 | 1 | 2 | 0	Electrical transformers	| | | |
00	402H	4	26	125,300	626,500	1 | 7 | 1 | 0 | 0	Gasoline	1 | 2 | 0 | 3
1						| | | |		| | | |
2						| | | |		| | | |
3						| | | |		| | | |
4						| | | |		| | | |
5						| | | |		| | | |
6						| | | |		| | | |
7						| | | |		| | | |
8						| | | |		| | | |
9						| | | |		| | | |

Mode of transport codes for columns (k) and (n) ▶

1 — Parcel delivery, courier, or U.S. Postal Service

2 — Private truck
3 — For-hire truck

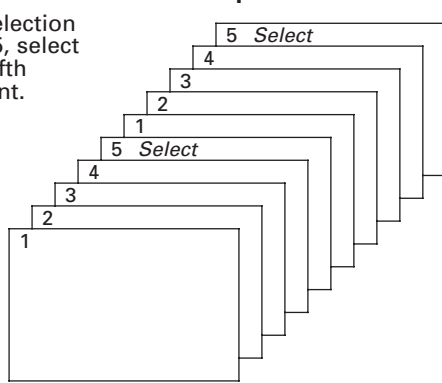
4 — Railroad
Continued →

SELECTING YOUR SAMPLE OF SHIPMENTS

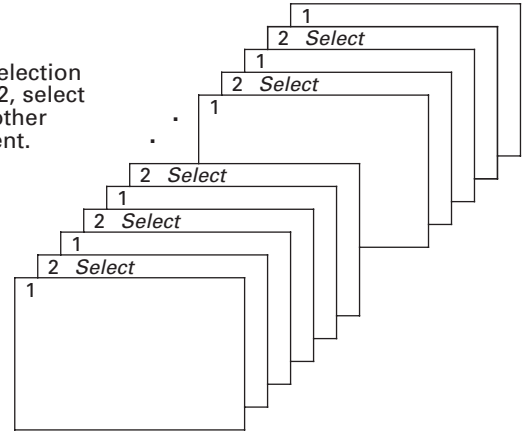
1. Use the file or combination of files that best reflects your full range of outbound shipping activities.
2. Begin with the first shipment. Count the shipments until you reach your selection rate. Select this shipment to report on in item F.
3. Continue counting with the next shipment. Count this shipment as 1 and continue until you reach the selection rate again. Select this shipment to report on in item F.
4. Repeat step 3 until you reach the last shipment for the one-week period. If the last shipment is counted as the selection rate, select this shipment to report on in item F. If the last shipment is not counted as the selection rate, do not report this shipment.

In the following examples, each rectangle represents one shipment.

If the selection rate is 5, select every fifth shipment.



If the selection rate is 2, select every other shipment.



Once you have selected your sample of shipments, please proceed to item F and enter the requested information for each selected shipment. Examples of completed lines for two shipments are provided on lines "0" and "00" below.


If you have difficulties constructing a file of shipments or have questions about how to select the sample of your shipments, please call our toll-free number for assistance: 1-800-772-7851.

Containerized? (Y/N)	U.S. destination <i>(Complete for all shipments.)</i>			Mode(s) of transport to U.S. destination <i>Enter all that apply in order used. Use codes below.</i>	Export? (Y/N)	Foreign destination <i>(for export shipments only)</i> Note: In column (j) enter the U.S. port, airport, or border crossing of exit.		Export mode	Line No.
	(i)	(j)				(k)	(l)			(m)		(n)	(o)
	City	State	ZIP Code			City	Country		
N	Los Angeles	C A	9 0 0 4 0	2, 4, 3	N				0
N	New York	N Y	1 0 4 5 4	5	Y	London	England	6	00
									1
									2
									3
									4
									5
									6
									7
									8
									9

5 — Shallow draft vessel 7 — Pipeline 9 — Other mode
 6 — Deep draft vessel 8 — Air 0 — Unknown

Item F SHIPMENT CHARACTERISTICS — Continued

Line No. (a)	Shipment ID Number (b)	Shipment date (c)		Shipment value (excluding shipping costs) in whole dollars (d)	Shipment weight in pounds (e)	Commodity code from SCTG Manual (f)	Commodity description (g)	If a hazardous material, enter the "UN" or "NA" number (h)
		Month	Day					
10						| | | |		| | | |
11						| | | |		| | | |
12						| | | |		| | | |
13						| | | |		| | | |
14						| | | |		| | | |
15						| | | |		| | | |
16						| | | |		| | | |
17						| | | |		| | | |
18						| | | |		| | | |
19						| | | |		| | | |
20						| | | |		| | | |
21						| | | |		| | | |
22						| | | |		| | | |
23						| | | |		| | | |
24						| | | |		| | | |
25						| | | |		| | | |
26						| | | |		| | | |
27						| | | |		| | | |
28						| | | |		| | | |
29						| | | |		| | | |
30						| | | |		| | | |
31						| | | |		| | | |
32						| | | |		| | | |
33						| | | |		| | | |
34						| | | |		| | | |

Mode of transport codes for columns (k) and (n) 

1 — Parcel delivery, courier, or U.S. Postal Service

2 — Private truck
3 — For-hire truck

4 — Railroad
Continued 

Containerized? (Y/N)	U.S. destination <i>(Complete for all shipments.)</i>			Mode(s) of transport to U.S. destination <i>Enter all that apply in order used. Use codes below.</i>	Export? (Y/N)	Foreign destination <i>(for export shipments only)</i>		Export mode	Line No.
	(j)					(m)			
(i)	City	State	ZIP Code	(k)	(l)	City	Country	(n)	(o)
									10
									11
									12
									13
									14
									15
									16
									17
									18
									19
									20
									21
									22
									23
									24
									25
									26
									27
									28
									29
									30
									31
									32
									33
									34

5 — Shallow draft vessel
6 — Deep draft vessel

7 — Pipeline
8 — Air

9 — Other mode
0 — Unknown

Item F SHIPMENT CHARACTERISTICS — Continued

Line No. (a)	Shipment ID Number (b)	Shipment date (c)		Shipment value (excluding shipping costs) in whole dollars (d)	Shipment weight in pounds (e)	Commodity code from SCTG Manual (f)	Commodity description (g)	If a hazardous material, enter the "UN" or "NA" number (h)
		Month	Day					
35						| | | | |		| | | |
36						| | | | |		| | | |
37						| | | | |		| | | |
38						| | | | |		| | | |
39						| | | | |		| | | |
40						| | | | |		| | | |

Mode of transport codes for columns (k) and (n) **1** — Parcel delivery, courier, or U.S. Postal Service **2** — Private truck **3** — For-hire truck **4** — Railroad *Continued* →

Item G

1. Do this establishment's outbound shipments leave more than one site within this physical location?

Yes

No

2. Are the records for outbound shipments from this location maintained in a number of separate files (e.g., separate files for each commodity, or for each shipping site) at this location?

Yes

No

If yes to item G1 or item G2:

3. Would it be easier to receive a separate questionnaire for each file or each shipment site?

Yes

No

Item H Enter the total value of shipments for the one-week reporting period. This figure should represent all products leaving this establishment for the one-week period. An estimate is acceptable.

Total value in whole dollars

Item I In the last three months did this location have any individual shipments with a value over \$2,000,000?

Yes

No

Item J CERTIFICATION

Name of person to contact regarding this report — <i>Please print</i>	Telephone number — <i>Include area code</i>	Date
Signature	Title	

Containerized? (Y/N)	U.S. destination (Complete for all shipments.)			Mode(s) of transport to U.S. destination <i>Enter all that apply in order used. Use codes below.</i>	Export? (Y/N)	Foreign destination (for export shipments only) Note: In column (j) enter the U.S. port, airport, or border crossing of exit.		Export mode	Line No.
	(j)					(m)			
(i)	City	State	ZIP Code	(k)	(l)	City	Country	(n)	(o)
									35
									36
									37
									38
									39
									40

5 — Shallow draft vessel **7** — Pipeline **9** — Other mode
6 — Deep draft vessel **8** — Air **0** — Unknown

Remarks

THANK YOU FOR COMPLETING YOUR REPORT

**1997 COMMODITY FLOW SURVEY
CENSUS OF TRANSPORTATION**

Reporting period:

Please return by:

RETURN TO

**BUREAU OF THE CENSUS
1201 East 10th Street
Jeffersonville IN 47132-0001**

(Please correct any error in name, address, and ZIP Code)

BEFORE COMPLETING YOUR REPORT, please read the accompanying instruction guide. If book figures are not available for requested data, please provide estimates. If you have any questions, please call 1-800-772-7851.

Through this survey, we are requesting data on a representative sample of your outbound shipments, to help us produce key statistics used by transportation planners and managers. We greatly appreciate your assistance in this program.

Item A Is the establishment name shown in the mailing address correct?

- 1 Yes
- 2 No — *Enter correct name.* ↗

Item B Mark (X) the **ONE** box which best describes this establishment during the one-week period shown above.

- 1 In operation
- 2 Temporarily or seasonally inactive
- 3 Ceased operation — *Give date* →

Month	Day	Year

Item C Is this establishment's physical location the same as the address shown in the label? (PO boxes or rural routes are not physical locations.)

- 1 Yes
- 2 No — *Enter physical location below.* ↗

Number and street		
City, town, village, etc.	State	ZIP Code

NOTE — The rest of this questionnaire requests information about shipments (or deliveries) from the establishment located at the address in the mailing label.

If you entered a different address in item C — *Please complete the form for shipments originating from the location listed in item C.*

Item D Please enter the **total number** of outbound shipments (or deliveries), including customer pick-up, for the one-week reporting period shown above. If book figures are not available, please provide your best estimate.

	This number should reflect all shipments and deliveries leaving this location during the one-week reporting period. <i>Please see Instruction Guide for a definition of "shipment."</i>
--	---

DO NOT PROCEED UNTIL YOU HAVE COMPLETED ITEM D.

YOUR RESPONSE IS REQUIRED BY LAW. Title 13, United States Code, requires businesses and other organizations that receive this questionnaire to answer the questions and return the report to the Census Bureau. By the same law, **YOUR CENSUS REPORT IS CONFIDENTIAL.** It may be seen only by Census Bureau employees and may be used only for statistical purposes. Further, copies retained in respondents' files are immune from legal process.

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Our goal in this section is to identify a sample of your shipments that you will provide data on. Through the use of a sample, we can avoid asking you for information on all of your shipments, while still obtaining statistically accurate information.

FINDING YOUR SELECTION RATE

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Please enter your selection rate. →

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41— 80	2
81— 100	3
101— 200	5
201— 400	10
401— 800	20
801— 1600	40
1601— 3200	80
3201— 6400	160
6401—12800	320
More than 12800	Call Census at 1-800-772-7851

CONTINUE ON NEXT PAGE. ↗

Item F SHIPMENT CHARACTERISTICS

Line No. (a)	Shipment ID Number (b)	Shipment date (c)		Shipment value (excluding shipping costs) in whole dollars (d)	Shipment weight in pounds (e)	Commodity code from SCTG Manual (f)	Commodity description (g)	If a hazardous material, enter the "UN" or "NA" number (h)
		Month	Day					
0	123-5	4	26	4,235	140	3 | 5 | 1 | 2 | 0	Electrical transformers	| | | |
00	402H	4	26	125,300	626,500	1 | 7 | 1 | 0 | 0	Gasoline	1 | 2 | 0 | 3
1						| | | |		| | | |
2						| | | |		| | | |
3						| | | |		| | | |
4						| | | |		| | | |
5						| | | |		| | | |
6						| | | |		| | | |
7						| | | |		| | | |
8						| | | |		| | | |
9						| | | |		| | | |

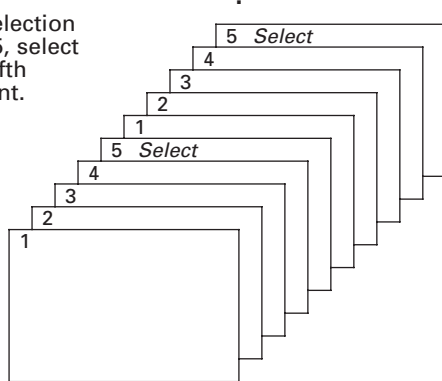
Mode of transport codes for columns (k) and (n) 1 — Parcel delivery, courier, or U.S. Postal Service 2 — Private truck 3 — For-hire truck 4 — Railroad Continued →

SELECTING YOUR SAMPLE OF SHIPMENTS

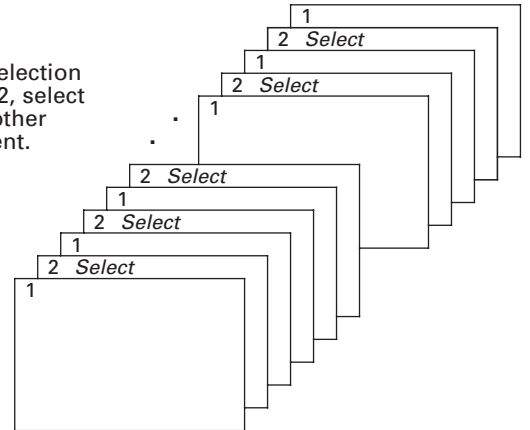
1. Use the file or combination of files that best reflects your full range of outbound shipping activities.
2. Begin with the first shipment. Count the shipments until you reach your selection rate. Select this shipment to report on in item F.
3. Continue counting with the next shipment. Count this shipment as 1 and continue until you reach the selection rate again. Select this shipment to report on in item F.
4. Repeat step 3 until you reach the last shipment for the one-week period. If the last shipment is counted as the selection rate, select this shipment to report on in item F. If the last shipment is not counted as the selection rate, do not report this shipment.

In the following examples, each rectangle represents one shipment.

If the selection rate is 5, select every fifth shipment.



If the selection rate is 2, select every other shipment.



Once you have selected your sample of shipments, please proceed to item F and enter the requested information for each selected shipment. Examples of completed lines for two shipments are provided on lines "0" and "00" below.

If you have difficulties constructing a file of shipments or have questions about how to select the sample of your shipments, please call our toll-free number for assistance: 1-800-772-7851.

Containerized? (Y/N)	U.S. destination <i>(Complete for all shipments.)</i>			Mode(s) of transport to U.S. destination <i>Enter all that apply in order used. Use codes below.</i>	Export? (Y/N)	Foreign destination <i>(for export shipments only)</i> Note: In column (j) enter the U.S. port, airport, or border crossing of exit.		Export mode	Line No.
	(i)	(j)				(k)	(l)			(m)		(n)	(o)
	City	State	ZIP Code			City	Country		
N	Los Angeles	C A	9 0 0 4 0	2, 4, 3	N				0
N	New York	N Y	1 0 4 5 4	5	Y	London	England	6	00
									1
									2
									3
									4
									5
									6
									7
									8
									9

5 — Shallow draft vessel 7 — Pipeline 9 — Other mode
 6 — Deep draft vessel 8 — Air 0 — Unknown

Item F SHIPMENT CHARACTERISTICS — Continued

Line No. (a)	Shipment ID Number (b)	Shipment date (c)		Shipment value (excluding shipping costs) in whole dollars (d)	Shipment weight in pounds (e)	Commodity code from SCTG Manual (f)	Commodity description (g)	If a hazardous material, enter the "UN" or "NA" number (h)
		Month	Day					
10						| | | |		| | | |
11						| | | |		| | | |
12						| | | |		| | | |
13						| | | |		| | | |
14						| | | |		| | | |
15						| | | |		| | | |
16						| | | |		| | | |
17						| | | |		| | | |
18						| | | |		| | | |
19						| | | |		| | | |
20						| | | |		| | | |
21						| | | |		| | | |
22						| | | |		| | | |
23						| | | |		| | | |
24						| | | |		| | | |
25						| | | |		| | | |
26						| | | |		| | | |
27						| | | |		| | | |
28						| | | |		| | | |
29						| | | |		| | | |
30						| | | |		| | | |
31						| | | |		| | | |
32						| | | |		| | | |
33						| | | |		| | | |
34						| | | |		| | | |

Mode of transport codes for columns (k) and (n) ▶

1 — Parcel delivery, courier, or U.S. Postal Service

2 — Private truck
3 — For-hire truck

4 — Railroad
Continued →

Containerized? (Y/N)	U.S. destination <i>(Complete for all shipments.)</i>			Mode(s) of transport to U.S. destination <i>Enter all that apply in order used. Use codes below.</i>	Export? (Y/N)	Foreign destination <i>(for export shipments only)</i>		Export mode	Line No.
	(j)					(m)			
(i)	City	State	ZIP Code	(k)	(l)	City	Country	(n)	(o)
									10
									11
									12
									13
									14
									15
									16
									17
									18
									19
									20
									21
									22
									23
									24
									25
									26
									27
									28
									29
									30
									31
									32
									33
									34

5 — Shallow draft vessel
6 — Deep draft vessel

7 — Pipeline
8 — Air

9 — Other mode
0 — Unknown

Item F SHIPMENT CHARACTERISTICS — Continued

Line No. (a)	Shipment ID Number (b)	Shipment date (c)		Shipment value (excluding shipping costs) in whole dollars (d)	Shipment weight in pounds (e)	Commodity code from SCTG Manual (f)	Commodity description (g)	If a hazardous material, enter the "UN" or "NA" number (h)
		Month	Day					
35						| | | |		| | | |
36						| | | |		| | | |
37						| | | |		| | | |
38						| | | |		| | | |
39						| | | |		| | | |
40						| | | |		| | | |

Mode of transport codes for columns (k) and (n)

1 — Parcel delivery, courier, or U.S. Postal Service

2 — Private truck
3 — For-hire truck

4 — Railroad
Continued →

Item G Enter the total dollar value of **all** shipments for the one-week reporting period. This figure should represent all products leaving this establishment for the one-week period. An estimate is acceptable.

Total value in whole dollars

Item H In the last three months did this location have any individual shipments with a value over \$2,000,000?

Yes

No

Item I AVAILABILITY AND USE OF ON-SITE SHIPPING FACILITIES

In column (b), check "Yes" or "No" for each type of shipping facility to indicate whether or not this type of facility existed **on-site** during 1997. For each "Yes" in column (b), check "Yes" or "No" in column (c) to indicate whether or not you used the facility on your premises for **outbound shipments** during 1997.

Type of shipping facility (a)	Was a shipping facility of this type on your premises during 1997? (b)	Did you use this facility on your premises for outbound shipments during 1997? (c)
1. Rail siding	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
2. Dock on the Great Lakes	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
3. Dock on inland water	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
4. Dock on deep sea water	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
5. Airport/landing strip capable of handling your shipments	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
6. Pipeline terminal	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No

Containerized? (Y/N)	U.S. destination (Complete for all shipments.)			Mode(s) of transport to U.S. destination <i>Enter all that apply in order used. Use codes below.</i>	Export? (Y/N)	Foreign destination (for export shipments only) Note: In column (j) enter the U.S. port, airport, or border crossing of exit.		Export mode	Line No.
	(j)					(m)			
(i)	City	State	ZIP Code	(k)	(l)	City	Country	(n)	(o)
									35
									36
									37
									38
									39
									40

5 — Shallow draft vessel **7** — Pipeline **9** — Other mode
6 — Deep draft vessel **8** — Air **0** — Unknown

Item J USE OF OFF-SITE SHIPPING FACILITIES

In column (b), check "Yes" or "No" for each type of shipping facility to indicate whether or not you used an **off-site** facility of that type for **outbound shipments** during 1997. For each "Yes", enter the miles to that off-site facility in column (c), and the mode of transport used to reach that facility in column (d). The modes are listed below.

Type of shipping facility (a)	Did you use this type of off-site facility for outbound shipments during 1997? (b)	Distance to the off-site facility of this type that you used most in 1997 (Report in miles – estimates are acceptable) (c)	Mode of transport used to reach that facility (Enter a code from the list below) (d)
1. Rail siding	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No		
2. Dock on the Great Lakes	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No		
3. Dock on inland water	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No		
4. Dock on deep sea water	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No		
5. Airport/landing strip capable of handling your shipments	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No		
6. Pipeline terminal	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No		

1 – Trailer on Flat Car (TOFC) **3** – For-Hire Truck **5** – Water **7** – Air
2 – Private Truck **4** – Rail **6** – Pipeline **8** – Other

PLEASE CONTINUE ON PAGE 8.

Instructions for Completing the Commodity Flow Survey

TIPS FOR COMPLETING THE CFS QUESTIONNAIRE

Please read all instructions.

You may use estimates if book figures are not readily available.

If you have questions about completing the survey, a Census Bureau representative will be glad to assist you. You can call us at 1-800-772-7851.

Some instructions are included on the questionnaire itself. However, due to space limitations, most of the instructions and definitions are included in separate reference materials. These include this instruction guide, and a listing of commodity codes to be used for classifying individual shipments in this survey.

PART I – GENERAL INFORMATION
Frequently Asked Questions About the
Commodity Flow Survey (CFS)

Why are you conducting the CFS?

The CFS produces valuable measures of the demands on the nation's transportation system.

The results of the CFS are used by transportation policy makers to analyze future transportation needs.

Who reports in the CFS?

The CFS covers a sample of establishments in the mining, manufacturing, wholesale, and selected retail industries.

Why is my participation important?

Your establishment was selected as part of a sample designed to represent a wide range of industries and geographic regions.

Your report helps ensure quality results.

Is this survey mandatory?

Yes. The CFS is mandatory under the authority of Title 13, United States Code (USC).

Will my data be kept confidential?

Yes. The same law that requires your participation, Title 13, USC, also guarantees your data will be kept strictly confidential.

The reports you provide the Census Bureau cannot be used for purposes of taxation, regulation, or investigation.

Your report is used only to develop summary data that do not reveal the activities of individual firms or establishments.

How often must I report?

You will be sent four questionnaires in all: one during each quarter of 1997.

The CFS will not be conducted again until 2002.

PART II – INSTRUCTIONS FOR COMPLETING YOUR QUESTIONNAIRE

Items A – C

Please enter the information requested on your establishment's name, operational status, and physical location.

Item D

Enter in the space provided your total number of outbound shipments **for the one week reporting period** on the front of the questionnaire.

Please include in this count any materials picked up by the customer ("customer pick-up").

What we mean by a "shipment":

For the purposes of this survey, a shipment is a single movement of goods, commodities, products, etc. from your location to a customer or to another location of your company.

"Commodities" refer to items that your location produces, sells, or distributes, *not* to items that are considered by-products of your location's operation.

What we don't mean by a "shipment":

Do *not* include as shipments items such as inter-office memos, payroll checks, business correspondence, etc.

Do *not* include as shipments items such as refuse, scrap paper, waste, and recyclable materials **unless** your location is in the business of selling or providing these materials to others.

A special note about "shipments":

A full, or partial, truckload should be counted as a single shipment only if all the commodities on the truck are destined for one location.

If a truck makes multiple deliveries on a route, **please count each stop as one shipment.**

Item E: Sampling Instructions

If you reported 40 or fewer shipments in Item D, complete Item F (Shipment Characteristics) for all of your shipments covered by the one-week reporting period.

If you reported more than 40 shipments in Item D, follow the instructions in Item E in order to select a sample of shipments on which to report in Item F.

By asking you to select a sample of your shipments for the one-week reporting period, we avoid asking you for information on all your shipments, while still obtaining statistically accurate information.

Reminder: The files you are sampling from should reflect the full range of your location's shipping activities in terms of modes of transportation used, commodities shipped, and destinations.

We're here to answer your questions! If you have questions about the sampling process (or any part of the questionnaire) please call us at 1-800-772-7851.

PART II – INSTRUCTIONS FOR COMPLETING YOUR QUESTIONNAIRE – Continued

Item F: Shipment Characteristics

- **Shipment ID Number (column b)** – Enter the invoice number, shipment number, or some other unique identification number that your establishment could use to find this particular shipping document if questions arise regarding your report.
- **Shipment Date (column c)** – Enter the month and day of the shipment. If shipment date is not available, use the invoice/shipping document date. Use numbers only.
- **Shipment Value (column d)** – Enter the dollar value, in whole dollars, of the entire shipment. The value should not include freight charges or excise taxes (i.e., report the net selling value, f.o.b. plant). If the value is not readily available from your records, please estimate.
- **Shipment Weight (column e)** – Enter the weight of the total shipment in whole pounds. If weight is not readily available from your records, please estimate.
- **Commodity Code (column f)** – Please use the list of Standard Classification of Transported Goods (SCTG) Codes in the enclosed SCTG Manual to select the proper code. For shipments with more than one commodity, enter only the code for the commodity with the greatest weight.
- **Commodity Description (column g)** – Enter a brief description of the commodity shipped. For shipments with more than one commodity, describe only the commodity with the greatest weight. Do not use trade names, catalog numbers, or other codes not familiar to persons outside your business.

Item F SHIPMENT CHARACTERISTICS							
Line No.	Shipment ID Number	Shipment date		Shipment value (excluding shipping costs) in whole dollars	Shipment weight in pounds	Commodity code from SCTG Manual	Commodity description
		Month	Day				
(a)	(b)	(c)	(c)	(d)	(e)	(f)	(g)
0	123-5	4	26	4,235	140	3 | 6 | 1 | 2 | 0	Electrical transformers
00	123-6	4	26	125,300	626,500	1 | 7 | 1 | 0 | 0	Gasoline
1						| | | | |	
2						| | | | |	
3						| | | | |	
4						| | | | |	

Mode of transport codes for columns (k) and (n) ▶	1 — Parcel delivery, courier, or U.S. Postal Service	2 — Private truck	4 — Railroad
	3 — For-hire truck		Continued →

PART II – INSTRUCTIONS FOR COMPLETING YOUR QUESTIONNAIRE – Continued

Item F: Shipment Characteristics – Continued

- **For Hazardous Materials (column h)** – If shipment is a hazardous material, enter the 4-digit United Nations or North American number.
- **Containerized (column i)** – Indicate whether or not the shipment was containerized by entering "Y" or "N" (yes or no). Containerized means that the shipment **left your establishment** in an intermodal container or stackable tank without permanently attached wheels. These containers typically vary from 20 to 53 feet in length, and are carried on truck chassis, trains, and ships.
- **U.S. Destination: City, State, and ZIP Code (column j)** – For domestic shipments, enter the city, state, and 5-digit ZIP Code of the buyer/receiver as it appears on the shipping document. Use the **"ship to"** address. Use the two letter state abbreviation shown in Part IV.

For **export shipments**, report the U.S. **port of exit** as the destination city. The port of exit is the port or airport from which the shipment left the country. In case of land shipments into Mexico or Canada, it is the border crossing.
- **Mode(s) of Transport (column k)** – Enter the code(s) for **all** modes of transport used for the shipment to its U.S. destination (i.e., the destination reported in column j). Codes are located on the bottom of pages 2, 3, 4, and 5 of the questionnaire. Enter in the sequence used, all that apply. See Part III for definitions of each mode.
 - **For Customer Pick-up:** Report the mode(s) of transportation used, if known. Otherwise, report mode as "0" (unknown).
 - **For Export Shipments:** List only the mode(s) of transport used to reach the port, airport, or border crossing of exit.

If a hazardous material, enter the "UN" or "NA" number (h)	Containerized? (Y/N) (i)	U.S. destination (j)			Mode(s) of transport to U.S. destination <i>Enter all that apply using codes shown below.</i> (k)
		City	State	ZIP Code	
	N	Los Angeles	C A	9 | 0 | 0 | 4 | 0	2, 4, 3
| | | |	N	New York	N Y	1 | 0 | 4 | 5 | 4	5

PART II – INSTRUCTIONS FOR COMPLETING YOUR QUESTIONNAIRE – Continued

Item F: Shipment Characteristics – Continued

- **Export Shipment (column l)** – Indicate whether or not the shipment is intended for export outside of the United States, by entering a "Y" or "N" (yes or no). For purposes of this survey, shipments to Puerto Rico and U.S. territories and possessions are considered exports.
- **Foreign Destination: City and Country (column m)** – If the shipment is an export, enter the foreign city and country of destination. **For U.S. Destination (column j),** enter the U.S. port, airport, or border crossing of exit. **In column (k),** enter the mode of transport used to the U.S. destination.
- **Export Mode (column n)** – If the shipment is an export, enter the code for the mode of transport by which the shipment left the country. Codes are located at the bottom of pages 2, 3, 4, and 5 of the questionnaire.

Export? (Y/N) (l)	Foreign destination (for export shipments only) Note: In column (j) enter the U.S. port, airport, or border crossing of exit. (m)		Export mode (n)	Line No. (o)
	City	Country		
N				0
Y	London	England	6	00
				1
				2
				3
				4
				5

Items G – I

Please enter the information requested.

Item J: Certification

Please enter the name and telephone number of the person to contact in the event that we have a question about your report.

PART III – MODE DEFINITIONS

Parcel delivery/Courier/U.S. Postal Service – Delivery services that carry letters, parcels, packages, and other small shipments that typically weigh less than 100 pounds. Includes bus parcel delivery service.

Private truck – Trucks operated by a temporary or permanent employee of this establishment or the buyer/receiver of the shipment.

For-hire truck – Trucks that carry freight for a fee collected from the shipper, recipient of the shipment, or an arranger of the transportation.

Railroad – Any common carrier or private railroad.

Shallow draft vessel – Barges, ships, or ferries operating primarily on rivers and canals; in harbors, the Great Lakes, the Saint Lawrence Seaway; the Intracoastal Waterway, the Inside Passage to Alaska, major bays and inlets; or in the ocean close to the shoreline.

Deep draft vessel – Barges, ships, or ferries operating primarily in the open ocean. Shipping on the Great Lakes and the Saint Lawrence Seaway is classified with shallow draft vessels.

Pipeline – Movements of oil, petroleum, gas, slurry, etc. through pipelines that extend to other establishments or locations beyond the shipper's establishment. Aqueducts for the movement of water are not included.

Air – Commercial or private aircraft, and all air service for shipments that typically weigh more than 100 pounds. Includes air freight and air express.

Other mode – Any mode not listed above.

Unknown – The shipment was not carried by a parcel delivery/courier/U.S. Postal service, and you cannot determine what mode of transportation is used.

Note: Commodities that are "shipped" under their own power, such as boats, barges, ferries, ships, aircraft, trucks, and trains **should be classified with the appropriate mode above.** Commodities shipped under their own power for which an appropriate mode is not listed (e.g., buses, recreational vehicles) should be listed as **"other" mode.**

PART IV -- STATE ABBREVIATION LIST

State	Abbrev.	State	Abbrev.
Alabama	AL	Montana	MT
Alaska	AK	Nebraska	NE
Arizona	AZ	Nevada	NV
Arkansas	AR	New Hampshire	NH
California	CA	New Jersey	NJ
Colorado	CO	New Mexico	NM
Connecticut	CT	New York	NY
Delaware	DE	North Carolina	NC
Dist. of Col.	DC	North Dakota	ND
Florida	FL	Ohio	OH
Georgia	GA	Oklahoma	OK
Hawaii	HI	Oregon	OR
Idaho	ID	Pennsylvania	PA
Illinois	IL	Rhode Island	RI
Indiana	IN	South Carolina	SC
Iowa	IA	South Dakota	SD
Kansas	KS	Tennessee	TN
Kentucky	KY	Texas	TX
Louisiana	LA	Utah	UT
Maine	ME	Vermont	VT
Maryland	MD	Virginia	VA
Massachusetts	MA	Washington	WA
Michigan	MI	West Virginia	WV
Minnesota	MN	Wisconsin	WI
Mississippi	MS	Wyoming	WY
Missouri	MO		

NOTICE - We estimate that it will take an average of 2 hours to complete this form. This includes time to read instructions, assemble and review information, and record answers on the form. If you have any comments regarding this estimate or any other aspect of this survey, send them to the Associate Director for Administration, Attn: Paperwork Reduction Project 0607-0189, Room 3104, Federal Building 3, Bureau of the Census, Washington, DC 20233-0001. Respondents are not required to respond to any information collection unless it displays a valid approval number in the top right corner on the front of the questionnaire.

